Virginia Highlands COMMUNITY COLLEGE

2022-23

Catalog

Dedicated to student success. Committed to excellence.

PROGRAMS OF STUDY

Associate of Arts and Sciences (AA&S)

Associate of Applied Science (AAS)

Certificate (C)

Career Studies Certificates (CSC)

Other Programs

COLLEGE CALENDAR

Holidays, 2022-2023

The holidays listed below have been established as the official holidays for the College. Normally, all administrative offices of the College will be closed on these days.

Monday, May 30, 2022	Memorial Day
Monday, June 20, 2022	Juneteenth (observed)
Monday, July 4, 2022	Independence Day
Monday, September 5, 2022	Labor Day
Thur. – Fri., November 24 – 25, 2022	Thanksgiving Break
Fri. – Sat., December 23 – 30, 2022	Christmas Break
Monday, January 2, 2023	New Year's Day (observed)
Monday, January 16, 2023	Martin L. King, Jr. Day

2022-2023 Academic Calendar

Summer Semester 2022

Full Term

First Day of Classes	Wednesday, May 25, 2022
Last day to pay tuition	Wednesday, May 25, 2022
Memorial Day – College Closed	Monday, May 30, 2022
Last day to add a class	Wednesday, June 1, 2022
Last day to drop a class and receive a refund (15%)	Monday, June 6, 2022
Juneteenth (observed) – College Closed	Monday, June 20, 2022
Independence Day – College Closed	Monday, July 4, 2022
Last day to withdraw from class without academic penalty (60%)	Monday, July 11, 2022
Last Day of Classes and Final Exams	Monday, August 8, 2022

First Five Weeks Term

First Day of Classes	Wednesday, May 25, 2022
Last day to pay tuition	Wednesday, May 25, 2022
Last day to add a class	Friday, May 27, 2022
Memorial Day – College Closed	Monday, May 30, 2022
Last day to drop a class and receive a refund (15%)	Tuesday, May 31, 2022
Last day to withdraw from class without academic penalty (60%)	Wednesday, June 15, 2022
Juneteenth (observed) – College Closed	Monday, June 20, 2022
Last Day of Classes and Final Exams	Thursday, June 30, 2022

Second Five Weeks Term

Independence Day – College Closed	Monday, July 4, 2022
First Day of Classes	Tuesday, July 5, 2022
Last day to pay tuition	Tuesday, July 5, 2022
Last day to add a class	Thursday, July 7, 2022
Last day to drop a class and receive a refund (15%)	Monday, July 11, 2022
Last day to withdraw from class without academic penalty (60%)	Monday, July 25, 2022
Last Day of Classes and Final Exams	Monday, August 8, 2022

Fall Semester 2022

Last day to pay tuition for early enrollment	Tuesday, August 9, 2022
In-Service and Enrollment Days	Tue. – Fri., August 16 – 19, 2022
Enrollment, Advising, & Class Preparation	Mon. – Fri., August 22 – 26, 2022

Full Term

First Day of Classes	Monday, August 29, 2022
Last day to pay tuition	Monday, August 29, 2022
Last day to add a class	Friday, September 2, 2022
Labor Day – College Closed	Monday, September 5, 2022
Last day to drop a class and receive a refund (15%)	Wednesday, September 14, 2022
Faculty Research Day – No Classes	Tuesday, October 18, 2022
Last day to withdraw from class without academic penalty (60%)	Wednesday, November 2, 2022
Advising and open enrollment for spring 2023 begins	Thursday, November 3, 2022
Faculty Research Day – No Classes	Wednesday, November 23, 2022
Thanksgiving Holiday – College Closed	Thursday, November 24, 2022
Thanksgiving Holiday – College Closed	Friday, November 25, 2022
Last Day of Classes	Friday, December 9, 2022
Final Exams	Mon. – Fri., December 12 – 16, 2022

First Seven Weeks Term

First Day of Classes	Monday, August 29, 2022
Last day to pay tuition	Monday, August 29, 2022
Last day to add a class	Thursday, September 1, 2022
Labor Day – College Closed	Monday, September 5, 2022
Last day to drop a class and receive a refund (15%)	Tuesday, September 6, 2022
Last day to withdraw from class without academic penalty (60%)	Tuesday, September 27, 2022
Last Day of Classes and Final Exams	Monday, October 17, 2022
Faculty Research Day – No Classes	Tuesday, October 18, 2022

Second Seven Weeks Term

First Day of Classes	Wednesday, October 19, 2022
Last day to pay tuition	Wednesday, October 19, 2022
Last day to add a class	Monday, October 24, 2022
Last day to drop a class and receive a refund (15%)	Wednesday, October 26, 2022
Advising and open enrollment for spring 2023 begins	Thursday, November 3, 2022
Last day to withdraw from class without academic penalty (60%)	Friday, November 18, 2022
Faculty Research Day – No Classes	Wednesday, November 23, 2022
Thanksgiving Holiday – College Closed	Thursday, November 24, 2022
Thanksgiving Holiday – College Closed	Friday, November 25, 2022
Last Day of Classes and Final Exams	Friday, December 9, 2022

Faculty Workday	Monday, December 19, 2022
Faculty Research Days	Tue. – Thur., December 20 – 22, 2022
Christmas Eve (observed) – College Closed	Friday, December 23, 2022
Christmas Day (observed) – College Closed	Monday, December 26, 2022
College Closed	Tue. – Fri., December 27 – 30, 2022

Spring Semester 2023

New Year's Day (observed) – College Closed	Monday, January 2, 2023
In-Service and Enrollment Days	Tue. – Fri., January 3 – 6, 2023
Enrollment, Advising, & Class Preparation	Mon. – Fri., January 9 – 13, 2023
Martin Luther King, Jr. Day – College Closed	Monday, January 16, 2023

Full Term

First Day of Classes	Tuesday, January 17, 2023
Last day to pay tuition	Tuesday, January 17, 2023
Last day to add a class	Monday, January 23, 2023
Last day to drop a class and receive a refund (15%)	Friday, February 3, 2023
Faculty Research Day – No Classes	Tuesday, March 7, 2023
Faculty Research Day – No Classes	Wednesday, March 8, 2023
Spring Break – No Classes	Mon. – Fri., March 20 – 24, 2023
Advising and open enrollment for summer 2023 and fall 2023 begins	Monday, March 27, 2023
Last day to withdraw from class without academic penalty (60%)	Monday, April 3, 2023
Faculty Research Day – No Classes	Thursday, April 6, 2023
Faculty Research Day – No Classes	Friday, April 7, 2023
Last Day of Classes	Friday, May 5, 2023
Final Exams	Mon. – Fri., May 8 – 12, 2023

First Seven Weeks Term

First Day of Classes	Tuesday, January 17, 2023
Last day to pay tuition	Wednesday, January 18, 2023
Last day to add a class	Friday, January 20, 2023
Last day to drop a class and receive a refund (15%)	Tuesday, January 24, 2023
Last day to withdraw from class without academic penalty (60%)	Tuesday, February 14, 2023
Last Day of Classes and Final Exams	Monday, March 6, 2023
Faculty Research Day – No Classes	Tuesday, March 7, 2023
Faculty Research Day – No Classes	Wednesday, March 8, 2023

Second Seven Weeks Term

First Day of Classes	Thursday, March 9, 2023
Last day to pay tuition	Thursday, March 9, 2023
Last day to add a class	Tuesday, March 14, 2023
Last day to drop a class and receive a refund (15%)	Friday, March 17, 2023
Spring Break – No Classes	Mon. – Fri., March 20 – 24, 2023
Advising and open enrollment for summer 2023 and fall 2023 begins	Monday, March 27, 2023
Faculty Research Day – No Classes	Thursday, April 6, 2023
Faculty Research Day – No Classes	Friday, April 7, 2023
Last day to withdraw from class without academic penalty (60%)	Wednesday, April 19, 2023
Last Day of Classes and Final Exams	Friday, May 5, 2023

Graduation	Friday, May 12, 2023

Classes that meet outside of these dates are considered dynamically dated classes. These will have different begin and end dates, payment due dates, dates for refund and withdrawal without academic penalty.

ABOUT THE COLLEGE

About VHCC

Virginia Highlands Community College was established on November 30, 1967 by action of the State Board for Community Colleges, and assigned a service region of Washington County, the western portion of Smyth County, and the city of Bristol, Virginia. Today it is one of 23 community colleges within the Virginia Community College System.

During its first academic year, 1969-1970, VHCC began delivering the occupational-technical programs that formerly were offered by the Washington County Technical School. More than 300 students enrolled in the first Virginia Highlands classes, which were offered at night in the technical school's facilities.

The College moved to its permanent 100-acre campus during the summer of 1970 and, in response to the community's needs, expanded its course offerings to include both occupational-technical programs and baccalaureate-transfer programs.

Over its 52 years of operation, Virginia Highlands Community College has become a dynamic leader in Southwest Virginia with a primary goal of providing comprehensive and quality education and related services for residents throughout its region. More than 3,000 students were served this past year by 111 full-time and 133 part-time faculty and staff members. The rolling hills of the campus have been developed to include six modern buildings, athletic and recreational facilities, and substantial parking. Programs and services also have changed to meet the needs of the local community. For example, the Division of Workforce Development and Continuing Education was created in 1996 to better prepare the local workforce. The Southwest Virginia Higher Education Center, a separate organization located on the VHCC campus, opened in 1998 to bring baccalaureate and graduate programs to the area, and the Arts Array cultural program was expanded into a community-wide program.

In addition, the dual enrollment program now offered by the College is allowing students to earn college credit while still in high school, and the service learning initiative is teaching VHCC students the value of volunteerism.

State-of the-art technology has made it possible to take online learning courses and has provided the entire College community with modern, up-to-date computer facilities. Through the Federal Trio programs, Student Support Services (EXCEL) and Upward Bound, high school and college students are receiving the academic help and encouragement they need to complete high school and succeed in college.

To evaluate each of its programs and services, the College engages in an ongoing strategic planning process aimed at examining every aspect of campus life. This thorough self-examination will ensure Virginia Highlands Community College continues to achieve its fundamental mission of effectively serving a community that is always changing.

Accreditation & Recognition

Virginia Highlands Community College, a division of the Virginia Community College System, is approved by the State Board for Community Colleges and by the Virginia Community College Systems Office. The associate degree curricula of the College have also been approved by the State Council of Higher Education for Virginia.

Virginia Highlands Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award the associate degree. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Virginia Highlands Community College.

The Associate degree nursing program at Virginia Highland Community College located in Abingdon, Virginia Nursing Program is approved by the Virginia Board of Nursing and is accredited by the Accreditation Commission for Education in Nursing (ACEN) 3390 Peachtree Road NE, Suite 1400 Atlanta, GA 30326 (404) 975-5000, www.acenursing.org. The most recent ACEN accreditation decision made by the ACEN Board of Commissioners for the Virginia Highlands Community College Associate degree nursing program is continuing accreditation. ACEN is officially recognized as the national accrediting agency for nursing education by the Council on Post-secondary Accreditation (COPA) and by the U.S. Department of Education.

The Radiography program is fully accredited by the Joint Review Committee for Radiologic Technology Education (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, Illinois, 60606-3182, phone 312-704-5300. You may also contact JRCERT at mail@jrcert.org or at www.jrcert.org.

The Emergency Medical Services Technology program is accredited nationally by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP), 25400 U.S. Highway 19 North, Suite 158, Clearwater FL, 33763, phone 727-210-2350.

VHCC is approved for listing in U.S. Department of Education directories and for participation in various federally sponsored programs of student aid and educational assistance. It has also been approved by the Virginia State Approving Agency to offer GI Bill® benefits.

VHCC is an institutional member of the American Association of Community Colleges, the Southern Association of Community, Junior, and Technical Colleges, and the Association of Virginia Colleges.

Mission of the College

Virginia Highlands Community College provides exceptional educational pathways to enrich lives and strengthen our communities.

Vision Statement

Virginia Highlands Community College will be an educational institution of choice, empowering students, employees and community members to reach their fullest potential.

Core Values

At Virginia Highlands Community College, we value excellence, individual worth, a welcoming environment, accountability and achievement.

Educational **excellence** that furthers intellectual, creative, ethical and social development through a broad range of programs, professionally delivered and continuously evaluated with a focus on improvement.

Individual worth, focusing on the strengths, experiences, and perspectives of all people. We set aside personal preferences and focus on the best interest of our campus and local communities, which are strengthened in an environment of mutual respect and learning.

A safe, secure, and **welcoming environment** that cultivates a student-centered approach to service.

Accountability, accepting responsibility for our actions and accepting ownership for the results. We uphold the values of honesty, transparency, and integrity while remaining good stewards of the resources entrusted to us.

Achievement, recognizing that life-long learning provides individual empowerment, resulting in success and personal satisfaction. We are proud to be a life-changing institution that encourages a passionate pursuit of excellence.

LearningPLUS+

LearningPLUS+ is a student-centered college-wide initiative designed to teach students the soft skills of communication, professionalism, problem solving and teamwork through hands-on experiential learning. VHCC students will participate in the LearningPLUS+ program in three ways:

1. Direct instruction and assessment of soft skills in their SDV 101 course.
2. Direct soft skill instruction, hands-on learning opportunities and assessment in most of their VHCC courses.
3. All students will be required to participate in a capstone experience that will allow them to demonstrate their mastery of the LearningPLUS+ soft skills prior to graduation.

At VHCC, we are committed to LearningPLUS+ because we're committed to student success and the needs of our communities. LearningPLUS+ is VHCC's way of ensuring our graduates have the skills they need to be successful in life and in the workplace.

Special College Policies

The College reserves the right to make changes as required in course offerings, curricula, academic policies and other rules and regulations affecting students, to be effective at the discretion of the College. These changes will govern current and formerly enrolled students. Enrollment of all students is subject to these conditions. Virginia Highlands Community College retains the right to make appropriate changes to remain in compliance with Virginia Community College System policy. Changes and supplements to this catalog will be issued as necessary.

ADMISSIONS

Admissions Policy

Individuals are eligible for admission to the community college if they are high school graduates or the equivalent, or if they are eighteen years of age or older and able to benefit academically from study at the community college as demonstrated by assessment scores in reading, writing, and mathematics. Minimum scores are noted in the chart below:

	Placement
Reading	EDE 10 or ENF 1
Writing	EDE 10 or ENF 1
Math	MDE 10 or MTE 1

Exceptions to this policy may be made by the college president only for documented reasons.

The College reserves the right to evaluate and document special cases and to refuse or revoke admission if the College determines that the applicant or student poses a threat, a potential danger, is significantly disruptive to the college community, or if such refusal or revocation is considered to be in the best interest of the College. The College also reserves the right to refuse admission for applicants who have been expelled or suspended from, or determined to be a threat, potential danger or significantly disruptive by another college. (see General Admissions Exceptions)

Individuals may be admitted to VHCC as curricular or non-curricular students. Students must satisfy required course pre-requisites or placement criteria before enrolling in a course that has requisite requirements. In order to receive any letter grade, a student must have attended a minimum of one class meeting or the equivalent in the case of an Online learning course.

For all curricular students, the following items are required:

a. A completed official application for admission with social security number requested.

b. Unless otherwise specified by the college, official transcripts from all high schools, colleges, and universities attended. Graduates who complete secondary school in a home school setting must provide a graduation date and may be required to provide documentation of coursework. The VCCS Student Information System academic records will be sufficient for colleges within the Virginia Community College System.

c. Additional information as stated by the college for admission to specific programs or curricula.

For all **non-curricular students**, a completed official application for admission is required with social security number requested.

Virginia Highlands Community College promotes and maintains educational opportunities without regard to race, color, sex, ethnicity, religion, gender, age (except where age is a bona fide occupational qualification), disability, national origin, or other non-merit factors. This institution prohibits sexual harassment including sexual violence.

General Admissions Exceptions

The College reserves the right to evaluate and document special cases and to refuse or revoke admission if the College determines that the applicant or student poses a threat, a potential danger, is significantly disruptive to the college community, or if such refusal or revocation is considered to be in the best interest of the College. The College also reserves the right to refuse admission for applicants who have been expelled or suspended from, or determined to be a threat, potential danger or significantly disruptive by another college. Below is the procedure if a denial of admissions is warranted. This provision applies to individuals who are in applicant status or those who are enrolled for a future semester. In extreme cases, such as convicted sex offenders or any student who poses a danger to the campus community, the College has the right to apply these provisions to dis-enroll currently enrolled students during a given semester session. Behaviors which present a threat or potential danger to the College community or other behaviors in which it is considered to be in the best interest of the College to refuse admission or revoke enrollment, but are not limited to any violation of the Violence Prevention Policy.

Procedures:

Upon notification to the Vice President of Instruction and Student Services that the applicant/enrolled student has exhibited threatening, violent, intimidating or disruptive behavior or any violation of the Violence Prevention Policy, the Vice President of Instruction and Student Services will conduct an investigation to evaluate the circumstances. After the investigation, if the College determines that the applicant is a threat or potential danger to the college community or if such refusal is considered to be in the best interest to the College, the student will be notified as follows:

Applicant with no enrollment:

After the investigation, the applicant will receive written notification at the home address listed in the student information system stating that admission to the College has been denied. The notification will state the denial is based on the College's determination that the applicant represents a threat or potential danger to the College or that the refusal of admission is considered to be in the best interest of the College. A service indicator will be placed on the applicant's record which will prevent the applicant from registering for classes.

Applicant with enrollment:

An applicant who becomes an enrolled student will receive written notification at the home address listed in the student information system stating that admission to the College is revoked and enrollment for the current or future semester is withdrawn. The notification will state the decision is based on the College's determination that the applicant represents a threat or potential danger to the College and/or their revoked admission and withdrawn enrollment is considered to be in the best interest of the College. The written notification will detail the procedures for due process and will provide the individual with explicit instructions on the appeal process. The College will reserve the class enrollment until the appeal process is complete, but the individual will not be allowed to attend class during the appeal process.

The individual is required to initiate the appeal process in writing within ten (10) calendar days of the notification by the College (as indicated by the date of the written notification from the College) in order to receive consideration to remain enrolled. Absent extreme extenuating circumstances, if the enrolled student fails to follow the appeal process within ten (10) calendars days of notification from the College he/she will forfeit the right to appeal, which will result in the College sending to the student written notification of administrative withdrawal of all current and future classes at the College, and revocation of admission for future semesters. The College will make every effort to expedite the hearing timeline.

Appeal process for enrolled student:

1. The College will notify the student of its investigation if a hold is placed on the student registering for classes, or taking advantage of any other student benefit.

2. The enrolled student will receive a letter from the Vice President of Instruction and Student Services detailing the denied status of the student, withdrawn enrollment and appeal procedure within ten (10) calendar days of the College's decision to deny or revoke admission and to withdraw the student from current or future enrollments. The enrolled student will be advised of the right to due process and request for appeal.

3. Upon receipt of a request for appeal from the student within the required ten (10) calendar days of notification, the Vice President of Instruction and Student Services will convene the Ad hoc Admissions Appeals Hearing Committee (AAAHC). In addition to the Vice President of Instruction and Student Services, the committee membership and appointment will be at the discretion of the President of the College. The purpose of the hearing is to provide the student notice of the basis for the College's decision and the right to provide his/her explanation of the facts, as well as for the AAAHC to evaluate the facts of the case. If, after the hearing, the AAAHC determines that the applicant or enrolled student represents a threat or potential danger to the College and/or the revoked admission and withdrawn enrollment is considered to be in the best interest of the College, the student's admission to the College will be revoked; the student will be administratively withdrawn from classes and the student will receive a tuition refund. The individual will be denied future admission/enrollment to the College.

4. The AAAHC will review the proceedings of the hearing and make a decision by a simple majority vote within fourteen (14) calendar days of receiving the written request for the appeal. The College will make every effort to expedite appeal process. The Vice President of Instruction and Student Services will convene the committee and serve as a member. The Vice President of Instruction and Student Services will inform the enrolled student by written correspondence of the AAAHC decision. The decision of the AAAHC will be final.

Admission Process for Convicted Sexual Offenders

The following procedures apply to applicants designated as convicted sexual offenders.

Procedures:

1. Upon notice that a convicted sexual offender has applied to the College, the Division of Enrollment Management and Student Services will place a hold (negative service indicator) on the applicant's file.
2. The Division of Enrollment Management and Student Services will notify the Vice-President of Instruction and Student Services who will send a letter to the student indicating that the student should contact Campus Police in order to arrange a meeting / hearing regarding the circumstances surrounding the hold on their application.
3. The Chief of Police (or designee) along with the Dean of Enrollment Management and Student Services (or designee) will facilitate the meeting with the student. During the meeting, the following information will be gathered:
    a. Nature of the offense for which he/she has been convicted;
    b. In the event that the applicant is a sexual offender, a statement acknowledging his/her understanding that his/her identity and status as a convicted sex offender will be publicized on the college campus in accordance with federal and state law upon admission.
    c. Parole officer contact information and conditions of parole.

   d. Psychologist or counselor contact information who can attest to applicant's behavior or condition.
   e. Justification for consideration of admission;
4. After the meeting, Campus Police and the Dean of Enrollment Management and Student Services (or designee) will confirm the information shared in the interview and make a recommendation to the Vice President of Instruction and Student Services on the applicant's participation at the College, based on the accuracy of the information provided by the applicant; the offense; and the potential likelihood of the applicant being a threat to the community.
5. If admission is granted, a letter from the Vice President of Instruction and Student Services stating the provisions of enrollment will be sent to the student (e.g. limitations on courses) as prescribed by conditions of parole or psychologist's information.
6. If the recommendation is to deny the applicant, the Vice President of Instruction and Student Services will send out the correspondence to the applicant. If denied admission, the applicant may appeal the decision by forwarding a written appeal to the Vice President of Instruction and Student Services. The appeal must be made within 10 business days of the decision. The appeal will be reviewed by a committee consisting of a faculty member, staff member, and a member of the Student Affairs Committee who will review the appeal and issue a decision within 10 business days from receipt of appeal.
7. In the event that a student self-reports or the information is provided regarding convicted sexual offender status after enrollment, the student will be called to a meeting and steps 3 through 6 will be applied.

The Vice President of Instruction and Student Services will send correspondence on all decisions.

Admission of Transfer Students

In most cases, a student who is eligible to continue enrollment at another college is eligible to transfer to Virginia Highlands Community College.

Transfer students who are ineligible to return to a particular curriculum in a previous college generally may not be allowed to enroll in the same curriculum in the community college until one semester elapses or until approved preparatory programs at the College is completed. The Admissions Committee of the College may decide on each case and can impose special conditions for the admittance of such students.

Each student transferring from another college should consult the Coordinator of Admissions and Records at the College for an assessment of credits in order to determine his/her standing before registering for classes. Generally, no credit will be given for courses with grades lower than "C." Transfer students may be advised to repeat courses in order to make satisfactory progress in their programs.

Transcripts of students transferring from non-regionally accredited colleges and universities will be evaluated on a course-by-course basis by the Coordinator of Admissions and Records.

Admission Priorities

When enrollment for any curriculum must be limited, priority will be given to qualified applicants who are residents of the VHCC service region and other Virginia residents who do not have access to a comparable program at their community college. Similar consideration may be given to applicants who live within areas in which the College maintains a clinical site or has other agreements.

The priority list is as follows:

1. Residents of the VHCC service region (City of Bristol, Washington County, and Western portion of Smyth County) and Tennessee residents from counties in which a clinical-site or other agreements exist (Johnson County and Sullivan County),
2. Other Virginia residents,
3. Out-of-state and international students.

The Virginia Highlands Community College Board has established the following schedule for considering applications: prior to April 1 applications will be considered for only those persons living within the political subdivisions supporting the College; after April 1 all Virginia residents will be considered for admission; and after May 1 out-of-state and international students with student (F-1 and F-2) and diplomatic (A-1 and A-2) visas.

Admission to English, Math, Biology, Chemistry, or Psychology Courses

Admission to specific courses is approved only when the student meets the prerequisite requirements or has instructor approval for the course.

For specific prerequisite and corequisite requirements, please refer to the Course Descriptions in this catalog.

Admission to Specific Curricula

In addition to the general admission requirements listed, specific requirements are prescribed for each curriculum of the College. These are listed in the Curriculum Offerings section of this catalog. Persons who do not initially satisfy the published academic requirements for a specific curriculum may be admitted to the curriculum with the condition that they complete the appropriate requirements.

It is policy to admit a student to curricula, as space permits. The appropriate college officer shall officially notify students of their admission to the curriculum.

Each student must be a graduate of an accredited high school or present passing score(s) on the General Educational Development Test (GED), or present passing score(s) on an Ability to Benefit test or otherwise be considered eligible by the College to be accepted to an associate degree, diploma, or certificate program.

Application for Readmission to the College

If a student in "good academic standing" has not been enrolled within the last three years (nine terms), he/she will be required to complete a new application for admission.

Classification of Students

All students are classified according to the following categories:

1. **Curricular Student**
   A student who has a high school diploma, a GED, or the ability to benefit is designated as a curricular student when all of the information required for general admission to the College has been submitted to the Division of Enrollment Management and Student Services and when the individual has been admitted to one of the curricula of the College.

2. **Non-Curricular Student**

A non-curricular student is one who is not formally admitted to one of the curricula but is classified according to the following student goals or conditions.

A. **Upgrading Employment Skills for Present Job**
   Student is employed and seeking to upgrade skills for a current job.

B. **Developing Skills for New Job**
   Student is seeking to develop skills for a new job.

C. **Career Exploration**
   Student is undecided about a career goal and an occupational choice. The College will provide counseling assistance to aid the student in making decisions concerning career/curricular goals. Such a student will be expected to declare another educational goal prior to completing 30 credit hours of course work.

D. **Personal Satisfaction and General Knowledge**
   Student is enrolled for reasons not related to specific occupational or educational goals.

E. **Transient Student**
   Student, while enrolled at a community college, maintains primary enrollment with another post-secondary institution.

F. **High School Student (with college approval only)**

   - students must be high school juniors or seniors who are age 16 or older

   - students must be qualified or prepared for the demands of a college level course and able to benefit from the enrichment opportunity (determined by appropriate high school personnel)

   - public school principal must approve/recommend the cross-registration of the high school student to the community college

   Limitations/Exclusions

   - no developmental courses may be approved for a dual enrollment arrangement

G. **Auditing a Course**
   Students desiring to attend a course without taking the examination or receiving credit for the course may do so by registering to audit that course. Students desiring to audit a course will register in the regular manner and pay the regular tuition. Audited courses carry no credit and do not count as part of the student's course load. Students desiring to change status in a course from audit to credit must do so within the add/drop period. Changes from credit to audit must be made by the official last day for students to withdraw from a class without penalty.

Disability Services

VHCC is committed to providing all students with equal access to academic programs, student activities, and other educational opportunities that enhance the college experience. The Office of Disability Services supports this goal by providing the appropriate accommodations and auxiliary aids to students with disabilities who request assistance. To request accommodations; students with disabilities should:

1. Contact the Office of Disability Services in ISC-124 at (276) 739-2404 or via email at kcopenhaver@vhcc.edu to schedule an appointment. This should be done immediately after applying to the college.
2. Provide current documentation of the disability. Documentation must be current, signed by a physician or other licensed professional, and include any functional limitations. Documentation may be emailed to kcopenhaver@vhcc.edu or mailed to the Office of Disability Services, Virginia Highlands Community College, P.O. Box 828, Abingdon, VA, 24212.

After completion of the intake process, an accommodation plan will be developed. The student and appropriate instructors will receive a copy of the plan. Accommodation plans remain active as long as the student is enrolled. Students who have not been enrolled for a period of two years or longer must complete a new request for disability services form and provide up-to-date documentation of their disability in order to receive accommodations.

Documentation Needed for Admissions

All students are required to complete an official application for admission (Note: social security number is requested). Those seeking in-state tuition also should complete an Application for Virginia In-State Tuition.

Additionally, all curricular students should provide official transcripts from all high schools, colleges and universities attended. The College may require additional documentation for some programs.

Dual Enrollment Student Admissions

Dual enrollment is restricted to high school juniors and seniors and home school students studying at the high school junior or senior levels. All students admitted under this section must demonstrate readiness for college, meet the applicable college placement requirements, and address all other college admission criteria. Home school students must provide a copy of a home school agreement approved by the school district or a letter from the local school board or a copy of the letter filed by the parent/legal guardian declaring home school for religious exemption. Documentation of parental permission is required for all dual enrollment students. Because enrolling high school freshman and sophomore students is considered exceptional, the college ready status of each freshman and sophomore student will be treated on a case-by-case basis. Formal approval by the College president is required.

• High school students who want to attend VHCC under the Principal's Permission provision must indicate high school status on the College application and submit a transcript of grades and have the "Principal's Permission to Enroll" form to enroll.

• Federal regulations do not permit financial aid to be awarded to college students who are simultaneously enrolled in public or private secondary educational programs.

International Applicants

Virginia Highlands Community College is authorized under federal law to enroll nonimmigrant alien students. The College welcomes applications from international students who meet the qualifications set forth in these guidelines. All stated requirements are subject to change based upon federal regulations or a determination by the College that a policy change is in the best interests of the student and/or the College community.

International applicants will be admitted only if they fulfill all general and special requirements for admission. International students are considered out-of-state residents for purposes of determining tuition rates and admission to programs with limited enrollment. Students who acquired a student visa through acceptance by another school or college will not be considered until they have secured a written release from the original institution. International students who are exclusively taking classes through online learning without entry into the United States will be evaluated on an individual basis. All documentation must be received by June 1 for Fall admission or October 1 for Spring admission.

1. **Financial Responsibility**
   No financial aid is available for international students. The College will not certify applications for international students to obtain a work permit until they have successfully completed 30 semester hours of coursework at the College with a 3.0 GPA, or resided in the U.S. for at least twelve consecutive months, whichever is the longest period of time. All international applicants must complete a form provided by the College and have it notarized to affirm they have financial resources sufficient to pay college and living expenses prior to being issued a SEVIS-20. The statement must include the amount of income the student will receive while attending college, the source of income, and the manner in which living expenses will be met. All international students holding F-1 and J-1 visas must purchase health and accident insurance. If the applicant is under 18, the parent or legal guardian must submit the notarized statement of financial support. All international students must have a local sponsor who will assume financial responsibility for the student.
2. **English Proficiency**
   International students whose native language is not English must document proficiency in the English language by submitting a TOEFL (Test of English as a Foreign Language) score. Official copies of the TOEFL scores must be submitted to Admissions and Records Specialist. The TOEFL test is required of all applicants who are not native speakers of English, in addition to all foreign students with visas, except those raised or schooled in Australia, Canada, Great Britain, Ireland, Jamaica, or other countries where

the College can determine that English is the language of instruction. A TOEFL score of 550 on the paper-based TOEFL test, 234 on the computer based TOEFL test, or 80 on the internet-based TOEFL is required, although achieving that score is no guarantee of admission. The applicant is responsible for making early arrangements for taking the test and should address inquiries to TOEFL, Educational Testing Service, Princeton, New Jersey 08540, USA. The Bulletin of Information, obtainable without charge, contains a description of the test and rules regarding application, fees, reports on the conduct of the test, lists of examination centers, examination dates, and an application blank. On the application for the test, the student should specify that the scores be sent to the Admissions and Records Specialist at VHCC. The official results of the TOEFL must be received at VHCC at least 60 days before the term for which the applicant seeks admission. Applicants who are in the United States and who have not taken the TOEFL or achieved the minimum cut score, may petition the College to evaluate them for admission during a visit to the campus. This evaluation will generally include completion of our freshman assessment (VPT) in English, reading, and mathematics including a writing sample on an assigned topic, followed by an interview with a member of the English faculty. The English faculty member will make the final admission decision based on the interview, writing, and test results. There is no appeal to this decision. There is no substitute for planning ahead on the part of international students wishing to gain admission to our College. Transfer applicants who have completed two semesters or terms of a non-ESL English composition course with above-average grades at an American college or university are not required to submit TOEFL scores.

3. **International Transcripts**
   International transcripts and documents must be submitted in their original form, accompanied by a certified English translation. Unofficial documents and documents without accompanying English translations will not be accepted. International transfer students must submit a syllabus of university study. This description of each course or subject studied must be submitted in English translation of the syllabus. Application without this information cannot be considered. It is required that transfer students seeking admission from international educational systems have a professional evaluation service review their transcripts with a course by course evaluation. Students currently enrolled in a U.S. system must still have their international transcripts evaluated.
4. **International Applicant Contact**
   For additional information about the process for international applicants please contact: the Admissions and Records Specialist, Virginia Highlands Community College, P.O. Box 828 Abingdon, VA 24212 or by phone at 276-739- 2508. Below is a checklist of admission requirements for international students:
   1. Application for Admission as a curricular student.
   2. Official English translated and notarized/certified secondary and college transcripts.
   3. Test of English as a Foreign Language (TOEFL) with a minimum score of 550 on the paper-based TOEFL (pBT) test and 234 on the computer-based TOEFL (cBT) test, or 80 on the internet-based TOEFL (iBT) is required and the test results cannot be more than two years old.
   4. Verification of health and accident insurance.
   5. Declaration of financial resources (must be in US dollars).
   6. Official transcripts from American colleges or universities attended.

Application Process for Students Applying from Abroad

Step 1: Apply to VHCC for an I-20

- Send all forms and required documents to the Admissions and Records Office by the application deadline.
- We will contact you if your application is complete or if you still need to fill out some documentation.
- If everything is in order, the College is authorized to issue you an I-20 document. This is an official document that confirms you are eligible to study at VHCC. Your I-20 will be issued within 10 working days.

Step 2: The Visa Interview

- Pay the SEVIS fee (Student and Exchange Visitor Information Service). The fee is currently $350 (USD). This may be paid online at the SEVIS Fee Payment information page.
- Make an appointment at the U.S. Embassy or Consulate for an interview. Many branches now use an online booking system.
- At the interview, you will be asked to show your relevant papers (I-20, financial papers, passport). You will be asked about your educational plans, your financial support and your plans for returning to your home country. Visit the U.S. Department of State's website for more information about the visa interview.
- If the consular officer determines that everything is in order, the officer is authorized to issue you an F-1 student visa.

Step 3: Travel to the U.S.

- After you receive your F-1 visa you should make travel arrangements.
- You may enter the U.S. no more than 30 days prior to the reporting date listed under #5 on your I-20.

Step 4: Check in at VHCC

- Check in at the Student Services Office. Bring your I-20, passport and I-94 card.
- The office will provide you with more information about orientation session, placement testing and your responsibilities as an F-1 international student.
- Take the English placement test. The result of the test will determine the level of English you will begin studying at the College or whether or not you need to take developmental English classes before starting a degree program.
- Meet with a counselor to review your test results and to register for your classes.

Placement Policy

Like other institutions of higher learning, Virginia Highlands Community College requires students applying to enroll in associate degree, and certificate programs and in courses that require a reading, writing, or math prerequisite to meet placement requirements for English and mathematics.

Students enrolling in Career Studies Certificate programs may be waived from placement, unless a course in the program requires a reading, writing, or math prerequisite.

Dual enrolled high school students who enroll in programs or courses must meet the admissions criteria specified for dual enrolled students and any applicable course prerequisites.

In determining students' readiness for college-level English and math courses, colleges will use the following criteria:

1. Any student who has earned an associate degree or higher or who has earned a C or better in college-level courses in math and/or English at a regionally accredited institution will be placed accordingly, provided they meet the prerequisites for the respective courses in their chosen program of study.

2. Any student who has successfully completed developmental courses at a non-VCCS institution will have their coursework evaluated for placement.

3. A student may submit a high school/home school transcript or an approved test score for placement evaluation. High school GPA (HSGPA) is valid for five (5) years after the date of high school graduation. SAT, ACT and GED Test scores are valid for five (5) years after the date of the test. Seniors who have not yet graduated may submit a transcript as of the completion of the first semester of the senior year to determine readiness for placement into college-level courses for the purpose of early admission.

   Math placement will be determined using one of the following measures.

Table M: Student Math Course Placement

If a student has. . .	**The student may enroll in. . .**
6+ years since high school graduation	Informed Self-Placement (See Advisor)
High School Grade Point Average (HS GPA) for Math Placement*	
Less than 2.0 HS GPA	MDE 10
2.0-2.99 HS GPA without HS Algebra 2*	MTH 111 MTH 132 MTH 154 + MDE 54 MTH 155 + MDE 55 MDE 60
2.0-2.99 HS GPA with HS Algebra 2*	MTH 111 MTH 132 MTH 154 + MDE 54 MTH 155 + MDE 55 MTH 161 + MDE 61
3.0+ HS GPA without HS Algebra 2*	MTH 111 MTH 132 MTH 154 MTH 155 MDE 60
3.0+ HS GPA with HS Algebra 2*	MTH 111 MTH 132 MTH 154 MTH 155 MTH 161
2.7+ HS GPA with a grade of C or better in Math Analysis/Pre-Calculus without trigonometry*	MTH 261

2.7+ HS GPA with a grade of B or better in Math Analysis/Pre-Calculus with trigonometry*		MTH 263
**High school GPA is valid for five (5) years after the date of high school graduation*		
SAT/ACT/GED Scores for Math Placement***		
SAT – Math	500 or above	MTH 111 MTH 132 MTH 154 MTH 155 MTH 161
	470-490 range	MTH 111 MTH 132 MTH 154 MTH 155 MTH 161+MDE 61
ACT – Subject Area Test Math	18 or above	MTH 111 MTH 132 MTH 154 MTH 155 MTH 161
	17	MTH 111 MTH 132 MTH 154 MTH 155 MTH 161 + MDE 61 MTH 155 MTH 161 + MDE 61
GED - Math	165 or above	MTH 111 MTH 132 MTH 154
	155-164 range	MTH 111 MTH 132 MTH 154 + MDE 54
	154 or below	MDE 10
****SAT, ACT and GED Test scores are valid for five (5) years after the date of the test.*		

= Students may complete the VPT – Calculus for placement into Pre-Calculus II, Calculus, and 200-level Statistics. Placement directly into Pre-Calculus II, Calculus, and 200-level Statistics based on HSGPA and highest-level courses taken will be at the discretion of each college.

English placement will be determined using one of the following measures.

Table E: Student English Course Placement

If a student has...	The student may enroll in...	
6 or more years since high school graduation	Informed Self-Placement (See Advisor)	
High School Grade Point Average (HS GPA) for English Placement*		
Less than 2.0 HS GPA	EDE 10	
2.0 to 2.99 HS GPA	EDE 11 + ENG 111 ENG 115	
3.0+ HS GPA	ENG 111 ENG 115	
Course	**Minimum Placement Requirement****	
EDE 10	1.99 or lower HS GPA	
EDE 11 + ENG 111	2.0 to 2.99 HS GPA	
ENG 111	3.0+ HS GPA	
ENG 115	2.0+ HS GPA	
SAT/ACT/GED Scores for English Placement***		
Test	**Student Score**	**The student may enroll in...**
SAT-ERW Evidence Based Reading & Writing	480 or above	ENG 111
	400-470	ENG 111 + EDE 11
ACT Subject Area Tests: English & Reading	18 or above	ENG 111
	15-17	ENG 111 + EDE 11
	14 and below	EDE 10
GED English	165 or above	ENG 111
*High School Grade Point Average (HS GPA) is valid for five (5) years after the date of high school graduation. Students who completed high school six (6) or more years ago will be enrolled based on self-informed placement.		
**Minimum placement requirements apply to students who completed high school five (5) or less years ago.		
***SAT, ACT, and GED scores are valid for five (5) years after the date of the test.		

Any student who is not placed by the criteria listed above will be required to meet with an advisor in regards to Informed Placement and Direct Enrollment.

Official SAT or ACT scores should be submitted to the Division of Enrollment Management and Student Services. An official report can be requested at www.collegeboard.org.

1. **Purpose of Placement Test**
   The purpose of these tests is to assure that students are academically prepared for college level work.
2. **When to Schedule Testing**
   It is recommended that students schedule testing prior to enrollment period and not wait until enrollment days. For example, if a student plans to enroll during fall semester, testing should occur during the summer prior to fall registration. All students must complete the VHCC Application for Admissions before placement testing. The Testing Center administers all placement tests (LRC 121A).
3. **Preparation for Testing**
   VHCC recommends that students plan to actively prepare and review for English testing. There are various suggestions available to guide preparation on the VHCC website under *Future Students>Placement Testing*. Also, a short video has been prepared which students are encouraged to watch prior to testing. VHCC recommends that students plan to actively prepare and review for mathematics testing. There are several suggestions available to guide preparation on the VHCC website on the *Future Students>Placement Testing* page in the Math Resources section.

4. **Retest Policy**
   Students who take the VPT and who do not enroll in developmental English/Math are allowed to take one (1) retest within twelve (12) months. Students who attempt a developmental English/Math course will be ineligible for a retest. Exceptions to this retest policy may be made on a case-by-case basis in accordance with established college procedures. VPT scores are valid for five (5) years after the date of the test. Previously taken developmental courses will be valid for five (5) years after term taken.

The counselors or English and mathematics faculty will document all mitigating circumstances that suggest an exception to the above placement rules.

Residence Requirements

To qualify for in-state tuition, a student must live in Virginia for at least one year immediately prior to the beginning of the semester. Applications for in-state tuition must be completed by all students seeking the in-state rate.

Student Level

1. **Freshman** - Students are classified as freshmen until 30 credits have been completed.
2. **Sophomore** - Students are classified as sophomores after 30 or more credits of course work have been completed.

Student Status

1. **Full-time Student** - A student is considered a full-time student if carrying 12 or more credits of course work.
2. **Part-time Student** - A student is considered a part-time student if carrying less than 12 credits of course work.

ACADEMIC POLICIES

Academic Honors

The College encourages a high level of academic achievement and seeks to recognize those students who excel in this area. The Vice-President's List and President's Honor Roll have been established for the purpose of recognizing scholastic achievement. Full-time students must complete 12 hours of coursework in addition to any developmental courses.

1. **President's Honor Roll**
   Full-time students earning a semester grade point average of 4.0 are placed on the President's Honor Roll. The semester average of a student who has earned an incomplete (I) will be computed when the Incomplete has been removed.
2. **Vice President's List**
   Full-time students earning a semester grade point average of at least 3.5 (with no D's or F's) will receive recognition by being placed on the Vice President's List.
3. **Merit List**
   Students enrolling for six to eleven credits during a semester and earning a GPA of 3.500 or more without any "I" or "F" grades will be placed on the Merit List.

Academic Load

The normal academic course load for students is 15-17 credits. The minimum full-time load is 12 credits and the normal maximum full-time load is 18 credits. Students must have a minimum grade point average of 3.0 and the approval of their faculty advisor and Counselor to carry an academic load of more than 18 credits. Students placed on academic warning or academic probation may be required to take less than the normal semester course load. Since the normal maximum academic load is 18 credits, no curriculum may officially list in any publication more than 18 credits per semester.

A minimum of 12 credits is required for full time enrollment status for financial aid, Veterans' Benefits, student loan deferments, or insurance enrollment status verification. Summer term is not required for most insurance status verifications and the regulations for Veterans' Benefits differ for summer and for academic sessions of less than 16 weeks. Veterans need to contact the VHCC Veterans' Office (276-739-2438) for enrollment status.

Academic Standing

1. **Good Academic Standing** - Students are considered to be "in good academic standing" if they do not fall under one of the below categories.
2. **Academic Warning -** Students who fail to attain a minimum GPA of 2.00 for any semester shall receive a notification of academic warning to inform them they are at risk of incurring negative academic standings in subsequent terms. Academic Warning is not an official standing.
3. **Academic Probation -** Students who fail to maintain a cumulative GPA of 1.5 shall be on academic probation until such a time as their cumulative average is 1.75 or better. The statement "Academic Probation" shall be placed on their permanent records but shall not be placed on the students' official transcripts. Students may be required to carry less than a normal course load the following semester and are required to consult with their counselor.
   A student pursuing a degree program is cautioned that, although an average between 1.5 and 1.99 may not result in formal academic probation, a minimum of 2.0 in the curriculum is a prerequisite to the receipt of an associate degree, diploma, or a certificate.
   Students shall be placed on probation only after they have attempted twelve semester credit hours.
4. **Academic Suspension** - Students on academic probation who fail to attain a semester GPA of 1.50 or better shall be placed on suspension only after they have attempted 24 semester credits. Academic Suspension shall be for one semester. The statement, "Academic Suspension," shall be placed on the students' permanent records but shall not be placed on the students' official transcripts. Students who are placed on academic suspension and wish to appeal may submit an appeal in writing to the Dean of Enrollment Management and Student Services (or designee) for reconsideration of the case. Suspended students may be reinstated at the conclusion of the suspension period and upon formal written petition to the Dean of Enrollment Management and Student Services and Enrollment Management (or designee). Students who have been reinstated from academic suspension must achieve a 2.0 GPA for the semester of their reinstatement and must earn at least a 1.75 GPA in each subsequent semester of attendance. The statement "Subject to Dismissal" shall be placed on the students' permanent records. Students who have been reinstated from academic suspension will remain subject to dismissal until their cumulative GPA is raised to a minimum of 1.75. Reinstated students may be required to carry less than a normal course load the following semester and are required to consult with their counselor. Students who are readmitted after being on academic suspension are required to meet with an academic counselor periodically throughout the first semester after readmission.
5. **Academic Dismissal -** Students who do not attain at least 2.0 GPA for the semester of reinstatement following academic suspension shall be academically dismissed. Students who achieve at least a 2.0 GPA for the semester of their reinstatement following academic suspension must earn at least a 1.75 GPA in each subsequent semester. Failure to attain a 1.75 GPA in each subsequent semester until the cumulative GPA reaches 1.75 shall result in academic dismissal. The statement "Academic Dismissal" shall be placed on the students' permanent records.

Academic dismissal normally is permanent. In exceptional circumstances, students may appeal. All appeals must be submitted thirty days prior to the first day of class for the semester in which the student plans to attend. Students who have been reinstated after academic dismissal will remain subject to dismissal until their cumulative GPA is raised to a minimum of 1.75. Reinstated students may be required to carry less than a normal course load the following semester and are required to consult with their counselor. Students who are re-admitted after being on academic dismissal are required meet with an academic counselor periodically throughout the first semester after readmission.

Adding a Course

Students may enroll in classes during the first full week of class through on-line enrollment procedures. After the first week students are not allowed to add a class unless it is in a subsequent term. Courses which do not follow regular term dates are considered dynamically dated classes and will have different add and drop dates.

Auditing a Course

Students who audit courses will not be required to take exams and will not receive credit for the course. To audit a course, students must receive permission from the instructional dean or designee, register in the regular manner, and pay regular tuition. Audited courses will not count toward enrollment status for financial aid, Veterans' Benefits, student loan deferments, or insurance enrollment status verification. Students may change status from audit to credit within the 15% add/drop period. Changes from credit to audit must be made within the posted deadline to change from credit to audit.

Class Attendance

Regular class attendance is required. When an absence is necessary, students are responsible for notifying the instructor prior to or soon after the absence. Frequent unexplained absences may result in dismissal from the course. Students are responsible for completing work missed, regardless of the reason for the absence. Any instruction missed and not subsequently completed will necessarily affect the grade of the student regardless of the reason for the absence. Absences cause students to miss more than work assigned—they also miss instruction. Faculty are not obligated to teach one-on-one when students are habitually absent. Please reference course syllabus for information on policies specific to a course.

Confidentiality of Student Records

Virginia Highlands Community College complies with the requirements of the Family Education Rights and Privacy Act of 1974 regarding confidentiality and student's access to student records. The privacy and confidentiality of all student records shall be preserved. Official student academic records, supporting documents, and other records shall be maintained only by appropriate members of the College staff employed for that purpose. Transcripts of educational records contain only information about academic status and are maintained by the Coordinator of Admissions & Records Office in the Division of Enrollment Management and Student Services. Access to this record is guaranteed to every student subject only to reasonable regulation as to time, place, and supervision.

The College may disclose personally identifiable information from a student's education records if such information has been designated as directory information. Directory information includes the student's name, major field of study, dates of attendance, number of credit hours enrolled, degrees, honors, and awards received, photos, and participation in officially recognized clubs and organizations, activities and sports. Also, the College will routinely provide local police departments with arrest and charge information which occurs on campus. Such directory information may be disclosed by the College to others without prior consent of the student unless the student should file a written objection with a college individual responsible for custody of such records no later than the time that the College has made such disclosure. In any case, the College may disclose directory information from the education records of an individual who is no longer in attendance at the College.

Grade reports will be made available to parents with the written permission of students. Confidential Release Forms for release or review of any official information from student records are available in the Division of Enrollment Management and Student Services and must be signed.

Continuing Education Unit

The Continuing Education Unit is used for the measurement, recording, reporting, accumulation, transfer and recognition of participation in programs which seldom in the past have been recorded in any formal or systematic way. A unit can be awarded for programs that are wholly structured to provide skills and/or knowledge for occupational improvement or for programs that are specifically organized to provide help in the solution of problems confronting the State.

One CEU is defined as "ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction."

Individuals seeking information concerning the Continuing Education Unit should direct inquiries to Workforce Development and Continuing Education.

Credit Hours Policy

The credit for each course must be indicated after the title in the course description. One credit is equivalent to one collegiate semester-hour credit. Each semester hour of credit given for a course is based on the "academic hour," which is 50 minutes of formalized, structured instructional time and a minimum of two hours of outside course work in a particular course weekly for fifteen weeks. This is a total of 750 minutes of instruction. In addition to this instructional time, appropriate evaluation will be required. If this evaluation is a final examination, a minimum of one hour will be scheduled for each semester hour of credit generated by the course, not to exceed three academic hours (150 minutes). Credits may be assigned to the activities as follows:

a. Lecture – One academic hour of lecture (including lecture, seminar, discussion, or other similar activities) and a minimum of two hours of outside course work per week, generally for 15 weeks, plus the evaluation or examination period, equals one collegiate semester-hour credit.
b. Laboratory – Two to five academic hours, depending on the discipline, of laboratory, clinical training, supervised work experience, coordinated internship, or other similar activities per week, and a minimum of two hours of outside course work, generally for 15 weeks, plus the evaluation or ex-amination period, equals one collegiate semester-hour credit.
c. Online Learning – In the case of online learning course offerings or hybrid courses that employ a mix of traditional contact hours and learning activities with students and faculty separated by time and place, the College will ensure that that content, competency coverage, and student outcomes are equivalent to those of traditional sections of the same class.

Curriculum Changes

Students interested in changing their program of study should consult with a Counselor and their advisor. Approval from an Academic Counselor is required.

Disclaimer

Virginia Highlands Community College provides its website, handbooks, and any other printed materials or electronic media for your general guidance. The college does not guarantee that the information contained within them, including, but not limited to, the contents of any page that resides under the DNS registrations of vhcc.edu is up-to-date, complete and accurate, and individuals assume any risks associated with relying upon such information without checking other credible sources, such as student's academic advisor. In addition, a student's or prospective student's reliance upon information contained within these sources, or individual program catalogs or handbooks, when making academic decisions does constitute, and should not be construed as, a contract with the college. Further, the college reserves the right to make changes to any provision or requirement within these sources, as well as changes to any curriculum or program, whether during a student's enrollment or otherwise.

Links or references to other materials and websites provided in the above-referenced sources are also for information purposes only and do not constitute the college's endorsement of products or services referenced.

Final Examinations

Students will be expected to take final examinations at the regularly scheduled times. No exceptions will be made without the permission of the Vice President of Instruction and Student Services or another appropriate academic administrator and the instructor of the course. The semester examination schedule is available online.

Final Grade Appeal Procedure

Level I: Final Grade Appeal to Faculty

For instances in which a student chooses to challenge a final grade, the student will communicate in writing with the faculty member to appeal the final grade. This communication will be submitted to the faculty member within **five (5)** College business days of receiving the grade. The faculty member will discuss the final grade appeal details with the student and will render a decision within **five (5)** College business days of receiving the student's appeal communication. The faculty member will retain documentation of this final grade appeal discussion and decision.

If a resolution is not reached between the student and faculty member and the student chooses to appeal beyond the faculty member's decision, the student will review the two criteria below. If one of the two criteria below are met and the student chooses to appeal the faculty member's decision, the student will complete a Final Grade Appeal form, to be submitted to the appropriate dean and copied to the faculty member **within 48 hours of receiving the faculty member's decision, or by 9 a.m. on the next College business day if the deadline falls on a weekend or after 5 p.m. on a weekday.**

*A student may request a Level II final grade appeal for one of the following reasons:

1. A procedural or substantive error occurred that significantly impacted the academic grade (e.g. substantiated bias, material deviation from established procedures); or

2. To consider new information unavailable during the original meeting that could substantially impact the original academic grade. A summary of this new information and its potential impact must be included in the forwarded appeal.

Level II: Academic Dean's Review

The appropriate Academic Dean will conduct a review of the information provided by both the student and the faculty member no later than ten (10) College business days following the student request for the review. The appropriate Academic Dean shall make a decision and communicate findings in writing to the student and the faculty member within five (5) business days after the review is completed.

After review, the appropriate Academic Dean may:

• Uphold the original decision

• Request a final grade change (may not be lower than original grade)

If the student chooses to appeal the appropriate Academic Dean's decision, the next step is a Level III final grade appeal.

Level III: Vice President's Review

An appeal of the appropriate Academic Dean's decision must be submitted by the student to the Vice President of Instruction and Student Services within 48 hours of the student receiving the appropriate Academic Dean's decision in writing, or by 9 a.m. on the next College business day if the deadline falls on a weekend or after 5 p.m. on a weekday. The Vice President of Instruction and Student Services may either:

• Uphold the appropriate Academic Dean's decision;

• Request a final grade change (may not be lower than original grade)

For the Final Grade Appeal procedure, the decision of the Vice President of Instruction and Student Services is the final decision for the College.

* Regarding sequential courses that require successful completion of a pre-requisite course taught in consecutive terms within semesters, the procedure described above will be expedited to reasonably accommodate all parties involved.

Time Limitation

Every effort will be made by all parties to expedite the disciplinary process. The time limitations specified for either party may be extended by written mutual agreement. If there is no written mutual agreement to extend the time limits set herein, the decision reached at the previous level shall be determined to be final.

Grade Point Average

Grade point average (GPA) is determined by dividing the total number of grade points earned by the total number of credits attempted.

1. **Semester Grade Point Average** - Semester GPA is determined by dividing the total number of grade points earned for the semester by the total number of credits attempted.
2. **Cumulative Grade Point Average** - Cumulative GPA, which includes all courses attempted, is computed each semester and is maintained on a cumulative basis as a record of the student's academic standing.
3. **Curriculum Grade Point Average** - A curriculum GPA, which includes only those courses applicable to the student's curriculum, is computed in order to ensure that the student satisfies the graduation requirement for that curriculum. When students repeat a course, only the highest grade earned is counted in the computation of the curriculum GPA.

Grading – Developmental Courses

A grade of "S" (Satisfactory) shall be assigned for satisfactory completion of Developmental course which are courses listed as either EDE or MDE.

Students making satisfactory progress but not completing all of the instruction objectives in Developmental courses may receive an "R" (Re-enroll). The "I" and "W" grades may be used under certain conditions. "I" grades require documented mitigating circumstances.

Students not making satisfactory progress in Developmental courses (courses listed as MDE and EDE shall receive a "U" (Unsatisfactory), and counselors will recommend consultation with the instructor to determine the subsequent sequence of courses for the student. Students are normally limited to two enrollments in the same remedial course.

Grading System

1. **Grades Assigned**
   Instructors are responsible for assigning a letter grade to reflect the quality of performance in each course. Quality points are assigned as follows:

Grade	Interpretation	Quality Points
A	Excellent	4
B	Good	3
C	Average	2
D	Poor	1
F	Failure	0
I	Incomplete	None
P	Pass	None
R	Reenroll	None
S	Satisfactory	None
U	Unsatisfactory	None
W	Withdrawal	None
X	Audit	None

The grades of A, B, C, D, P, and S are passing grades. Grades of F and U are failing grades. R and I are interim grades. Grades of W and X are final grades carrying no credit.

2. **Grades Applicable to All Courses**

I = Incomplete - No credit.

No grade point credit. The "I" grade is to be used only for verifiable unavoidable reasons that a student is unable to complete a course within the normal course time. To be eligible to receive an "I' grade, the students must (1) have satisfactorily completed more than 60% of the course requirements and attendance and (2) must request the faculty member to assign the "I" grade and indicate why it is warranted. The faculty member has the discretion to decide whether the "I" grade will be awarded. Since the "incomplete" extends enrollment in the course, requirements for satisfactory completion shall be established through consultation between the faculty member and the student. In assigning the "I" grade, the faculty member must complete documentation that (1) states the reason for assigning the grade; (2) specifies the work to be completed and indicates the percentage in relation to the total work of the course; (3) specifies the date by which the work must be completed; and (4) identifies the default grade (B, C, D, F, P, R, or U) based upon course work already completed. Completion dates may not be set beyond the last day of the subsequent semester (to include summer term) without written approval of the Chief Academic Officer of the campus. The student will be provided a copy of the documentation. A grade of "F" will be assigned at the end of the subsequent semester unless the "I" grade is changed by the faculty member through the normal grade change processes. An "I" grade will be changed to a "W" only under documented mitigating circumstances which must be approved by the Chief Academic Officer of the campus.

W = Withdrawal - No credit.

A grade of "W" is awarded to students who withdraw or are withdrawn from a course after the add/drop period but prior to the completion of 60% of the session. After that time, the student will receive a grade of "F" unless mitigating circumstances are documented in the student's academic file.

X = Audit - No credit.

Students desiring to attend a course without taking the examination or receiving credit for the course may do so by registering to audit through the usual registration process and paying the normal tuition. Permission of the division dean or another appropriate academic administrator is required to audit a course.

Audited courses carry no credit and do not count as part of the student's course load. Students desiring to change status in a course from audit to credit or from credit to audit must do so within the add/drop period for the course.

Students who desire to earn credit for a previously audited course must re-enroll in the course for credit and pay normal tuition to earn a grade other than "X." Advance standing credit should not be awarded for a previously audited course.

3. **Grades for Courses with Academic Credit/No Grade Point Credit**

R = Re-Enroll – No grade point credit.
The "R" grade may be used as a grade option, in developmental and ESL courses only, to indicate satisfactory progress toward meeting course objectives. In order to complete course objectives, students receiving an "R" grade must re-enroll in the course and pay the specified tuition.

S = Satisfactory - No grade point credit; applies to developmental courses, noncredit courses, and specialized courses and seminars at the discretion of the College**.**

U = Unsatisfactory - No grade point credit; applies to developmental courses, noncredit courses, and specialized courses and seminars at the discretion of the College.

4. **Academic Renewal Policy**

Students, who return to the college after a separation of five (5) years, or more, may petition for academic renewal. The request must be in writing and submitted to the Division of Enrollment Management and Student Services

If a student is determined to be eligible for academic renewal, D and F grades earned prior to reenrollment will be deleted from the cumulative and curriculum grade point average (G.P.A.), subject to the following conditions:

a. Prior to petitioning for academic renewal the student must demonstrate a renewed academic interest and effort by earning at least a 2.5 G.P.A. in the first twelve (12) semester hours completed after reenrollment.

b. All grades received at the College will be a part of the student's official transcript.

c. Students will receive degree credit only for courses in which grades of C or better were earned prior to academic renewal, providing that such courses meet current curriculum requirements.

d. Total hours for graduation will be based on all course work taken at the College after readmission, as well as former course work for which a grade of C or better was earned, and credits transferred from other colleges or universities.

e. The academic renewal policy may be used only once and cannot be revoked once processed.

Graduation

The State Board for Community Colleges will establish minimum standards and will authorize community colleges to issue appropriate associate degrees, diplomas, and certificates to individuals who satisfactorily complete course and program requirements.

1. **Degree and Certificate Awards**
Virginia Highlands Community College offers the following degrees, diplomas, and certificates for students who successfully complete approved programs at the College:

Associate of Arts and Sciences Degree (AA&S) is awarded to students majoring in Business Administration, General Studies, Education, and Science who may plan to transfer to four-year colleges or universities after completing their community college programs.

Associate of Applied Science Degree (AAS) is awarded to students majoring in one of the occupational-technical curricula who may plan to obtain full-time employment immediately upon graduation from the College. (While college transfer is not a primary goal in the AAS Degree programs, opportunities may be available for students to move from these programs into advanced degree programs.)

The Diploma is awarded to students who complete a non-degree occupational program that is two years in length.

The Certificate is awarded to students who complete a non-degree program that is one year in length.

Certificate in Career Studies is awarded to students who complete a non-degree occupational program that is equivalent to at least one semester of study.

2. **Associate Degree Requirements**

To be eligible for graduation with an associate degree from a community college, the student must:

A. Have fulfilled all of the course and credit-hour requirements of the degree curriculum with a minimum of 25 percent (25%) of the credits acquired at the College awarding the degree;
B. Have been certified for graduation by the appropriate college official;
C. Have earned a grade point average of at least 2.0 in all studies attempted that are applicable toward graduation in his/her curriculum;
D. Have filed an application for graduation with the Coordinator of Admissions & Records in the Division of Enrollment Management and Student Services which may be waived in the case of the General Education Certificate/Uniform Certificate of General Studies (UCGS);
E. Have resolved all financial obligations to the College and returned all library and college materials.

3. **Certificate and Career Studies Certificate Requirements**

To be eligible for graduation with a certificate or career studies certificate from the College, a student must:

A. Have fulfilled all of the courses and credit-hour requirements of the certificate curriculum as specified in the College catalog with a minimum of 25 percent (25%) of the credits acquired at the College awarding the certificate;
B. Have been certified for graduation by the appropriate college official;
C. Have earned a grade point average of at least 2.0 in all studies attempted that are applicable toward graduation in their curricula;
D. Have filed an application for graduation with the Coordinator of Admissions & Records in the Division of Enrollment Management and Student Services;
E. Have resolved all financial obligations to the College and returned all library and college materials.

If a student pursues a degree program but completes only the credits required for a certificate program, the division dean and the Vice President of Instruction and Student Services may recommend that a certificate be awarded.

4. **Second Degree or Certificate**

VHCC will award students more than one degree, diploma, certificate or career studies certificate in accordance with the state policy indicating that the awards must differ from one another by at least 25% of the credits. The College may grant credit for all previously completed applicable courses that are requirements of the additional certificate or degree. It may also, when appropriate, substitute alternate courses for those courses for which the students received credit in the previous certificate, diploma, or degree. Students who are seeking more than one credential should work with an academic counselor to plan accordingly.

5. **Graduation Honors**

A student who has fulfilled the requirements for graduation as outlined, is eligible for graduation honors. Honors recognitions are based upon the cumulative grade point average. Additionally, the honor recognitions for the graduation ceremony are based upon scholastic achievements at the end of the semester prior to graduation. Honor recognitions are recorded on the student's program as follows:

Grade Point Average	Honor
3.2 to 3.49	Cum Laude (with honor)
3.5 to 3.79	Magna cum laude (with high honor)
3.8 to 4.00	Summa cum laude (with highest honor)

6. **Graduation Commencement Ceremony**

Virginia Highlands Community College has formal graduation exercises in May for students completing curricula.

A. Diplomas will be mailed to the graduate's home mailing address in the Student Information System (SIS) 10-12 weeks after the end of their final semester. Students are responsible for ensuring the mailing address in (SIS)> Student Center is accurate.

B. Students who need up to two (2) courses to meet graduation requirements may petition the Student Affairs Committee for permission to walk in the ceremony. They must submit a plan to complete these courses by the end of summer semester. The written petition must be completed and submitted to the Vice President of Instruction & Student Services by March 30. The Student affairs Committee will evaluate the plan for graduation and make a recommendation to the Vice President of Instruction & Student Services.

C. Students who have applied for graduation and fail a Spring Semester class must complete the written petition and appear before an ad hoc committee to request permission to walk in the Spring ceremony.

Catalog Year for Graduation

The catalog year used to determine graduation requirements is the one in effect at the time of the student's initial program placement into the plan, or any catalog thereafter, as long as the student has maintained an active status with the college. In the event that there has been a break in a student's enrollment at the college resulting in discontinuation, the catalog in effect at the time of the student's re-admission into the plan, or any catalog thereafter, is the catalog that shall be in effect for the student. Following a three-year period of non-enrollment resulting in discontinuation, the student may only be re-admitted to those plans that are currently active. A student may not be re-admitted to a plan which has been inactivated.

Repeating a Course

If a student repeats a course, the highest grade earned will count. A student usually is limited to two (2) enrollments in the same credit course, including audit (X), withdrawal (W) and failure (F). Exceptions to this policy must be approved by the Vice President of Instruction and Student Services. Students must petition for a third enrollment by following these procedures:

1. Complete the petition for third enrollment form (available in Division offices).
2. Obtain approval signature from the faculty member teaching the course.
3. Obtain approval signature from the Division Dean.
4. Obtain approval signature from the Vice President of Instruction and Student Services or designee.
5. Submit the approved petition to the Division of Enrollment Management and Student Services.

This limitation does not apply to the courses in the Curriculum Guide identified as General Usage courses: 090, 190, 290; 095, 195, 295; 096, 196, 296; 097, 197, 297; 098, 198, 298; 099, 199, 299.

Waiver of Requirements

Students who have completed educational programs or obtained work or training experience may petition the appropriate Division Dean for a waiver for required courses in a particular curriculum. Through subsequent interviews and tests, students may qualify for waiver of curriculum admission requirements, course prerequisites, and courses in a curriculum. The recommendation of the course instructor or Academic Counselor is required. Students may substitute equivalent or more sophisticated courses in the same field in any approved curriculum with the approval of the appropriate division dean and the Vice-President of Instruction and Student Services provided they can, by previous educational accomplishment or college administered examination, demonstrate the capability for success in the courses requested.

To be eligible for graduation with an associate degree, diploma or certificate from VHCC, the student must have fulfilled all of the course and credit-hour requirements of the degree curriculum with a minimum of 25 percent (25%) of the credits acquired at the College awarding the degree.

In accordance with Policy 5.6.5.2.e, the physical education requirements for the degree, diploma and certificate programs may be waived for veterans, and the college may grant up to 3 credits of physical education/health credits for basic military training to satisfy the physical education/health credit requirement of the veterans' curricula.

Advanced Standing

Students may receive Advanced Standing and credit in courses if they can demonstrate that previous educational study, training, work experience, military service or college administered examination results entitle them to advancement in the courses for a particular curriculum. Approval of the faculty member, appropriate division dean and Vice President of Instruction and Student Services is required. Instructional division faculty will clearly describe and establish the validity of the evaluation process and criteria for awarding credit for prior experiential learning. Student records shall reflect Advanced Standing and applicable source. To be eligible for graduation with an associate degree, diploma or certificate from VHCC, the student must have fulfilled all of the course and credit-hour requirements of the degree curriculum with a minimum of 25 percent (25%) of the credits acquired at the College awarding the degree.

Advanced Standing awards credit for competency in subject matter based upon previous academic study or occupational experience. Credits waived will not be included in the computation of the student's cumulative grade point average. Consequently, the student's Grade Point Average (GPA) will be based only on courses actually completed at Virginia Highlands Community College.

A. Advanced Standing may include college credit and advancement based upon individual college participation in the Advanced Placement Program of the College Entrance Examination Board. Virginia Highlands Community College participates in the College Board's Advanced Placement Program by awarding Advanced Standing to entering students who have made 3, 4, or 5 scores on Advanced Placement (A.P.) Tests. Students may receive credit in the academic disciplines listed below in which the A.P. Test is offered. Students planning to transfer are encouraged to check with the transfer institution to confirm acceptance of A.P. credits.

The faculty members of the appropriate academic divisions of the College have established policies for advanced placement in the disciplines listed below. Students should have official A.P. Score Reports sent directly to the Admissions Specialist in the summer following their senior year of high school. The report is then submitted to the Coordinator of Admissions and Records for evaluation. Upon the Coordinators recommendation and approval from the appropriate division dean and Vice President of Instruction and Student Services, approvals are sent to the Coordinator of Admissions & Records to be added to the academic record and for official student notification.

ADVANCED PLACEMENT TEST SCORE POLICIES

EXAMINATION	SCORE	COURSE EXAMINATION	CREDITS
Biology	3, 4 or 5	BIO 101 and 102	8
Chemistry	3, 4 or 5	CHM 111 and 112	8
English: Language & Composition (11th grade)	3, 4 or 5	ENG 111	3
English: Literature and Composition (12th grade)	3	ENG 111	3
English: Literature and Composition (12th grade	4 or 5	ENG 111 and 112	6
English: Language & Composition **and** Literature and Composition	3, 4 or 5 on each	ENG 111 and 112	6
History: United States	3, 4 or 5	HIS 121 and 122	6
Mathematics: Calculus AB	3, 4 or 5	MTH 263 and 264	8
Government and Politics: United States	3, 4 or 5	PLS 135	6 3
Principles of Psychology	3, 4 or 5	PSY 200	3

The College reserves the right to award advanced placement in other courses on an individual basis. Students who have AP credit scores 3 or higher in a given discipline may petition for credit by contacting the Academic Counselor.

B. Credit by Examination is a means of achieving Advanced Standing through satisfactorily demonstrating subject-matter competency on an examination administered by the College. Students may request advanced placement credit by examination if they believe they have mastered a specific body of knowledge. Instructional Faculty in the appropriate academic division assess the student's

request, administer the appropriate test(s) and/or other assessments designed to measure the student's competency, and recommend or deny credit based on their findings. The faculty will forward the student's petition, copies of assessment measures, documented findings and their recommendation to the appropriate division dean for review. The petition is then forwarded to the Vice President of Instruction and Student Services for approval. The approved petition is sent to the Coordinator of Admissions & Records to be added to the academic record and for official student notification.

C. Credit by previous completion of college course work, Transfer Credit, is one means of achieving Advanced Standing through an administrative determination by the College that equivalent course coverage has been satisfactorily completed at an accredited post-secondary institution. Official transcripts and the Transcript Evaluation Request Form are submitted to the Admissions Specialist in the Division of Enrollment Management and Student Services. A copy of the transcript is forwarded to the Coordinator of Admissions and Records for evaluation. Upon the Coordinators recommendation and approval from the appropriate division dean and Vice President of Instruction and Student Services, approvals are sent to the Coordinator of Admissions & Records to be added to the academic record and for official student notification.

D. Credit for Equated Occupational Experience, including experiential learning and professional certifications is one means of achieving Advanced Standing through an administrative determination by the College that the occupational experience of an individual is at least equivalent to the course(s) and credits to be exempted. If through past experience the student feels that he/she knows the subject matter, the student may request that the instructional faculty in the discipline consider awarding such credit. If the faculty agree that the student has sufficient competency, the instructor may administer an examination to determine and document the extent of the student's competency. The student and faculty must document demonstrated skills and competencies and submit the request for advanced standing with the faculty's recommendation to the appropriate division dean for review. Students may submit portfolios as a means of documenting competency in a given field. The petition is then forwarded to the Vice-President of Instruction and Student Services for approval. The approved petition is sent to the Coordinator of Admissions & Records to be added to the academic record and for official student notification.

E. Credit by Advanced Placement is one means of achieving Advanced Standing through the administration of the College Level Examination Program (CLEP). Tests of the College Level Examination Program (CLEP) are designed by The College Board to validate student learning and receive college credit. VHCC serves as an open testing center. General CLEP examinations are 90-minute, objective tests that measure achievement in the liberal arts, English, composition, humanities, mathematics, natural sciences, social sciences, and history. Subject examinations measure achievement in specific college level courses. Tests can be scheduled by contacting the Testing Center at VHCC. The CLEP registration guide can be obtained from the Testing Center or by writing to The College Board, Box 1822, Princeton, New Jersey 08541 or visit CollegeBoard CLEP Exams.

It is the responsibility of the student to ascertain the acceptability of specific tests for particular courses and in the event the student plans to transfer. Faculty have recommended credit be awarded at VHCC for CLEP as follows:

Subject	Type and Title of CLEP Exams	VHCC Courses	Equated VHCC Credits
Biology	Subject (General Biology)	BIO 101 BIO 102	4 4
Chemistry	Subject (General Chemistry)	CHM 111 CHM 112	4 4
Economics	Subject (Prin. of Macroeconomics) (Prin. of Microeconomics)	ECO 201 ECO 202	3 3
English	General (English Composition) with essay	ENG 111	3
	Subject (American Literature)	ENG 241 ENG 242	3 3
	Subject (English Literature)	ENG 243 ENG 244	3 3
Government	Subject (Amer. Government)	PLS 135	3 3 3
History	Subject (Western Civilization)	HIS 101 HIS 102	3 3
Mathematics	Subject (Pre-Calculus I & II)	MTH 161 MTH 162	3 3
	(Calculus w/Elementary Functions)	MTH 263 MTH 264	3 3

Allow 2-3 weeks to receive your score report.

F. Credit may be granted as a means of achieving Advanced Standing through applicable Armed Service School Experiences, and for successful completion of correspondence courses and subject standardized tests (SST) of the Defense Activity for Non-Traditional Educational Support (DANTES), formerly the United States Armed Forces Institute (USAFI). Advanced Standing may also be awarded in accordance with the ACE Guide to the Evaluation of Educational Experiences in the Armed Services.

Tests of the Defense Activity for Non-Traditional Educational Support (DANTES) designed by The College Board serve to validate student learning and receive college credit. VHCC no longer serves as a DANTES testing center. DANTES examinations are objective tests measuring achievement in the areas of mathematics; specialties in the social sciences such as human/cultural geography, lifespan development psychology, counseling, anthropology and others; specialties in the business fields

such as finance, accounting, business law, organizational behavior, and others; applied technology in the areas of electrical circuits, electronic devices, technical writing and refrigeration technology among others; foreign languages; humanities; and physical science. Students requiring information may contact the Educational Testing Service of The College Board, P. O. Box 6604, Princeton, New Jersey 08541-6604.

Official CLEP and DANTES score reports should be submitted to the Admissions Specialist in Student Services. The report is then submitted to the Coordinator of Admissions and Records for evaluation. Upon the Coordinator's recommendation and approval from the appropriate division dean and Vice President of Instruction and Student Services, approvals are sent to the Coordinator of Admissions & Records to be added to the academic record and for official student notification.

VHCC will accept the recommended cut off score for the CLEP and DANTES examination determined by the American Council on Education based on the national 50th percentile. CLEP and DANTES examinations are pass/fail examinations that recommend a P grade for the national 50th percentile cutoff; however, only credit is awarded for Advanced Standing and grades are not posted on the student's academic record.

G. Currently licensed LPNs who have been accepted to the nursing program may be offered the option of entering a summer Bridge Program - providing they have completed all the general education courses required for the LPN to RN bridge program. Applicants must have graduated from an approved LPN program after May 15, 2016 OR provide documentation of 1 year (2000 hours) of full-time LPN work experience in direct patient care during the past three years with written verification from employer at the time of application. LPNs enrolled in the bridge program option will take nursing courses in the summer semester and then move directly into the second year of the program in the fall semester.

H. The College will consider awarding credit for scores of 5, 6 or 7 on most higher-level International Baccalaureate (IB) examinations subject to the review and approval of the appropriate departments. No credit will be awarded for standard-level examinations. To receive credit for IB exams, students must have official results sent to the Admissions Specialist in Student Services. The report is then submitted to the Coordinator of Admissions and Records for evaluation. Upon the Coordinator's recommendation and approval from the appropriate division dean and Vice President of Instruction and Student Services, approvals are sent to the Coordinator of Admissions & Records to be added to the academic record and for official student notification.

The specific decisions regarding awarding credits will be made on a case by case basis by the appropriate academic divisions. The transferability of these credits to other two- and four-year colleges varies widely. Each college sets its own policy on required scores and credits awarded. When developing academic plans, students need to consult with their proposed transfer institution.

Administration of Advanced Standing

The following criteria regulate Advanced Standing credit:

A. Students must petition in writing for Advanced Standing and must provide official documentation as requested by faculty.

B. The determination of such credit must be made by qualified faculty at Virginia Highlands Community College and according to procedures and standards approved by the faculty to ensure that assessment procedures are appropriate for the credit awarded.

C. If documentation and interviews are used in lieu of examinations; the faculty must demonstrate that these methods provide assurances of academic comparability to credit earned by traditional means.

D. International applicants must provide official transcripts with English translation, if necessary. It is required that international transfer students have a professional evaluation service review their transcripts with a course by course evaluation.

E. By policy, residency requirements dictate that students must complete 25% of their course work at the institution granting an associate degree, diploma or certificate.

F. Virginia Highlands Community College will award credit only:

1. For documented learning which ties the prior experience to the theories and data of the relevant academic field,
2. To matriculated students, credit will be posted on the student's academic transcript as Advanced Standing credit and upon request from another institution, VHCC will document how such learning was evaluated and the basis on which such credit was awarded.

Withdrawal from a Course

1. **Student Initiated Withdrawal**

A student may withdraw from a course without academic penalty during the first 60% of a session. The following policies apply:

A. **Fifteen Percent of the Semester**

If a student withdraws from a class prior to the end of the add/drop period for the session, the student is removed from the class roll, no grade is awarded, and a refund is processed.

B. **Sixty Percent of the Semester**

After the add/drop period, but prior to completion of 60% of a session, a student who withdraws from a course will be assigned a grade of "W".

C. **After Sixty Percent (Late Withdrawal)**

Students who have not withdrawn from a course by the official withdrawal date will receive the earned grade for the course. Exceptions to this policy will be granted only with documented mitigating circumstances accepted by the faculty member teaching the course. A grade of withdrawal implies that the student was making satisfactory progress in the course at the time of withdrawal. In order for a late withdrawal to be approved, the Vice President of Instruction and Student Services must also agree in writing with the mitigating

reasons. The student may appeal the decision by following the Student Policies Appeal Process.

2. Faculty Initiated Withdrawal

A. **Dated Classes**
A dated class is any class that meets within a term but for only two - four days. All students absent the first day of a two- or four-day class will be administratively withdrawn on the next business day. The reinstatement policy does not apply to two- or four-day classes. All financial aid students should check with the Financial Aid Office to determine the effect on their award.

B. Semester Long Classes

1. **Fifteen Percent of the Semester**
The instructor must withdraw students who have not attended class during the first 15 percent of the semester. The student is removed from the class roll and no grade is awarded. Only the instructor may approve an appeal for reinstatement into the class.

Students may petition the instructor for reinstatement within five (5) working days of the official processing date on the withdrawal form or Navigate email notification (Petition form is available in the division offices).

2. **Sixty Percent of the Semester**
The instructor may withdraw students who have stopped attending and/or have not completed sixty (60) percent of the course work on or before the official 60% withdrawal date. A grade of "W" is assigned for the course. Only the instructor may approve an appeal for reinstatement into the class.

A student's request for reinstatement must be made to the instructor within five (5) working days of the official processing date on the withdrawal form (Petition form is available in the division offices).

TUITION & FINANCIAL AID

Financial Aid

VHCC strives to assure that no one be denied the opportunity of attending the College for financial reasons. Toward this end, a variety of financial aid programs are available for qualified students. Students wishing to apply for financial aid may secure application forms and information from the Office of Financial Aid or by visiting the VHCC Financial Aid Web Site. All applicants must file a Free Application for Federal Student Aid (FAFSA) to determine their eligibility for federal and state financial aid programs.

VHCC is required by federal and state regulations to review financial aid applicants who are selected for a process known as "Verification" by the U.S. Department of Education (DOE). VHCC will verify all financial aid applicants that complete a FAFSA and are selected by the Central Processor to be verified. VHCC also reserves the right to select applicants to be verified if information is found to be questionable.

Who is Eligible for Financial Aid?

To be eligible for most federal and state aid programs, students must:

1. Be a U.S. citizen or an eligible noncitizen; Have financial need;
2. Be admitted to, and pursuing, an eligible degree or certificate program;
3. Have a high school diploma or a General Education Development (GED) certificate;
4. Have a valid Social Security number;
5. Meet satisfactory academic progress;
6. Electronically sign a statement on the Free Application for Federal Student Aid (FAFSA) certifying that federal student aid will be used only for educational purposes;
7. Electronically sign a statement on the FAFSA certifying they are not in default on a federal student loan and do not owe money on a federal grant;
8. Register with the Selective Service if required; and
9. No financial aid is available for audited courses.

Students admitted as non-curricular or as pending acceptance into a curriculum, are ineligible for financial aid.

VCCS Satisfactory Academic Progress (SAP) Policy

Federal regulations require that a student receiving federal financial aid make satisfactory academic progress in accordance with the standards set by the College and the federal government. These limitations include all terms of enrollment, whether or not aid was awarded or received. Satisfactory Academic Progress (SAP) standards also apply to all federal and state aid, state as well as scholarships. Progress is measured throughout the academic program by the student's cumulative grade point average (Qualitative) and by credits earned as a percentage of those attempted (Quantitative or Pace of Completion). In addition, students must complete their programs of study before attempting 150% of the credits required to complete the program. The College Financial Aid Office will evaluate satisfactory academic progress before aid is awarded and after grades are posted for every term, starting with their first term of enrollment. Some career studies certificate programs (i.e., shorter than 16 credits in total length) are ineligible for student financial aid, but those credits will be counted toward all SAP requirements (GPA, Completion Rate, Maximum Timeframe, and Developmental Maximum) if the student later enrolls in an eligible program.

I. STUDENT FINANCIAL AID STATUS

A. Financial Aid Good Standing (GS) – Students who are meeting all aspects of the SAP policy or successfully following a designated academic progress plan.

B. Financial Aid Warning Status (WS) – Students who fail to meet SAP for the first time (excluding students who have already attempted 150% of the credits required for their programs of study) will be automatically placed in a Warning Status for one (1) term and are expected to meet SAP requirements by the end of that term. Students who fail to meet satisfactory academic progress requirements at the end of the warning status term will be placed on financial aid suspension. However, with a successful SAP appeal, those students will be placed on financial aid probation and will retain financial aid eligibility.

C. Financial Aid Probation Status (PS) – Students who have successfully appealed financial aid suspension are placed in Probation Status (PS). Students in Probation Status (PS) are eligible to receive financial aid for one (1) semester, after which they MUST be in Good Standing (GS) or meeting the requirements of an academic progress plan that was pre-approved by the College Financial Aid Office. (See "IV. Appeals" for additional information.)

D. Financial Aid Suspension Status (SS) – Students who do not meet the credit progression schedule and/or the cumulative grade point average standard, or who fail to meet the requirements of their pre-approved academic progress plan, will be placed in Suspension Status (SS). Students in Suspension Status (SS) are not eligible to receive financial aid.

E. Academic Suspension (AS) – Academic requirements for avoiding warning status and staying in school differ from financial aid requirements for SAP. Academic status will be noted on registration records; financial aid status will be noted on financial aid pages in SIS. Any student suspended from the College for academic or behavioral reasons is automatically ineligible for financial aid.

II. EVALUATING PROGRESS

A. Quantitative Standards or Pace of Completion

Completion Rate (67% Rule): Students must, at a minimum, receive satisfactory grades in 67% of cumulative credits attempted. This calculation is performed by dividing the cumulative total number of successfully completed credits by the cumulative total number of credits attempted. All credits attempted at the College (except audits, which must be entered as such by the class census date) are included. All credits accepted in transfer count as both attempted and successfully completed credits. This evaluation will be made prior to aid being awarded and after grades are posted at the end of each semester a student is enrolled at the College. Credits with satisfactory grades at the College are those for which a grade of A, B, C, D, S, or P is earned.

Maximum Hours (150% Rule): In order to continue receiving financial aid, a student must complete his/her program of study before attempting 150% of the credits required for that program. Developmental and ESL course work are excluded in this calculation. Attempted credits from all enrollment periods at the College plus all accepted transfer credits are counted; whether or not the student received financial aid for those terms is of no consequence.

Transfer Students: Credits officially accepted in transfer will be counted in determining the maximum number of allowable semester credit hours for financial aid eligibility.

Second Degree Students: Credits earned from a first degree or certificate must be counted if the student changes programs or attempts a second degree or certificate. Depending on the circumstances, an appeal might be warranted.

ESL and Developmental Studies: Students may receive financial aid for a maximum of 30 semester hours of Developmental Studies courses as long as the courses are required as a result of placement testing, the student is in an eligible program of study, and SAP requirements continue to be met. ESL credits are unlimited in number as long as they are taken as part of an eligible program and SAP requirements continue to be met.

Additional Considerations for Quantitative or Pace of Completion Standards

- Withdrawals (W grades) that are recorded on the student's permanent academic transcript will be included as credits attempted and will have an adverse effect on the student's ability to meet the requirements of the completion rate for financial aid.
- Incomplete Grades: Courses that are assigned an incomplete grade are included in cumulative credits attempted. These cannot be used as credits earned in the progress standard until a successful grade is assigned.
- Repeated courses enable the student to achieve a higher cumulative grade point average. Students can repeat courses with financial aid until successfully completed but repeating courses adversely affects the student's ability to meet completion rate requirements. Financial aid can be considered for successfully completed classes that are repeated to achieve a higher grade but for only one additional attempt. Only the latest attempt will count toward the cumulative grade point average.

B. Qualitative Standards

Cumulative GPA Requirements (GPA Rule): In order to remain eligible for financial aid consideration, students must meet minimum cumulative grade point average requirements based on a progressive scale. Only non-remedial courses with grades of A, B, C, D, and F are included in this calculation. Transfer credits are excluded. ***In order to graduate, a minimum cumulative grade point average of 2.0 is required.***

Total Number of Credits Attempted	GPA Requirement
1-15	1.5
16-30	1.75
31+	2.0

III. REGAINING ELIGIBILITY FOR FINANCIAL AID

Students who do not meet the credit progression requirements (Quantitative or Pace of Completion) and/or cumulative grade point average requirements (Qualitative) will be immediately ineligible for financial aid. Removal from financial aid does not prevent students from enrolling without financial aid if they are otherwise eligible to continue their enrollment.

Unless extenuating circumstances exist and an appeal is granted (see "IV. Appeals" for additional information), a student in financial aid suspension should expect to continue classes at his or her own expense until SAP requirements are again met.

Students who fail to meet these SAP Standards and who choose to enroll without benefit of student financial aid may request a review of their academic records after any term in which they are enrolled without the receipt of financial aid to determine whether they have again met SAP standards. If the standards are met, eligibility is regained for subsequent terms of enrollment in the academic year. Students should consult their campus financial aid advisors for assistance in appealing any element of this policy or to determine how to regain eligibility for financial aid.

IV. APPEALS

Under certain circumstances, students who fail to meet SAP standards and lose eligibility for financial aid can appeal the financial aid suspension. Students must clearly state what caused the suspension and must also clearly indicate what has changed that will now allow the student to succeed. Appeals are encouraged if:

- Extenuating circumstances exist (i.e., student's serious illness or accident; death, accident or serious illness in the immediate family; other mitigating circumstances), or
- The student has successfully completed one degree and is attempting another, or
- The student on suspension for other than Maximum Hours (150%), who has not yet met SAP requirements, has during suspension enrolled in and successfully completed at least 12 semester credits at the College with a minimum GPA of 2.0.

Students appealing a suspension must:

- Complete the College's SAP Appeal Form in entirety,
- Attach documentation in support of the appeal, including an advisor statement showing remaining credits to graduation for 150% appeals, and
- Submit all items to the College Financial Aid Office.

Only complete appeal submissions, with documentation, will be evaluated by the Financial Aid Office. The decision is final. Depending on the circumstances, the student could be required to complete additional requirements (i.e., see a career counselor or another type of counselor, meet with an advisor to develop an academic progress plan for completion, limit enrollment, etc.) before an appeal is granted. The goal is to help the student get back on track for graduation. The reasonableness of the student's ability for improvement to again meet SAP standards and complete the student's program of study will be carefully considered. Appeals will be approved or denied. Students who have appeals approved will be in probationary status for the coming term. ***During probationary status, the student must meet the conditions of the appeal as communicated to him or her by the Financial Aid Office, or the student will return to suspension.*** If an academic progress plan has been pre-approved by financial aid, continuing to meet the requirements of that plan will put the student back into good standing.

Excluded Credits from Enrollment Status

Under the following conditions, certain course credits will not be included when calculating the current enrollment status used to determine eligibility for aid:

1. A course is registered as audit;
2. A developmental course if the student has attempted at least 30 semester hours of developmental course work.
3. Courses which do not apply toward graduation in the student's current curriculum.

Repayment of Title IV Aid when a Student Withdraws

If a student withdraws on or before 60% of the class has been completed, federal financial aid regulations established by the Higher Education Amendments of 1998 require that a portion of the total Title IV funds awarded to that student (Pell Grant, FSEOG, Coma, VGAP) must be returned. The determination is based on calendar days.

Withdrawal Date for a Student Receiving Title IV Aid

To determine the withdrawal date, the Office of Financial Aid will consider:

1. The date in the Student Account System that the student was withdrawn;
2. The date the student officially notified the Division of Enrollment Management and Student Services of intent to withdraw;
4. The date that the College determines that a student stopped attending class because of an illness, accident, grievous personal loss, or other circumstances beyond the student's control.
5. The date the student last attended an academically-related activity such as an exam, a tutoring session, a computer-assisted instructional session, an academic counseling session, an academic advisement session, or study session assigned by the College.

The College must document a student's withdrawal date and maintain the documentation.

VHCC Disbursement Process

Disbursement of federal and state grant funds to student accounts will occur within 4 weeks following the last day to add a class for the semester. A notification of the disbursement date will be posted on the VHCC website. In approximately four (4) weeks after this date, students may expect to receive any refund check that they are entitled to after tuition, and approved charges are deducted. Students have the option to choose a reloadable Visa branded prepaid debit card or direct deposit (ACH) into their existing bank accounts.

Aid Programs Available

VHCC does not participate in the Direct Lending Loan Programs, however, the College does participate in the following grant and work programs:

PELL Grant – Students may apply for this federally-funded program by completing the Free Application for Federal Student Aid. This non-repayable grant is available to eligible students enrolled in an eligible certificate or degree program. Maximum award for the 2022-2023 award year will be $6495 for full-time students.

Federal Supplemental Educational Opportunity Grant – VHCC participates in this federal program which provides direct awards to a limited number of students. Grants may range from $100 to $4000 depending on the student's need, financial resources, and cost of attending the College.

Federal Work-Study Program – Numerous jobs on campus and off campus are available each year under the Federal Work-Study Program. Students who have financial need and enrolled in at least half time may qualify for participation in this program. Community service jobs are also available to students. Foreign students who are in this country on temporary visas are ineligible to participate in the work-study program. These funds cannot be applied to tuition or books.

Commonwealth Grant Program – The COMA Grant Program is a needs-based program of grants to students at VHCC who are permanent residents of Virginia enrolled in 6 or more credit hours. Funding is provided solely by the Commonwealth of Virginia. Individual awards vary dependent upon need and funding level. Awards range from $200 up to the cost of tuition.

Virginia Guaranteed Assistance Program – The VGAP Grant Program is a needs-based program to students at VHCC who are permanent residents of Virginia, first time freshmen who graduated from a Virginia high school, have a 2.5 high school grade point average and enroll full time. Awards vary from $600 to tuition and fees. Renewal students must maintain a 2.0 and continuous full-time enrollment.

Part-Time Tuition Assistance Program (PTAP) – This VCCS funded grant provides tuition assistance only to students in an eligible degree or certificate program who enroll for at least 1 but less than 9 credits. Students must demonstrate need and be domiciled in Virginia.

Transfer Grants - The Transfer Grant makes a four-year college degree more affordable for Virginia Highlands Community College graduates who have financial need (determined by the FAFSA). It provides a $1,000 grant for all eligible students, with an extra $1,000 for students who pursue undergraduate work in engineering, math, nursing, teaching or science. For more information, contact the Division of Enrollment Management and Student Services (276-739-2438).

Alternative Student Loan Program - Alternative loans, also called private loans, are offered by lending institutions as an additional source of funds for higher education. These funds are not part of the federal government loan programs; VHCC does not participate in the Direct Loan Programs which include Stafford or Plus student loan programs.

Other Fees, Charges and Fines

In accordance with the rules and regulations of the State Board for Community Colleges, the College has established the following fees:

Student Testing Fees: Students shall not be charged for credit by exam.

Community Education/Public Service: Fees shall be established for Community Education and Community Service offerings equal to or greater than the direct cost of such offerings plus 30% for administrative overhead support.

Student Activity Fee: A Student Activity fee ($2 per credit hour) is required of all students registered for credit classes. The fee subsidizes student activities and cultural events, including the Arts Array program. VHCC students receive free admission to all these events.

Parking Fee: A Parking fee ($1 per credit hour) is required of all students registered for credit classes. The fee is used to make needed repairs to parking lots and parking lot lighting.

General:

Students who damage or lose school property (laboratory or shop equipment, supplies, library materials, etc.) are expected to pay for such losses. In addition, students are expected to pay fines for lost library items, improper parking or other infractions as determined by the College administration with approval of the Virginia Community College Systems Offices.

Transcripts, certificates, diplomas or degrees will not be issued nor will a student be permitted to enroll until payments due to the business office, bookstore, or library have been paid in full.

Books and Materials: Students are expected to purchase all books, supplies, consumable materials that they will use in their classes and studies. The estimated cost of these items will usually average between $200 - $400 per semester for a full-time student. Disability Services can arrange for textbooks when merited.

Students may use excess financial aid in the College Bookstore to purchase only required books and supplies for registered courses deemed eligible for financial aid for the term. A course would be deemed ineligible for financial aid if any of the following circumstances exist:

1. The course does not apply to the student's academic program;
2. The course has already been repeated once after having been successfully completed. Successful completion is defined as any grade other than an F, U, R, or W;
3. The course is developmental and the student has already attempted 30 or more developmental credits; and/or

Items not approved for purchase with financial aid include but are not limited to apparel, food, cell phones, gift items, and gift/prepaid cards. VHCC allows the purchase of course related electronics (e.g., laptops, tablets, cameras, and scientific calculators) limited to one-time purchase.

During the book purchase period, books and supplies purchased using financial aid cannot be returned or sold back to the College Bookstore for cash. Amounts for returned items must be credited back to the aid types that paid for the books and supplies on the student's account.

Student Field Trips: All students participating in field trips will be responsible for related expenses, including transportation charges. Student activity funds will cover costs associated with official student activity trips.

Purchase of Tools: All students pursuing a curriculum requiring the use of hand tools are required to furnish their tools. The College will furnish specialized tools that an employer normally would provide for a mechanic or technician.

Refunds

1. Students will be eligible for a refund for credit hours dropped by the last date to qualify for a refund date as noted in the Academic Calendar. To be eligible for a refund, a student must log into their My VHCC account and drop a course by the refund deadline date. It is a student's responsibility to be aware of all deadline dates listed in the Academic Calendar. After the drop period has passed, there shall be no refunds.
    A. Refunds will be on a per-credit hour rate.
    B. Refunds will not exceed tuition charges.
    C. Funds will be restored to the appropriate account from which payment was made.
    D. Refunds are subject to proper bookstore clearance for returned/re-saleable or paid items (if applicable).
2. In accordance to Virginia Community College system Policy, 4.3.2.2, exceptions to the refund policy are considered only with documented extenuating circumstances for the following reasons:
    - Administrative error
    - Extreme financial hardship
    - Major medical emergency of extraordinary circumstances
    - National emergency or mobilization declared by the President of the United States
    - Other highly unusual emergency or extenuating circumstances as determined by the College

    Tuition refund requests after the drop date must be initiated no later than the end of the subsequent academic semester in which the refund is requested. Requests outside this deadline will not be accepted. To request a refund after the drop period, an Add/Drop form must be submitted along with documentation to the Vice President of Instruction and Student Services.
3. For students receiving financial aid, after the add/drop period has passed, return of Title IV funds only will be processed on a percentage based upon the time of withdrawal and the amount of Title IV aid earned as of that date. When a recipient of Title IV grant (Pell or FSEOG) assistance withdraws from the College during a semester in which the recipient began attendance, the College must determine the amount of Title IV grant assistance that the student earned as of the student's withdrawal date in accordance with federal regulations. Students should contact the financial aid office regarding the financial consequences prior to withdrawing.

Refunds, Credits, Reinstatement as a Result of Military Service
Pursuant to 23-9.6:2 of the Code of Virginia, and corresponding SCHEV Guidelines, VHCC provides for the tuition relief, refund, and reinstatement of students whose service in the uniformed services has required their sudden withdrawal or prolonged absence from their enrollment. Service in the uniformed services is defined as service (whether voluntary or involuntary) on active duty in the Armed Forces, including such service by a member of the National Guard or Reserve, for a period of more than 30 days under call or order to active duty of more than 30 days.

Students need to submit documentation of the official military orders to the Veterans Officer before the end of the semester of withdrawal or prolonged absence.

a. Tuition and Required Fees

Should a student be ordered to active duty (for reservists) or be mobilized (active military) as described in the Code of Virginia, Section 23-9.6:2, and he/she requests to be withdrawn from VHCC after the census date, the student may elect either to be deleted from the registration file and be awarded a full refund or to be administratively withdrawn with no refund and assigned a grade of "W".

VHCC offers the option for such refunds to be retained and to be applicable to tuition and fees charged in the semester or term in which the student returns to study.

b. **Textbooks**
VHCC will process refunds for textbooks according to the contractual arrangement with Follett, VHCC Bookstore vendor.

c. **Academic Credits and Grades**
Students who are subject to conditions described in Code of Virginia, Section 23-9.6:2 have the opportunity to receive an incomplete grade ("I") until released from active duty (for reservists) or mobilization (for active military personnel). All course requirements shall be completed within one year from the date of release from active duty or mobilization.

Students may be given the option of taking their examinations prior to regularly scheduled times as an exception to VCCS policy 5.7.1 in accordance with the SCHEV Guidelines on Tuition Relief, Refund, and Reinstatement.

Reinstatement

Students who are called to active duty or are mobilized shall be assured a reasonable opportunity to be reinstated in the same programs of study without having to re-apply for admission if they return to VHCC after a cumulative absence of not more than five years so long as the student provides notice of intent to return to the institution not later than three years after the completion of military service.

Scholarships

At the local level, scholarships and grants-in-aid are made available and awarded on the basis of the student's scholastic achievement, financial need, character or occupational goal. The VHCC Educational Foundation, Inc. offers a number of scholarships provided by interested citizens and civic organizations. All inquiries concerning financial aid and scholarship programs should be made to the Office of Financial Aid.

The VHCC Educational Foundation, Inc. is a separately incorporated non-profit corporation which secures voluntary support and manages, invests, and expends such funds solely for the benefit of Virginia Highlands Community College and its students. The Foundation Board of Directors volunteer their expertise and service on behalf of the College and community.

The Foundation assists Virginia Highlands Community College in a variety of ways: through the endowment and distribution of scholarship funds, the purchase of equipment and furnishings, and financial support of academic and community enrichment programs. For additional information, call (276) 739-2538.

Tuition

(Includes basic tuition and applicable surcharge)

1. **General**. The 2022-23 tuition rate listed below is effective Summer 2022. Current tuition rates will be published on the VHCC website at www.vhcc.edu/tuition. Subject to change by the State Board for Community Colleges.

   Tuition Rate Per Credit Hour

   Virginia Resident $157.00
   Out-of-State Resident $357.10
   30-Mile Radius.....$157.00

   Upon paying tuition, students are eligible to obtain a student identification card that can be used in the VHCC Library, Bookstore, and other campus facilities.

   Unless otherwise notified, students must meet all published payment deadlines each semester. Students who do not meet the deadline will be removed from the official class roster. Only paid students will be allowed to attend class.

2. **Reduced Tuition Charges**. The Virginia General Assembly in 1984 enacted legislation clarifying the state code regarding eligibility for in-state tuition. To be eligible for the in-state tuition rates, students must live in Virginia for a minimum of one year before the first official day of classes. If a student's parent or parents are employed full-time in Virginia but live out of state, special provisions for determining eligibility for reduced tuition rates exist. Spouses and dependents of active duty military personnel are entitled to show eligibility for in-state tuition rates in the same manner as nonmilitary personnel, except that the one-year durational period may be waived for active duty military personnel (and their dependent children) who voluntarily elect Virginia as their permanent residence for domiciliary purposes.

   The General Assembly enacted legislation in 1995 that authorized the State Board for Community Colleges to charge a contract tuition rate to students enrolled in Virginia community colleges who live within 30-miles of campus and are eligible for in-state tuition in a state contiguous to Virginia, provided that state has a reciprocal agreement for Virginia residents.

   Please check with the Coordinator of Admissions & Records in the Division of Enrollment Management and Student Services for more specific guidelines concerning changes in the domicile law.

3. **Waived Tuition.** Section 23.7.1 of the Code of Virginia provides that free tuition shall be granted to children of persons killed, disabled, missing in action or prisoners in any armed conflict.

   Eligibility of such children shall be determined by the Virginia Department of Veterans Services who shall certify in writing to the admitting institution that tuition should be waived in accordance with the provisions of Section 23-7.1. Applications are available in Division of Enrollment Management and Student Services Office. The Virginia Military Survivors and Dependents Education Program also applies to spouses of veterans killed or permanently disabled due to combat.

4. **Waived Tuition.** In accordance with Section 23-7.4 of the Code of Virginia, all students are eligible for in-state tuition for courses taken through the College's dual enrollment program.

5. **Senior Citizens Higher Education Act of 1974 as Amended, 1976, 1977, 1982 and 2015.**

   A. To be eligible for free tuition and fees for credit courses, part-time or full time, a person must meet the following criteria:

      1. Be 60 years of age or older.

2. Be a legal resident of Virginia.
3. Report a taxable income not exceeding $23,850 for Federal Income Tax purposes for the year prior to enrollment.
4. Be admitted to a course after all tuition-paying students have been accommodated.
5. Be admitted to the College as a student.

B. To be eligible for free tuition when auditing a credit course or taking a non-credit course, a person must meet the following criteria:

1. Be 60 years of age or older.
2. Be a legal resident of Virginia.
3. Be admitted to a course after all tuition-paying students have been accommodated.
4. Be admitted to the College as a student.

Estimated Full-Time Cost of Attendance 2020-21

In-State students

Books and Supplies	$ 1,200
Personal/Miscellaneous	$ 1,800
Room and Board	$ 3,200
Transportation	$ 3,400
Tuition and Fees	$ 3,930
Total	**$13,530**

Out of State students

Books and Supplies	$1,200
Personal/Miscellaneous	$1,800
Room and Board	$3,200
Transportation	$3,380
Tuition and Fees	$10,155
Total	**$19,735**

Veterans Benefits

Information concerning veterans' educational programs and benefits may be obtained from the Veterans Officer located in the Division of Enrollment Management and Student Services. Veterans must first apply for Veterans Education Benefits at www.benefits.va.gov/gibill then contact the VHCC Veterans Officer, located in the Student Services Office. It is the responsibility of students eligible for Veterans Administration benefits to secure the necessary forms from this office. Assistance in completing and submitting these forms is also provided. Veterans may request a military transcript at the Joint Services Transcript, jst.doded.mil (Army, Coast Guard, Marine Corps, and Navy) * which will be evaluated by the Student Services Center to receive transfer credits at Virginia Highlands Community College.

*Air Force personnel can request their military transcripts through the Air Force Transcript Portal at https://www.airuniversity.af.edu/Barnes/CCAF/Display/Article/803247/community-college-of-the-air-force-transcripts/.

If you have questions regarding your qualifications of veteran's benefits or to explore your options for maximum use, please call the Veterans Administration toll-free number at 888-442-4551 (1-888-GIbill1) or visit the website www.benefits.va.gov/gibill.

All academic policies as included in this catalog apply equally to all students at Virginia Highlands. However, there are a few guidelines specifically applicable to the administration of veterans certified for benefits through the Veterans Administration.

1. Veterans Officer will consult with veterans who fail to attend classes regularly.
2. Veterans Officer will report to the Veterans Administration as soon as possible any change in the status of veterans, whether that be a change of curriculum, reduction or increase in course-load or withdrawal.
3. Veterans who fail to maintain good academic standing must be counseled by a Counselor at the College prior to veterans' benefits being reinstated.
4. Virginia Highlands Community College grading policies will be used to determine whether veterans are maintaining satisfactory progress. According to College and the Veterans Administration policies, students must make satisfactory academic progress. If suspended or dismissed, students must appeal to the Dean of Enrollment Management and Student Services (or designee) and meet with the Admissions Committee. Students who have been reinstated must achieve a 2.0 GPA for the semester of their reinstatement. At the conclusion of this semester, enrollment for successful students receiving veterans' educational benefits will be certified.
5. The physical education requirements for the degree, diploma and certificate programs may be waived for veterans (please see Veterans Officer), and the College may substitute other credits to satisfy the total credit requirements of the veteran's curriculum.

Additional information and forms are available on the VHCC website at www.vhcc.edu/veterans.

Tuition Relief for Active Duty Personnel

As required by Virginia Code Section 23-9.6.2, VHCC will provide tuition relief, refund, and reinstatement of students whose active military status during a time of national emergency has required their sudden withdrawal or prolonged absence from their enrollment.

Chapter 31/Chapter 33 Fee Deferment Policy

If a student wishes to use Chapter 31 or Chapter 33 the University will defer students' semester charges. These semester charges will be deferred a minimum of 90 days from the tuition deadline. Charges not covered by the VA must be paid by the tuition deadline to prevent penalty fees. Penalties will not be imposed on charges covered by the VA, but may be imposed on charges that are past due and not covered by the VA.

Fall deferment ends November 21

Spring deferment ends April 11

Summer deferment ends October 5

Veterans Access, Choice, and Accountability Act of 2014 (As Amended by Public Law 114-315) and Title 38, U.S.C Section 3679(c)

The following individuals shall be charged the in-state rate, or otherwise considered a resident, for tuition purposes:

• A Veteran using educational assistance under either chapter 30 (Montgomery G.I. Bill – Active Duty Program) or chapter 33 (Post9/11 G.I. Bill), of title 38, United States Code, who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence) and enrolls in the school within a period of active duty service of 90 days or more.

• Anyone using transferred Post-9/11 GI Bill benefits (38 U.S.C. § 3319) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence) and enrolls in the school within a period of active duty service of 90 days or more.

• Anyone using transferred Post-9/11 GI Bill benefits (38 U.S.C. § 3319) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence) and the transferor is a member of the uniformed service who is serving on active duty.

• A spouse or child using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence).

• An individual using educational assistance under chapter 31, Vocational Rehabilitation and Employment (VR&E) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence) effective for courses, semesters, or terms beginning after March 1, 2019.

• Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school. The person so described must have enrolled in the school prior to the expiration of the three-year period following discharge or release as described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States Code.

• According to Public Law 117-68, Title 38 USC 3679(c)(2)(A), all public institutions can only charge in-state tuition and fees to students covered under Chapters 30, 31, 33, and 35 pursuant to the Veteran Access, Choice, and Accountability Act of 2014 with amendments.

EXPLANATION OF DEGREES/COURSES

College Transfer Degrees

The college transfer programs include first- and second-year courses in arts and sciences and pre-professional courses that transfer to four-year colleges and universities. A number of four-year degree programs are available on the campus of VHCC through the Southwest Virginia Higher Education Center (SVHEC) which was established in 1991 to provide expanded educational opportunities for the citizens of the region. For additional information contact the SVHEC at 276-619-4300 or www.swcenter.edu.

Associate of Arts and Sciences Degree programs are designed with two primary goals in mind: (1) to offer the student a widely accepted program of general preparation for upper-division work in his/her chosen professional field, stressing a balance of required courses common to most baccalaureate degree programs; and (2) to offer maximum flexibility so that the student may select specific courses that may be required at the college or university to which transfer is contemplated.

Guaranteed Admissions Agreement
Through system-wide negotiated agreements, students who graduate from Virginia Highlands Community College with an associate's degree and a minimum grade point average are guaranteed admission to 23 of the Commonwealth's four-year colleges and universities. For more information, visit the online tool located at https://www.vhcc.edu/current-students/academic-resources/transferw or contact Student Services.

Articulation Agreements
VHCC has articulation agreements with a number of colleges and universities. For more information contact Student Services.

Minimum High School Requirements or Equivalents for College Transfer Programs

4 units of English
3 units of college preparatory mathematics
1 unit of laboratory science
1 unit of social studies

College Transfer Programs
Associate of Arts & Sciences (AA&S)
Business Administration
Business Administration - Specialization in Business Information Technology
Education
Education – Specialization in Art
Education - Specialization in Teacher Preparation
Education – Specialization in Theatre Arts
General Studies
Science
Science - Specialization in Engineering
Science - Specialization in Natural Resources

Certificate (C)
Uniform Certificate of General Studies (UCGS) **Career Studies Certificate (CSC)**
Applied Music
Pre-Pharmacy Science

Transfer Tool

The State Council of Higher Education for Virginia has implemented an online tool designed to clearly identify which courses will transfer from Virginia community colleges to four-year institutions. The SCHEV Transfer Tool is available at http://www.schev.edu.

Cooperative Education

Co-op/Internship students are employed part-time at work experience sites in positions related to their future career goals. The typical work week is 10-25 hours, depending upon the number of credits to be earned. It is preferred that students take advantage of the Internship Program (without pay) while working at nonprofit entities. Experiential learning combined with classroom theory enhances the development and professional preparation of the Co-op/Internship student.

Developmental Courses

Developmental courses do not fulfill degree requirements. They are designed to help students overcome academic deficiencies and build the foundation needed to succeed in college-level courses.

The developmental courses at VHCC provide supplementary and compensatory learning experiences that are directly related to curricular or subject areas. These courses assist individuals in developing both basic study skills and subject knowledge necessary to succeed in their college programs.

Increasing numbers of students are continuing, extending, or updating their educational experience in areas of occupational-technical skills and in traditional academic areas. With this growth, VHCC assumes the responsibility to support and enhance each student's opportunity and potential for success through the developmental studies courses and through a continued commitment to serve the educational needs of the service region.

General Education Requirements

The programs in general education at VHCC emphasize broad learning that goes beyond job training and skill development. Each degree and certificate program of the College contains prescribed general education courses, including academic courses in the humanities/fine arts, social/behavioral sciences, natural sciences, mathematics, wellness and communication skills. General education is that portion of the collegiate experience that addresses the knowledge, skills, attitudes, and values characteristic of educated persons. It is unbounded by disciplines and honors the connections among bodies of knowledge.

Virginia Highlands Community College is committed to offering its students programs that encompass the common knowledge, skills, and attitudes required by each individual to be more effective as a person, a worker, a consumer, and a citizen. Through a combination of general education courses, specialized courses in the major field, and student development courses, graduates are provided with a collegiate experience that supports the development of the following general education goals.

Student Learning Outcomes for Each of the General Education Goal Areas

The State Council of Higher Education for Virginia (SCHEV) has updated its general education requirements. The current outcomes are currently in development by Virginia Highlands Community College. The outcomes will be included in a catalog addendum once they are approved by SCHEV.

VHCC degree graduates will demonstrate competency in the following general education areas:

1. Civic Engagement
Civic Engagement is the ability to contribute to the civic life and well-being of local, national, and global communities as both as social responsibility and a life-long learning process. Degree graduates will demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.

2. Critical Thinking
Critical Thinking is the ability to use information, ideas and arguments from relevant perspectives to make sense of complex issues and solve problems. Degree graduates will locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.

3. Professional Readiness
Professional Readiness is the ability to work well with others and display situationally and culturally appropriate demeanor and behavior. Degree graduates will demonstrate skills important for successful transition into the workplace and pursuit of further education.

4. Quantitative Literacy
Quantitative Literacy is the ability to perform accurate calculations, interpret quantitative information, apply and analyze relevant numerical data, and use results to support conclusions. Degree graduates will calculate, interpret, and use numerical and quantitative information in a variety of settings.

5. Scientific Literacy
Scientific Literacy is the ability to apply the scientific method and related concepts and principles to make informed decisions and engage with issues related to the natural, physical, and social world. Degree graduates will recognize and know how to us the scientific method, and to evaluate empirical information.

6. Written Communication
Written Communication is the ability to develop, convey, and exchange ideas in writing, as appropriate to a given context and audience. Degree graduates will express themselves effectively in a variety of written forms.

Table 5-1
Minimum Requirements for
Associate Degrees in the VCCS

	Minimum Number of Semester Hour Credits				
General Education:	**(1) AA**	**(2) AS**	**(3) AA&S**	**(4) AFA**	**(5) AAA / AAS**
Communication	6[a]	6[a]	6[a]	6[b]	3-6
Humanities/Fine Arts/Literature	6[c]	6[c]	6[c]	3-9	3-6
Social/Behavioral Sciences	6[d]	6[d]	6[d]	3-9	3-6
Natural Sciences	4	4-8	4-8	4	0-6[e]
Mathematics	3	3-6	3-6	3	0-6[e]
Institutional Specific General Education Courses	5-6	5-6	5-6	0	0
Total for General Education =	30-31	30-38	30-38	19-28	15
As specified above, degree programs must contain a minimum of 15 semester hours of general education as defined by SACSCOC.					
Other Requirements for Associate Degrees:					
Student Development	1-2	1-2	1-2	1-2	1-2
Transfer Core[f] (columns 1-4)	27-32	20-32	20-32	34-43	43-53
Career/technical courses (column 5)					
Total for Degree =	60-63	60-63	60-63	60-63	60-69

Notes:

[a] Each of the courses in communication must be in written communication.
[b] One course in humanities/fine arts for the Fine Arts major must be a literature course.
[c] Each of the two courses cannot be from the same discipline area (e.g. humanities).
[d] One course in social/behavioral sciences must be a history course and the second required course cannot be history.
[e] A total of 3-6 semester hours is required in either natural sciences and/or mathematics for the AAA and AAS.
[f] Transfer core includes additional general education and/or major courses.

General Education Courses

General Education Courses for Associate of Applied Science Degrees, and Certificates

English Composition
ENG 111-112 College Composition I-II
ENG 115 Technical Writing

Humanities: Study of human culture
*ART 201-202 History of Art I-II
CST 130 Introduction to Theater
CST 151-152 Film Appreciation I-II
ENG 245 – British Literature
ENG 146 – American Literature
HUM 200 or higher
*MUS 221-222 Music History I-II
*PHI 100 Introduction to Philosophy
PHI 260 Studies in Eastern Thinking
REL 200 Old Testament – Fall Semesters only
REL 210 New Testament – Spring Semesters only
*REL 230 Religions of the World
Foreign Language – any 200level course**
*Indicates course specified for pathways elective options

***100 level foreign language courses may not be used to satisfy the humanities graduation requirement in programs where only one humanities course is required. In programs with two humanities courses, only one 100 level foreign language course may be used to satisfy the humanities graduation requirement.*

Mathematics
MTH 111 Basic Technical Mathematics
MTH 132 Business Mathematics
MTH 154 Quantitative Reasoning
MTH 155 Statistical Reasoning
MTH 161-162 Precalculus I-II
MTH 245-246 Statistics I-II
MTH 261-262 Applied Calculus I-II
Note: *Placement is required for all mathematics courses.*

Natural Science
BIO 101-102 Biology I-II
BIO 141-142 Human Anatomy & Physiology I-II
BIO 145 Human Anatomy and Physiology for the Health Sciences
CHM 111-112 General Chemistry I and II
GOL 105 Physical Geology
GOL 106 Historical Geology
PHY 231-232 General University Physics I-II
PHY 241-242 University Physics I-II

Social Science: Study of relationships within a society
ADJ 100 Survey of Criminal Justice
*ECO 201-202 Principles of Macroeconomics – Principles of Microeconomics
GEO 210 People and the Land: Intro Cultural Geography
GEO 220 World Regional Geography
*HIS 101 or higher (History courses)
PLS 135 or higher (Political Sciences courses)
*PSY 120 or higher (Psychology courses)
*SOC 200 or higher (Sociology courses)
Indicates course specified for pathways elective options.

Wellness
All PED Activity Courses (Physical Education Courses)
HLT 105 CPR
HLT 106 First Aid and Safety
HLT 110 Personal & Community Health
HLT 230 Nutrition and Human Development

General Education Electives
If a program requires a general education elective a student may choose any three-credit course from one of the above categories or from courses listed below.
ACC 211-212 Principles of Accounting I-II
ADJ 100 Survey of Criminal Justice
BIO 215 Plant Life of Virginia
CST 100 Principles of Public Speaking
ITE 119 Information Literacy

General Education Courses for Associate of Arts & Sciences Degrees

Students are advised to use the Uniform Certificate of General Studies or TransferVA Passport Course Rosters to guide course selections

English Composition
ENG 111-112 College Composition I-II

Humanities: Study of human culture
*ART 101 and ART 102 History of Art: Prehistoric to Gothic and History of Art: Renaissance to Modern
CST 130 Introduction to Theater
CST 151 Film Appreciation I
ENG 245 – British Literature
ENG 246 – American Literature
HUM 200 or higher
*MUS 221-222 Music History I-II
*PHI 100 Introduction to Philosophy
REL 200 Old Testament – Fall Semesters only
REL 210 New Testament – Spring Semesters only
*REL 230 Religions of the World
Foreign Language – any 200 level course**
Indicates course specified for pathways elective options

***100 level foreign language courses may not be used to satisfy the humanities graduation requirement in programs where only one humanities course is required. In programs with two humanities courses, only one 100 level foreign language course may be used to satisfy the humanities graduation requirement.*

Mathematics
MTH 154 Quantitative Reasoning
MTH 155 Statistical Reasoning
MTH 161-162 PrecalculusI-II
MTH 263-264 Calculus I-II
MTH 245-246 Statistics I-II
MTH 261-262 Applied Calculus I-II
MTH 265 Calculus III
MTH 266 Linear Algebra
MTH 267 Differential Equations
MTH 288 Discrete Mathematics

Note: *Students are urged to check the mathematics requirements of the four-year college to which they plan to transfer to determine the proper mathematics courses that should be taken at the community college. Placement is required for all mathematics courses.*

Natural Science

BIO 101-102 Biology I-II
BIO 141-142 Human Anatomy & Physiology I-II
CHM 111-112 General Chemistry I -II
CHM 241-242/243-244 Organic Chemistry I-II
GOL 105 Physical Geology
GOL 106 Historical Geology
PHY 231-232 General University Physics I-II
PHY 241-242 University Physics I-II

Social Science: Study of relationships within a society

ADJ 100 Survey of Criminal Justice
*ECO 201-202 Principles of Macroeconomics – Principles of Microeconomics
GEO 210 People and the Land: Intro Cultural Geography
GEO 220 World Regional Geography
*HIS 101 or higher (History courses)
PLS 135 or higher (Political Sciences courses)
*PSY 120 or higher (Psychology courses)[1]
*SOC 200 or higher (Sociology courses)
*Indicates course specified for pathways elective options

[1]Please note: VHCC will continue using PSY 230 with no pre-requisites. However, students who intend to transfer to pursue a bachelor's degree/major in psychology are advised that PSY 200 must be taken before PSY 230.

Wellness

All PED Activity Courses (Physical Education Courses)
HLT 105 CPR
HLT 106 First Aid and Safety
HLT 110 Personal & Community Health
HLT 230 Nutrition and Human Development
HLT 228 Principles of Public Health

Note: *Transfer students should note that four-year institutions may require a PED activity course in the general education core.*

General Education Electives

If a program requires a general education elective a student may choose any three-credit course from one of the above categories or from courses listed below.

ACC 211-212 Principles of Accounting I & II
ADJ 100 Survey of Criminal Justice
BIO 151-152 Human Gross Anatomy I-II
CSC 221 Introduction to Problem Solving and Programming
CSC 222 Object Oriented Programming
CSC 223 Data Structures and Analysis of Algorithms
CST 100 Principles of Public Speaking
ITE 152 Introduction to Digital and Information Literacy and Computer Applications

Note: *Students may petition the division dean to count a class not listed above as a transfer elective. They must provide evidence that the class is accepted at the institution to which they plan to transfer. Additionally, by the nature of the course description and by the nature of most transfer degrees, performance-based courses will not be substituted for general education electives. Performance-based courses include the following courses: ART 121, ART 125, ART 131, ART 134, CST 131, CST 136, CST 145, CST 132, MUS 131, MUS 132, MUS 141, MUS 147, MUS 150, MUS 163, and MUS 249.*

STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA

Approved TransferVA Passport Course Roster (October, 2019)

Select one course from each Block of courses.

Block I

- ENG 111 – College Composition I

Block II

- ART 101 – History and Appreciation of Art I
- ART 102 – History and Appreciation of Art II
- ART 201 – History of Art I
- ART 202 – History of Art II
- HIS 111 – World Civilizations Pre-1500 CE
- HIS 112 – World Civilizations Post-1500 CE
- HIS 121 – United States History to 1877
- HIS 122 – United States History Since 1865

Block III

- ECO 201 – Principles of Macroeconomics
- PLS 135 – US Government and Politics
- PSY 200 – Principles of Psychology
- SOC 211 – Principles of Anthropology I

Block IV

- BIO 101 – General Biology I
- CHM 101 – Introductory Chemistry I
- CHM 111 – General Chemistry I

Block V

A. Quantitative/Statistics Pathway
   - MTH 154 – Quantitative Reasoning
   - MTH 155 – Statistical Reasoning
   - MTH 245 - Statistics I

B. Calculus Pathway
   - MTH 161/162 – Precalculus I/ Precalculus II
   - MTH 167 – Precalculus with Trigonometry
   - MTH 245 – Statistics I
   - MTH 261 – Applied Calculus I
   - MTH 263/264 – Calculus I/Calculus II

* MTH 161/162 and 167 should only be taken by students preparing for calculus or for four-year degree programs that require study in College Algebra/Precalculus. Precalculus may not satisfy general education and may not receive transfer credit.

James Madison University does not accept ENG 111 toward satisfaction of general education requirements.

Christopher Newport University does not accept MTH 154 toward satisfaction of general education requirements.

The College of William & Mary does not have a college-wide general education composition requirement. ENG 111 will not count toward satisfaction of general education requirements but students will receive generalized credit for the course.

Approved Uniform Certificate of General Studies Course Roster

The Uniform Certificate of General Studies (UCGS) is a two-year college program in which all courses are transferable and satisfy lower-division general education requirements at any Virginia public institution of higher education. The Passport is component of the UCGS and is therefore a subset of courses in the UCGS. The UCGS consists of seven course blocks. To satisfy the UCGS students are required to complete the appropriate number of courses in each block as described below. Student course selection should be carefully considered since the UCGS program is not designed to capture the complexities of individual programs of study at the four-year institutions. Students should be advised to take the UCGS course that best suits their intended program of study at the four-year institution. The UCGS Course Roster for the Virginia Community College System (VCCS) is below.

VCCS Uniform Certificate of General Studies Course Roster

Students are required to select courses from each block as prescribed below.

1) Block I (Written Communication) – Select ENG 111 plus one other course.
   - ENG 111 – College Composition I
   - ENG 112 – College Composition II
   - ENG 113 – Technical-Professional Writing

2) Block II (Humanities /Art/Literature) – Select two courses chosen from different categories (please note that the two courses cannot be from the same category).
   A. Art
      - ART 100 – Art Appreciation
      - ART 101 (201) – History of Art: Prehistoric to Gothic
      - ART 102 (202) – History of Art: Renaissance to Modern
      - CST 130 – Introduction to Theatre
      - CST 151 – Film Appreciation I
      - MUS 121 – Music in Society
      - MUS 221 – History of Western Music Prior to 1750
      - MUS 222 – History of Western Music 1750 to Present
      - MUS 226 – World Music

   B. Humanities
      - HUM 201 – Early Humanities
      - HUM 202 – Modern Humanities
      - HUM 210 – Introduction to Women and Gender Studies
      - HUM 216 – Introduction to Non-Western Cultures
      - HUM 220 – Introduction to African American Studies
      - HUM 256 – Comparative Mythology
      - HUM 259 – The Greek and Roman Tradition
      - PHI 100 – Introduction to Philosophy
      - PHI 111 – Logic I
      - PHI 220 – Ethics
      - REL 100 – Introduction to the Study of Religion
      - REL 230 – Religions of the World
      - REL 237 – Eastern Religions
      - REL 240 – Religions in America

   C. Literature
      - ENG 225 – Reading Literature: Culture and Ideas
      - ENG 245 – British Literature
      - ENG 246 – American Literature
      - ENG 250 – Children's Literature
      - ENG 255 – World Literature
      - ENG 258 – African American Literature
      - ENG 275 – Women in Literature

3) Block III (Social and Behavioral Sciences) – Select one course.
   - ECO 150 – Economic Essentials: Theory and Application
   - ECO 201 – Principles of Macroeconomics
   - ECO 202 – Principles of Microeconomics
   - GEO 210 – People and the Land: Intro to Cultural Geography
   - GEO 220 – World Regional Geography
   - PLS 135 (211) – U.S. Government and Politics
   - PLS 140 – Introduction to Comparative Politics
   - PLS 241 – Introduction to International Relations I
   - PSY 200 – Principles of Psychology
   - SOC 200 – Introduction to Sociology
   - SOC 211 – Cultural Anthropology
   - SOC 268 – Social Problems

4) Block IV (Natural Sciences) – Select one course.
   - BIO 101 – General Biology I
   - BIO 102 – General Biology II
   - BIO 106 – Life Science
   - CHM 101 – Introductory Chemistry I
   - CHM 111 – General Chemistry I
   - CHM 112 – General Chemistry II
   - ENV 121 – General Environmental Science I
   - ENV 122 - General Environmental Science II
   - GOL 105 – Physical Geology
   - GOL 106 – Historical Geology
   - GOL 110 – Earth Systems: An Environmental Geology Perspective
   - PHY 100 – Elements of Physics
   - PHY 201 – General College Physics I (Algebra Based)
   - PHY 202 – General College Physics II (Algebra Based)
   - PHY 241 – University Physics I (Calculus Based)
   - PHY 242 – University Physics II (Calculus Based)

5) Block V (Mathematics) – Select one course.
   A. Quantitative/Statistics Pathway:
      - MTH 154 – Quantitative Reasoning
      - MTH 155 – Statistical Reasoning
      - MTH 245 – Statistics I

   B. Calculus Pathway:
      - MTH 161/162 – Precalculus I/ Precalculus II
      - MTH 167 – Precalculus with Trigonometry
      - MTH 261 – Applied Calculus I
      - MTH 263 – Calculus I
      - MTH 264 – Calculus II

6) Block VI (History) – Select one course.
   - HIS 101 – Western Civilizations Pre-1600 CE
   - HIS 102 – Western Civilizations Post-1600 CE
   - HIS 111 – World Civilizations Pre-1500 CE
   - HIS 112 –World Civilizations Post-1500 CE
   - HIS 121 – United States History to 1877
   - HIS 122 – United States History Since 1865

7) Block VII (Specialized GE Requirements) – Select two courses.

   NOTE: For Block VII, Student may complete courses from Blocks I-VI above or any additional course below. Students should align their Block VII course selection with their intended transfer destination's specific general education or programmatic requirements.

   - ASL 101 – American Sign Language I
   - ASL 102 – American Sign Language II
   - ASL 201 – American Sign Language III
   - ASL 202 – American Sign Language IV
   - ART 121 – Foundations of Drawing
   - ART 131 – Two Dimensional Design
   - ART 132 – Three Dimensional Design
   - ART 223 – Life Drawing
   - CSC 110 – Principles of Computer Science
   - CST 100 – Principles of Public Speaking
   - CST 110 – Introduction to Communication
   - FL 101 – Foreign Language I
   - FL 102 – Foreign Language II
   - FL 201 – Foreign Language III
   - FL 202 – Foreign Language IV
   - ITE 152 – Introduction to Digital and Information Literacy and Computer Applications
   - MUS 101 – Fundamentals of Music

Health/Physical Education Courses

Students may substitute any HLT (Health) course that contains a personal wellness component for Physical Education requirement. Transfer students should note that four-year institutions may require a PED activity course in the general education core.

Honors Program

The Virginia Highlands Community College Honors Program offers qualified students the opportunity to pursue challenges beyond those found in regular college classes. Honors students engage in special coursework that stimulates critical thinking and examines the interrelationships of ideas across disciplines. Specially designated honors courses and regular classes that offer an honors component, allow students to develop a broader, deeper understanding of topics in the humanities, social sciences, and natural sciences. Instructors of honors component courses may design, or allow students to design, one or more projects, areas of study, or additional topics beyond regular class requirements in order to receive a course grade with honors. The instructor will specify the criteria for successful completion of the honors component. However, honors credit will not be awarded in a course where the student's final grade is C or lower. The faculty member may restrict honors options to students who meet appropriate criteria which might include but are not limited to performance on placement exams, performance in prerequisite or related courses, performance on SAT or other college placement tests, and recommendations of other faculty. A notation will be made on the transcript of a student to whom honors credit has been awarded.

Information Technology Requirements

VHCC policy requires that students must keep their IT skills up to date. Therefore, IT courses transferred from other institutions and IT courses completed at VHCC must not be more than 5 years old for IT majors. If a student can demonstrate competency, the student may appeal the rule by requesting departmental approval from the lead faculty in the IT Department.

Math Requirements

Students are urged to check the mathematics requirements of the four-year college or university to which they plan to transfer to determine the proper mathematics courses to be taken at the community college.

Occupational/Technical Degrees

The occupational and technical education programs are designed to meet the increasing demands for technicians, paraprofessional workers, and skilled craftsmen for employment in industry, business, the professions, and government. These programs may serve as initial training for students preparing to enter the job market for the first time, as a supplement to work experience for persons who are preparing for advancement in their present lines of work, or as retraining for persons who must develop new skills for the present job market.

To meet these goals, Citizens Advisory Committees provide, in partnership with industry and the community, information and advice to enable continuous updating of curricular, course content, technology and faculty knowledge of current industry practices. Preparation for successful employment may encompass many aspects of education that extends beyond the classroom, such as cooperative education and internships that are conducive to success in the workplace.

Associate of Applied Science Degree programs are designed primarily to prepare the student for employment immediately upon graduation from the community college. Thus, these programs contain a large number of specialized courses.

Virginia Highlands offers both **one-year certificate programs and one-year or less career studies certificate programs** for those students interested in immediate employment in selected occupational fields. The student's program is designed to facilitate transition into an appropriate AAS degree program at a later date. Students interested in such options should plan their programs carefully with their advisors and counselors at VHCC. Some career studies certificate programs are designed in response to the non-conventional short-term program of study needs of many adults in our service region for an award which provides for upgrading, retraining, and investigating career possibilities or specialized interests.

AGRICULTURAL AND NATURAL RESOURCES TECHNOLOGY

Associate of Applied Science (AAS)

Horticulture Technology

Horticulture Technology - Specialization in Business and Entrepreneurship

Career Studies Certificate (CSC)

Agricultural Management

Horticulture Production

BUSINESS

Associate of Applied Science (AAS)

Accounting

Administrative Support Technology - Executive Administrative Assistant

Administrative Support Technology – Specialization in Legal Assisting/Paralegal

Administrative Support Technology – Specialization in Medical Office Specialist

Management

Certificate (C)

Accounting and Information Systems Technology

Clerical Studies

Supervision and Management

Career Studies Certificate (CSC)

Culinary Arts

Industrial Supervision

Medical Coding Specialist

Retail Management

Small Business Management

HEALTH

Associate of Applied Science (AAS)

Emergency Medical Services Technology*

Nursing

Nursing - LPN to RN Transition Program

Radiography*

**In cooperation with Southwest Virginia Community College*

Certificate (C)
Health Sciences
Practical Nursing

Career Studies Certificate (CSC)
Advanced Emergency Medical Technician
Computerized Tomography
Emergency Medical Technician
Emergency Medical Technician – Plus
Intermediate to Paramedic Bridge
Medical Assisting
Nurse Aide

Other Programs
Mammography Advanced Studies
Pharmacy Technician

INDUSTRIAL TECHNOLOGY

Associate of Applied Science (AAS)
Air Conditioning, Refrigeration, and Heating
Computer Numerical Control Machine Operations
Electrical Technology
Electrical Technology – Specialization in Mechatronics
Electrical Technology – Specialization in Energy Technology
Technical Studies

Certificate (C)
Solar Energy Technology

Career Studies Certificate (CSC)
Advanced Mechatronics
Advanced Practical Electrical Technician
Advanced Precision Machining
Advanced Welding
Applied Mechatronics
Commercial Refrigeration
Diesel Mechanic
Industrial Electricity
Practical Electrical Technician
Precision Machining
Refrigeration
Welding

INFORMATION TECHNOLOGY

Associate of Applied Science (AAS)
Information Systems Technology
Information Systems Technology - Specialization in Networking

Certificate (C)
Networking A+
Web Programming and Design

Career Studies Certificate (CSC)
CISCO Networking and A+
Computer Programming
Cyber Security
Database Security and Design
Networking Fundamentals I
Networking Fundamentals II
Software Applications Specialist
Small Unmanned Aerial Systems (sUAS)
User Support Specialist
Web Design and Development

PUBLIC SERVICE

Associate of Applied Science (AAS)
Criminal Justice
Human Services

Certificate (C)
Human Services Advocate

Career Studies Certificate (CSC)
Advanced Early Childhood Education
American Sign Language
Child Development
Corrections
Early Childhood Education
Foundations of Criminal Justice
Law Enforcement
Substance Abuse Counselor-Assistant

WORKFORCE DEVELOPMENT & CONTINUING EDUCATION

Non-Credit Programs
Certified Billing & Coding Specialist
Certified Production Technician
Commercial Driver's License Program
Nurse Aide (non-credit)
Phlebotomy Technician Program
Photovoltaic – Entry Level
Remote Airman Training
Six Sigma Green Belt
Six Sigma Yellow Belt

Orientation

All students enrolled in an associate degree or certificate program must complete an orientation (SDV) course during their first semester in college. This course carries a value of 1 credit hour and requires fifteen hours of counselor/instructor – student contact.

All curricular students in the community colleges of Virginia complete an orientation program designed primarily to provide information applicable to the basic operation of the College. Along with the SDV course, all new students are required to attend a New Student Orientation prior to the start of their classes. The SDV course and New Student Orientation introduces students to the local community college philosophy, campus resources, enrollment process, curricular offerings, program layouts, class schedules, placement testing, transfer, study skills, financial management, life management, personal wellness, and the faculty advising process.

Orientation Credit Eligibility:

- When transfer courses are evaluated for students entering a curriculum, VHCC will accept first-year experience credit courses such as study skills, orientation, if a student has a grade of "S" for Satisfactory, or a "C" or better.
- Students who have been awarded an associate's or bachelor's degree may petition for SDV course waiver. The credit hours are not waived and a student must make up the one credit hour for SDV.
- Approval is required by the Dean of Arts and Sciences and Vice President of Instruction and Student Services for all Petitions for Credit of SDV.

State Board Guidelines

In implementing its statement of purpose, VHCC provides several types of programs, as well as a wide selection of curricular offerings. Each curriculum is designed to meet the general criteria established by the State Board for Community Colleges. At the same time, VHCC strives to design each curriculum with emphasis on the needs and opportunities within the College's service region.

The State Board sets minimum standards for conferring appropriate associate degrees, certificates, and diplomas to individuals who satisfactorily complete course and program requirements. The following programs are offered by VHCC. The descriptions reflect the philosophies of the state governing agencies and the College.

Workforce Development & Continuing Education

The mission of the **Workforce Development & Continuing Education** is to provide assistance, workforce training, and employee development to promote economic growth of business and industry and opportunities for personal development within the VHCC service area.

The services provided via Workforce Development & Continuing Education include: Continuing Education; Workforce Development; Community Services (noncredit); Small Business Development Center and Manufacturing Technology Center.

Where specific employment opportunities for new or expanding industries are available, special training activities are developed and coordinated through the Workforce Services of the Virginia Department of Business Assistance. The College's role is to provide facilities, equipment, instructors and/or administrative service as needed.

Continuing Education. Today's rapidly changing technology requires that employees' skills be continually. The mission of Continuing Education is to establish and deliver a total program, credit instruction, training and testing to professional groups for certification and licensure review.

Workforce Development. Pre-employment training and training for employed workers that helps to meet the need for highly trained workers. Conveniently scheduled, custom-designed classes are offered on the College campus or at the worksite during-all hours of the day or night.

Community Services. Programs and training include noncredit classes, seminars, workshops and teleconferences that will continue and expand individual and community learning experiences.

Small Business Development Center. A Small Business Development Center provides one-on-one counseling, business education opportunities, and resources from the federal, state, local, academic, and private sectors to assist owners and managers to improve their competitiveness and profitability. Counseling services are provided free of charge and are confidential.

Manufacturing Technology Center. The MTC, located at Wytheville Community College, is a catalyst for economic growth and industrial competitiveness through training, applied research, and community-industrial service.

Procurement Assistance Center. Contracts between government and the private sector are available at all levels. The Center provides assistance with government contracting at the federal, state and local levels.

Curriculum & Program Requirements

College Transfer

Business Administration

Associate of Arts and Sciences Degree

Program Coordinator: Ben Bullen • bbullen@vhcc.edu 276-739-2452
Length: Four semesters (two years)

Purpose: With the rapid development in business and industry in Virginia, there is a great demand for qualified personnel in business administration to help provide leadership for this economic growth. The Associate of Arts and Sciences Degree curriculum with a major in Business Administration is designed for persons who plan to transfer to a four-year college or university to complete a baccalaureate degree program in a business area.

Transfer Objectives: Business Administration, Finance, Accounting, Public Administration, Management, Banking, Marketing, Economics, Human Resource Management

Admission Requirements: In addition to the admission requirements established for the College, entry into the Associate of Arts and Sciences Degree curriculum with a major in Business Administration recommends the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English, 3 units of college preparatory mathematics, 1 unit of laboratory science, and 1 unit of social studies. Students with deficiencies in reading, writing or math will be required to take developmental studies.

Program Requirements: The modern business world demands that its employees be knowledgeable in fields over and beyond business technology. Thus, this curriculum requires courses in the humanities, natural sciences, and social sciences in addition to the principles of economics and principles of accounting usually required in the first two years of a baccalaureate business curriculum. In order to help prepare for upper division (junior class) standing at a four-year college or university, the student usually must complete a program at the community college which is comparable in length and courses to the first two years of the program at the four-year college or university. Upon completion of the four-semester curriculum listed, the graduate will be awarded the Associate of Arts and Sciences Degree with a major in Business Administration.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
MTH	MTH 161 or 263	3	0	3
ACC 211	Principles of Accounting I	4	0	4
CST 100	Principles of Public Speaking	3	0	3
SDV 101	Orientation to College Success	1	0	1
PED	Physical Education	0	2-3	1
	Total	**14**	**2-3**	**15**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
MTH	MTH 162, 245, 261, or 264	3	0	3
ACC 212	Principles of Accounting II	4	0	4
ITE 152	Introduction to Digital and Information Literacy and Computer Applications	3	0	3
EEE	Elective	3	0	3
	Total	**16**	**0**	**16**
Third Semester (Fall)				
HIS	History 101, 111 or 121	3	0	3
ECO 201	Principles of Macroeconomics[2]	3	0	3
HUM/ART/LIT	ENG 245 or ENG246	3	0	3
SCI	Natural Science (BIO, CHM, GOL, or PHY)	3	3	4
EEE	Elective	3	0	3
	Total	**15**	**3**	**16**
Fourth Semester (Spring)				
HIS	History 102, 112 or 122	3	0	3
ECO 202	Principles of Economics II	3	0	3
HUM/ART/LIT	HUM/ART/LIT EEE [1]	3	0	3
SCI	Natural Science (BIO, CHM, GOL, or PHY)	3	3	4
SDV 106	Preparation for Employment	1	0	1
	Total	**13**	**3**	**14**
Total Minimum Credits for AA&S Degree				**61**

1 HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course, and the second required course cannot be history.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Business Administration – Specialization in Business Information Technology

Associate of Arts and Sciences Degree

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu 276-739-2503
Length: Four semesters (two years)

Purpose: With new economic development in business and IT industries in Virginia's Southwest, there is a demand for qualified personnel in the business information technology field. The Associate of Arts and Sciences Degree curriculum major in Business Administration with Specialization in Information Technology is designed for persons who plan to transfer to a four-year college or university to complete a baccalaureate degree program in a Business or Business IT discipline.

Transfer and Career Objectives:
Business Majors, Business Management Information Systems, Business Information Technology

Admission Requirements: In addition to the admission requirements established for the College, entry into the Associate of Arts and Sciences Degree curriculum major in Business Administration with Specialization in Information Technology recommends the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English, 3 units of college preparatory mathematics, 1 unit of laboratory science, and 1 unit of social studies. Students with deficiencies in reading, writing or math will be required to take developmental studies.

Program Requirements: The modern business world demands that its employees be knowledgeable in disciplines beyond business technology. Thus, this curriculum requires courses in communication, humanities, natural sciences, and social sciences in addition to the principles of economics and principles of accounting usually required in the first two years of a baccalaureate in Business and Business IT programs. In order to help prepare for upper division (junior class) standing at a four-year college or university, the student usually must complete a program at the community college which is comparable in length and courses to the first two years of the program at the four-year college or university. Upon completion of the four-semester curriculum identified below, the graduate will be awarded the Associate of Arts and Sciences Degree with a major in Business Administration Specialization in Business Information Technology.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
MTH	MTH 161 or 263	3	0	3
ACC 211	Principles of Accounting I	4	0	4
SDV 101	Orientation to College Success	1	0	1
ITE 152	Introduction to Digital and Information Literacy and Computer Applications	3	0	3
CST 100	Principles of Public Speaking	3	0	3
	Total	**17**	**0**	**17**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
MTH	MTH 162, 245, 261, or 264	3	0	3
ACC 212	Principles of Accounting II	4	0	4
CSC 221	Introduction to Problem Solving and Programming[1]	3	0	3
	Total	**13**	**0**	**13**
Third Semester (Fall)				
HIS	History 101, 111 or 121	3	0	3
ECO 201	Principles of Macroeconomics[2]	3	0	3
HUM/ART/LIT	ENG 245 or ENG 246,	3	0	3
SCI	Natural Science (BIO, CHM, GOL, or PHY)	3	3	4
CSC 222	Object Oriented Programming[2]	4	0	4
	Total	**16**	**3**	**17**
Fourth Semester (Spring)				
HIS	History 102, 112 or 122	3	0	3
ECO 202	Principles of Economics II	3	0	3
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
SCI	Natural Science (BIO, CHM, GOL, or PHY)	3	3	4
SDV 106	Preparation for Employment	1	0	1
	Total	**13**	**3**	**14**
Total Minimum Credits for AA&S Degree				**61**

[1] Prerequisite: ITE 152, and MTH 132 or division approval
[2] Prerequisite: CSC 221 or Division approval

[1] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course, and the second required course cannot be history.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

VHCC policy requires that students must keep their IT skills up to date. Therefore, IT courses transferred from other institutions and IT courses completed at VHCC must not be more than 5 years old for IT majors. If a student can demonstrate competency, the student may appeal the rule by requesting departmental approval from the lead faculty in the IT Department.

Education

Associate of Arts and Sciences Degree

Program Coordinator: Will Galliher • wgalliher@vhcc.edu
276-739-2416
Length: Four semesters (two years)

Purpose: The Associate of Arts and Sciences Degree Program with a major in Education is designed for persons who plan to transfer to a four-year college or university to complete a baccalaureate degree program in the social sciences or high school education. This curriculum is designed to offer sufficient course flexibility to students whose educational goals may not yet be clearly defined and to provide greater opportunity for these students to elect courses which emphasize areas of individual academic strength and interest in the college transfer core.

Transfer Objectives:
Education
Pre-professional Careers
Human Services
Social Work
Psychology
Undecided Majors

Admission Requirements: In addition to the admission requirements established for the college entry into the Associate of Arts and Sciences Degree Program with a major in Education recommends the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English, 3 units of college preparatory mathematics, 1 unit of laboratory science, and 1 unit of social science. Students with deficiencies in reading, writing or math will be required to take developmental studies.

Program Requirements: The world of modern education demands that students be knowledgeable both in their teaching field and in general education. Thus, this curriculum requires courses in the humanities, natural sciences, mathematics, social sciences, and personal wellness. The Education curriculum is designed to lead the student toward meeting state teacher licensure requirements and teaching endorsements. This curriculum also provides a solid general core education as students prepare for pre-professional degrees.

In order to prepare for upper division (junior class) standing at a four-year college or university, the student must complete a program at the community college which is comparable in length and courses to the first two years of the program at the four-year college or university. Upon satisfactory completion of the four-semester program listed, the graduate will be awarded the Associate of Arts and Sciences Degree with a major in Education.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
HLT 110	Concepts of Personal and Community Health	3	0	3
MTH	Mathematics	3	0	3
EEE	HUM/ART/LIT EEE[1]	3	0	3
EEE	Social Science Elective[2]	3	0	3
	Total	**16**	**0**	**16**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
CST 100	Principles of Public Speaking	3	0	3
MTH	Mathematics	3	0	3
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
EEE	Social Science Elective[2]	3	0	3
	Total	**15**	**0**	**15**
Third Semester (Fall)				
EEE	Literature 245 or 246	3	0	3
SCI	Natural Science (BIO, CHM, GOL or PHY)	3	3	4
HIS	History 121, 111 or 101	3	0	3
EEE	Social Science Elective[2]	3	0	3
ITE 152	Introduction to Digital and Information Literacy and Computer Applications	3	0	3
	Total	**15**	**3**	**16**
Fourth Semester (Spring)				
HUM/ART/LIT	ENG 245 or ENG 246	3	0	3
EEE	Social Science[2] or Humanities Elective ,[1]	3	0	3
SCI	Natural Science (BIO, CHM, GOL, or PHY)	3	3	4
HIS	History 122, 112 or 102	3	0	3
	Total	**12**	**3**	**13**
Total Minimum Credits for AA&S Degree				**60**

[1] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course, and the second required course cannot be history.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Students planning to enter Secondary Education should complete Praxis I before transfer. For more information on licensure requirements, see an academic counselor or contact Eva S. Tilson at etilson1@vhcc.edu.

Education - Specialization in Art

Associate of Arts and Sciences Degree

Program Coordinator: Thomas Bryant • tbryant@vhcc.edu 276-739-2451
Length: Four semesters (two years)

Purpose: The Associate of Arts and Sciences Degree Program with a major in Education - Specialization in Art is designed for persons who plan to transfer to a four-year college or university to complete a baccalaureate degree program.

Transfer Objectives and Professional Options:
College or high school teaching Art History
Undecided majors with an interest in Art
Museum studies
Museum Curator

Admission Requirements: In addition to the admission requirements established for the college, entry into the Associate of Arts and Sciences Degree Program with a major in Education recommends the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English, 3 units of college preparatory mathematics, 1 unit of laboratory science, and 1 unit of social science. Students with deficiencies in reading, writing or math will be required to take developmental studies.

Program Requirements: The world of modern education demands that students be knowledgeable both in their teaching field and in general education. Thus, this curriculum requires courses in the humanities, natural sciences, mathematics, social sciences, and personal wellness. The Education curriculum is designed to lead the student toward meeting state teacher licensure requirements and teaching endorsements. This curriculum also provides a solid general core education as students prepare for pre-professional degrees.

In order to prepare for upper division (junior class) standing at a four-year college or university, the student must complete a program at the community college which is comparable in length and courses to the first two years of the program at the four-year college or university. Upon satisfactory completion of the four-semester program listed, the graduate will be awarded the Associate of Arts and Sciences Degree with a major in Education - Specialization in Art.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
HIS	History 101, 111 or 121	3	0	3
MTH	Mathematics	3	0	3
ART 121	Drawing I	1	4	3
ART 131	Two Dimensional Design	1	4	3
	Total	**12**	**8**	**16**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
HIS	History 102, 112 or 122	3	0	3
MTH	Mathematics	3	0	3
ITE 152	Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ART 201 or 202	Art History I or II	3	0	3
	Total	**15**	**0**	**15**
Third Semester (Fall)				
HUM/ART/LIT	ENG 245 or ENG 246	3	0	3
SCI	Natural Science (BIO, CHM, GOL, or PHY)	3	3	4
EEE	Social Science Elective	3	0	3
ART 125	Introduction to Painting	2	3	3
CST 100	Principles of Public Speaking	3	0	3
	Total	**14**	**6**	**16**
Fourth Semester (Spring)				
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
SCI	Natural Science (BIO, CHM, GOL, or PHY)	3	3	4
ART 132	Three Dimensional Design	1	4	3
EEE	Social Science Elective[2]	3	0	3
PED	Physical Education	0	2-3	1
	Total	**10**	**9-10**	**14**
Total Minimum Credits for AA&S Degree				**61**

[1] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course, and the second required course cannot be history.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Students planning to enter Secondary Education should complete Praxis I before transfer. For more information on licensure requirements, see an academic counselor or contact Eva S. Tilson at etilson1@vhcc.edu.

Education - Specialization in Teacher Preparation

Associate of Arts and Sciences Degree

For Early Childhood PK-3, Elementary PK-6, Middle Education 6-8 and Special Education

Program Coordinator: Mary Munsey • mmunsey@vhcc.edu 276-739-2454
Length: Four semesters (two years)

Purpose: The VCCS Teacher Education Teacher Preparation Education degree is designed to provide the courses in general education for the student who plans to complete a baccalaureate degree in pursuit of teacher licensure at a four-year institution in one of the following endorsement areas:
Early Childhood PK-3, Elementary PK-6, Middle Education 6-8, Special Education Licensure, and Secondary Education

Students who enter this program should be aware of the requirements for professional employment in the education field including academic and licensing requirements. Consultation with the Counselor or faculty advisor is highly recommended.

Admission Requirements: In addition to the admission requirements established for the college, entry into the Associate of Arts and Sciences Degree Program with a major in Education recommends the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English, 3 units of college preparatory mathematics, 1 unit of laboratory science, and 1 unit of social science. Students with deficiencies in reading, writing or math will be required to take developmental studies.

Program Requirements: The world of modern education demands that students be knowledgeable both in their teaching field and in general education. Thus, this curriculum requires courses in the humanities, natural sciences, mathematics, social sciences, and personal wellness. The Education curriculum is designed to lead the student toward meeting state teacher licensure requirements and teaching endorsements. This curriculum also provides a solid general core education as students prepare for pre-professional degrees.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to Education	1	0	1
MTH	Mathematics	3	0	3
HIS 121	United States History to 1877	3	0	3
ITE 152	Introduction to Digital and Information Literacy and Computer Applications	3	0	3
HLT/PED	Health/Wellness	0	2-3	1
	Total	**13**	**2-3**	**14**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
MTH	Mathematics	3	0	3
HIS 122	United States History Since 1865	3	0	3
PLS 135	US Government and Politics	3	0	3
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
	Total	**15**	**0**	**15**
Third Semester (Fall)				
CST 100	Principles of Public Speaking	3	0	3
HIS	History of Western Civilization 101, 102, or History of World Civilizations 111 or 112	3	0	3
EEE	Elective	3	0	3
ECO	Principles of Economics 201 or 202	3	0	3
SCI	Natural Science	3	3	4
	Total	**15**	**3**	**16**
Fourth Semester (Spring)				
GEO 210	People and the Land: Intro. to Cultural Geography[2]	3	0	3
SCI	Natural Science	3	3	4
EEE	HUM/ART/LIT EEE[1]	3	0	3
EDU 200	Introduction to the Teaching Profession	3	0	3
HUM/ART/LIT	ENG245 or ENG 246	3	0	3
	Total	**15**	**3**	**16**
Total Minimum Credits for AA&S Degree				**61**

[1] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course, and the second required course cannot be history.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Students planning to enter Secondary Education should complete Praxis I before transfer. For more information on licensure requirements, see an academic counselor or contact Eva S. Tilson at etilson1@vhcc.edu.

Education - Specialization in Theatre Arts

Associate of Arts and Sciences Degree

Program Coordinator: Dona Lee • dlee@vhcc.edu 276-739-2585
Length: Four semesters (two years)

Purpose: The Education - Specialization in Theatre Arts is designed for students who plan to transfer to a four-year institution. This program is designed to develop skills in and appreciation of those subjects related to performance and production in theatre. This program provides basic preparation leading to theatre-related careers, as well as to the teaching of theatre.
Transfer Objectives and Professional Options: Communications, Theatre, Dramatic Literature, Radio and Television Broadcasting, Undecided Majors with an interest In Theatre, Film, Drama

Admission Requirements: In addition to the admission requirements established for the college, entry into the Associate of Arts and Sciences Degree Program with a major in Education recommends the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English, 3 units of college preparatory mathematics, 1 unit of laboratory science, and 1 unit of social science. Students with deficiencies in reading, writing or math will be required to take developmental studies.

Program Requirements: The world of modern education demands that students be knowledgeable both in their teaching field and in general education. Thus, this curriculum requires courses in the humanities, natural sciences, mathematics, social sciences, and personal wellness. The Education curriculum is designed to lead the student toward meeting state teacher licensure requirements and teaching endorsements. This curriculum also provides a solid general core education as students prepare for pre-professional degrees.
Students are urged to consult with their counselors and advisors at Virginia Highlands Community College in planning their program and selecting electives. In order to prepare for upper division (junior class) standing at a four-year college or university, the student must complete a program at the community college which is comparable in length and courses to the first two years of the program at the four-year college or university. Upon satisfactory completion of the four-semester program listed, the graduate will be awarded the Associate of Arts and Sciences Degree with a major in Education - Specialization in Theatre Arts.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
MTH	Mathematics	3	0	3
CST 130	Intro. to the Theatre	3	0	3
CST 136	Theatre Workshop	0	3	1
ITE 152	Introduction to Digital and Information Literacy and Computer Applications	3	0	3
	Total	**13**	**3**	**14**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
MTH	Mathematics	3	0	3
CST 100	Principles of Public Speaking	3	0	3
EEE	Social Science Elective	3	0	3
CST 145	Stagecraft (Taught in odd years)	2	2	3
	Total	**14**	**2**	**15**
Third Semester (Fall)				
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
SCI	Natural Science	3	3	4
PED	PED Elective	0	2-4	2
CST 131	Acting I (Taught in odd years)	3	0	3
HIS	History 101, 111, or 121	3	0	3
	Total	**12**	**5-7**	**15**
Fourth Semester (Spring)				
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
SCI	Natural Science (BIO, CHM, GOL, or PHY)	3	3	4
CST 147	Costume Construction (Taught in even years)	2	2	3
CST 151	Film Appreciation	3	0	3
EEE	Social Science Elective[2]	3	0	3
	Total	**14**	**5**	**16**
Total Minimum Credits for AA&S Degree				**60**

[1] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course, and the second required course cannot be history.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Students planning to enter Secondary Education should complete Praxis I before transfer. For more information on licensure requirements, see an academic counselor or contact Eva S. Tilson at etilson1@vhcc.edu.

General Studies

Associate of Arts and Sciences Degree

Program Coordinator: Cory Lewis clewis@vhcc.edu 276-739-2559
Length: Four semesters (two years)

Purpose: The Associate of Arts and Sciences Degree Program with a major in General Studies is a degree program designed for transfer to four-year colleges for those students whose area of interest is other than those covered by VHCC's Business Administration, Science, or Education curricula. In general, these students would not be taking a foreign language and would not be planning to major in the fields of education, business, science, medicine, mathematics, agriculture, or computer science. Some possible goals of a General Studies student might be Communications, Social Work, or Journalism. General Studies is also appropriate for the undecided transfer student or those in transition between colleges.

Admission Requirements: In addition to the admission requirements established for the college, entry into the General Studies program recommends the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English; 3 units of college preparatory mathematics; 1 unit of laboratory science; and 1 unit of social science. Students with deficiencies in reading, writing or math will be required to take developmental studies.

Program Requirements: Four-year colleges and universities usually require a broad general education during the first two years of their baccalaureate programs. Therefore, this curriculum offers a distribution of general education courses usually required in the first two years of many baccalaureate programs. Students are urged to select a four-year college or university early in the planning with their counselor and to prepare their community college program carefully in accord with the requirements for entry into the junior year at the college to which they will transfer. When admitted into the program the student will, in consultation with the Counselor, develop a curriculum based upon the freshman and sophomore year requirements of the transfer institution, which the student has selected. The student should then consult with the transfer institution to be certain that the planned program will provide the student with the courses the student must have in order to be admitted as a junior upon graduation from VHCC. The Counselor and/or Faculty Advisor will assist the student in selecting courses, which are normally transferable. Upon satisfactory completion of the four-semester program, the graduate will be awarded the Associate of Arts and Sciences Degree with a major in General Studies.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
HIS	History 101, 111 or 121	3	0	3
MTH	Mathematics	3	0	3
SCI	Natural Science (BIO, CHM, GOL, PHY)	3	3	4
SDV 101	Orientation to College Success	1	0	1
EEE	Transfer Elective	3	0	3
	Total	**16**	**3**	**17**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
HIS	History 102, 112 or 122	3	0	3
MTH	Mathematics	3	0	3
SCI	Natural Science (BIO, CHM, GOL, PHY)	3	3	4
EEE	Transfer Elective	3	0	3
	Total	**15**	**3**	**16**
Third Semester (Fall)				
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
EEE	Transfer Elective	3	0	3
SSE	Social Sciences Elective[2]	3	0	3
EEE	Transfer Elective	3	0	3
EEE	Transfer Elective	3	0	3
	Total	**15**	**0**	**15**
Fourth Semester (Spring)				
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
EEE	Transfer Elective	3	0	3
EEE	Transfer Elective	3	0	3
EEE	Transfer Elective	3	0	3
EEE	Transfer Elective	3	0	3
	Total	**15**	**0**	**15**
Total Minimum Credits for AA&S Degree				**63**

[1] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course, and the second required course cannot be history.

Students are urged to follow the recommended pathways available for this degree when choosing electives - see an advisor for more details.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Uniform Certificate of General Studies (UCGS)

Certificate

Program Coordinator: Cory Lewis clewis@vhcc.edu 276-739-2559
Length: Two-year program

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester				
ENG 111	College Composition I	3	0	3
MTH	MTH course from UCGS Course Roster	3	0	3
HIS	HIS course from UCGS Course Roster	3	0	3
HUM/ART/LIT	Humanities or ART course from the UCGS Course Roster**	3	0	3
SCI	Natural Science course from UCGS Course Roster	3	3	4
Second Semester				
ENG 112	College Composition II	3	0	3
SSE	Social Science Elective from UCGS Course Roster (not history)	3	0	3
EEE	Specialized General Education course from UCGS Course Roster***	3	0-3	3-4
EEE	Specialized General Education course from UCGS Course Roster***	3	0-3	3-4
HUM/ART/LIT	Humanities, ART, or Literature course from UCGS Course Roster	3	0	3
	Total	30	**3-9**	**31-33**

The Uniform Certificate of General Studies (UCGS) is a two-year college program in which all courses are transferable and satisfy lower-division general education requirements at any Virginia public institution of higher education. The Passport is component of the UCGS and is therefore a subset of courses in the UCGS. The UCGS consists of seven course blocks. To satisfy the UCGS students are required to complete the appropriate number of courses in each block as described below. Student course selection should be carefully considered since the UCGS program is not designed to capture the complexities of individual programs of study at the four-year institutions. Students should be advised to take the UCGS course that best suits their intended program of study at the four-year institution. The UCGS Course Roster* for the Virginia Community College System (VCCS) is below. The UCGS Course Roster for Richard Bland College is under development.

* UCGS Course Roster.
**For the HUM, ART, LIT block, students must select two courses chosen from different categories. Please note that the two courses cannot be from the same category.
***This references Block VII on the UCGS Course Roster. Students may complete courses from UCGS Course Roster Blocks I-VI or any additional course from Block VII on UCGS Course Roster. Students should align their Block VII course selection with their intended transfer destination's specific general education or programmatic requirements. VHCC recommends the default selection for these two courses to be CST 100 and ITE 152 or another HIS course from the UCGS Course Roster.
****VHCC recommends that students who intend to pursue an Associate of Arts and Sciences degree with VHCC to additionally take SDV 100/101, but this course is not part of the UCGS Certificate.

Applied Music

Career Studies Certificate

Program Coordinator: Mary Munsey mmunsey@vhcc.edu • 276-739-2454
Length: Two Semesters (1 year)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
MUS 221	Music History I	3	0	3
MUS 131	Class Voice I	1	2	2
MUS 163	Guitar Theory & Practice I	2	3	3
MUS 249	Band Ensemble	0	6	2
	Total	**6**	**11**	**10**
Second Semester (Spring)				
MUS 222	Music History II	3	0	3
MUS 132	Class Voice II	1	2	2
MUS 147	Applied Music Composition	0	3	1
MUS 141	Class Piano I	1	2	2
MUS 150	Old Time String Band	2	2	3
	Total	**7**	**9**	**11**
Total Credits for Career Studies Certificate				**21**

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Pre-Pharmacy Science

Career Studies Certificate

Program Coordinator: Sandy Davis • sdavis@vhcc.edu • 276-739-2464
Length: Two Semesters (1 year)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
BIO 141	Human Anatomy and Physiology I	3	3	4
HLT 143	Medical Terminology	3	0	3
BIO 101	General Biology I	3	1	4
	Total	**9**	**4**	**11**
Second Semester (Spring)				
HLT 106 or HLT 261	First Aid and Safety or Basic Pharmacy I	2-3	0	2-3
BIO 142	Anatomy and Physiology II	3	3	4
BIO 102	General Biology II	3	1	4
	Total	**8-9**	**4**	**10-11**
Total Credits for Career Studies Certificate				**21-22**

Students are urged to work closely with Professor Sandy Davis while working on this Career Studies Certificate. Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Science

Associate of Arts and Sciences Degree

Program Coordinator: Nicole Freeman nfreeman@vhcc.edu • 276-739-**2537**

Length: Four semesters (two years)

Purpose: With the emphasis on scientific discoveries and technological development in today's society, there is a strong demand for scientists and scientifically oriented persons in business, government, industry and the professions. The Associate of Arts and Sciences Degree Program with a major in Science is designed primarily for those persons who are interested in a pre-professional or scientific program and who plan to transfer to a four-year college or university to complete a baccalaureate degree program or major in such fields as:

Agriculture	Nursing	Physics
Mathematics	Pre-Chiropractic	Geology
Biology	Pharmacy	Science Education
Pre-Medicine	Pre-Dentistry	Wildlife Sciences
Chemistry	Physical Therapy	

Admission Requirements: In addition to the admission requirements established for the college entry into the Associate of Arts and Sciences Degree program with a major in Science recommends the satisfactory completion of the following high school units or equivalent as a minimum: 4 units of English, 3 units of college preparatory mathematics, 1 unit of laboratory science, 1 unit of social studies Students with deficiencies in reading, writing or math will be required to take developmental studies.

Program Requirements: Although the major emphasis in this curriculum is mathematics, the biological sciences, and the physical sciences, the curriculum also includes courses in humanities and social sciences. Electives are provided so that the student can select the appropriate courses for his pre-professional or scientific program as required in the first two years of the four-year college or university. In order to help prepare for upper division (junior class) standing at a four-year institution, the student usually must complete a program at the community college which is comparable in length and courses to the first two years of the program at the four-year institution. Upon satisfactory completion of the four-semester program described, the graduate will be awarded the Associate of Arts and Sciences Degree with a major in Science.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
HIS	History 101, 111 or 121	3	0	3
MTH	MTH 161 or 263	3-4	0	3-4
SCI	Natural Science (BIO, CHM, GOL, PHY)	3	3	4
SDV 101	Orientation to College Success	1	0	1
	Total	**13-14**	**3**	**14-15**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
HIS	History 102, 112 or 122	3	0	3
MTH	MTH 162, 261, 245, or 264	3-4	0	3-4
SCI	Natural Science (BIO, CHM, GOL, PHY)	3	3	4
	Total	**12-13**	**3**	**13-14**
Third Semester (Fall)				
HUM/ART/LIT	Literature or HUM/ART/LIT EEE[1]	3	0	3
EEE	Social Science Elective[2]	3	0	3
MTH	Mathematics	3	0	3
SCI	Natural Science, Mathematics, or Engineering Transfer Elective (BIO, CHM, EGR, GOL, MTH, PHY)	3	3	4
CST 100	Principles of Public Speaking	3	0	3
	Total	**15**	**3**	**16**
Fourth Semester (Spring)				
HUM/ART/LIT	HUM/ART/LIT EEE[1]	3	0	3
EEE	Transfer Elective	3	0	3
ITE or ITP	Information Technology Course	3	0-3	3-4
EEE	Transfer Elective	3	0	3
SCI	Science, Mathematics, or Engineering Transfer Elective (BIO, CHM, EGR, GOL, MTH, PHY)	3	3	4
SCI 299*	Science Supervised Study	1	0	1
	Total	**16**	**3-6**	**17-18**
Total Minimum Credits for AA&S Degree				**60**

[1] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course and the second required course cannot be history.

* Science Supervised Study is the LearningPLUS+ degree capstone course. Students in the science degree will work with their faculty advisor to select from AGR BIO, CHM, EGR, GOL, HRT, MTH, and PHY for their supervised study experience.

Students are urged to follow the recommended pathway for this degree when making elective selections. See Science degree pathways as follows: Biology-Pre-Med, Chemistry, Wildlife Sciences

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated; and further, to consult with their counselors and advisors at VHCC in planning their academic program and electives.

Science - Specialization in Engineering

Associate of Arts and Sciences Degree

Program Coordinator: Brian Hale • bhale@vhcc.edu 276-739-2456
Length: Four semesters (two years)
Purpose: This program is designed to provide the first two years of general engineering education common to most engineering majors at universities in the US. It will prepare a student to transfer to a four year school and begin classes in a declared major. The Engineering classes that we offer will prepare a student to take the Fundamentals of Engineering exam which is the first test in the sequence to becoming a licensed professional engineer; transferability will depend on the transfer institution and specific major.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
HIS	History 101, 111 or 121	3	0	3
MTH 263	Calculus I	4	0	4
EGR 121	Fundamentals of Engineering	2	0	2
CHM 111	General Chemistry I	3	3	4
SDV 101	Orientation to College Success	1	0	1
	Total	**16**	**3**	**17**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
SSE	Social Science Elective [1]	3	0	3
MTH 264	Calculus II	4	0	4
MTH 266	Linear Algebra	3	0	3
EGR 122	Engineering Design	2	2	3
	Total	**15**	**2**	**16**
Third Semester (Fall)				
HUM/ART/ LIT	HUM/ART/LIT EEE[2]	3	0	3
ITP or EGR EEE	Computer Programming Course or EGR Elective	3-4	0	3-4
MTH 267	Differential Equations	3	0	3
PHY 241	University Physics I	3	3	4
EGR EEE	Engineering Elective	3-4	0	33-4
	Total	**15-17**	**3**	**16-18**
Fourth Semester (Spring)				
HUM/ART/ LIT	HUM/ART/LIT EEE[2]	3	0	3
EGR EEE	Engineering Elective	3-4	0	3-4
MTH 265	Calculus III	4	0	4
PHY 242	University Physics II	3	3	4
EGR EEE	Engineering Elective	3-4	0	3-4
EGR 299	Supervised Study	1	0	1
	Total	**17-19**	**3**	**18-20**
Total Minimum Credits for the AA&S Degree				**67-71**

[1] One course in social/behavioral sciences must be a history course and the second required course cannot be history. Approved Social Science Electives will NOT include course with HIS prefix. ECO 201, ECO 202, GEO 210, PLS 135, PLS 136, PSY 200, PSY 215, PSY 230, PSY 235, SOC 200, SOC 211, SOC 215, SOC 268

[2] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

Students are urged to follow the recommended pathway for this degree when making elective selections.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Students who are planning to transfer are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated and to consult with their counselor or advisor at Virginia Highlands Community College in planning their program and selecting electives.

Science – Specialization in Natural Resources

Associate of Arts and Sciences Degree

Program Coordinator: Ben Casteel • bcasteel1@vhcc.edu 276-739-2441

Length: Four semesters (two years)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
BIO 101	General Biology I	3	3	4
MTH 161	Pre-Calculus	3	0	3
HIS 101	Western Civilizations Pre-1600 CE	3	0	3
EEE	Transfer Horticulture/Agriculture Elective	2	2	3
SDV 101	Orientation to College Success	1	0	1
	Total	**15**	**5**	**17**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
BIO 102	General Biology II	3	3	4
MTH 261	Applied Calculus I	3	0	3
EEE	Transfer Horticulture/Agriculture Elective	2	2	3
	Total	**11**	**5**	**13**
Third Semester (Fall)				
ECO 201	Principles of Macroeconomics[2]	3	0	3
HUM/ART/LIT	HUM/ART/LIT EEE	3	0	3
CHM 111	General Chemistry I	3	3	4
EEE	Transfer Horticulture/Agriculture Elective	2	2	3
ITE 152	Introduction to Digital and Information Literacy and Computer Applications	3	0	3
	Total	**14**	**5**	**16**
Fourth Semester (Spring)				
ECO 202	Principles of Microeconomics	3	0	3
HUM/ART/LIT	HUM/ART/LIT EEE [1]	3	0	3
CHM 112	General Chemistry II	3	3	4
EEE	Transfer Horticulture/Agriculture Elective	2	2	3
HRT 299	Supervised Study	1	0	1
	Total	**12**	**5**	**14**
Total Minimum Credits for AA&S				**60**

[1] HUM/ART/LIT - each of the two courses cannot be from the same discipline area (e.g. humanities). Students should work with an advisor to select two courses chosen from different categories (please note that the two courses cannot be from the same category).

[2] One course in social/behavioral sciences must be a history course, and the second required course cannot be history.

* Science Supervised Study is the LearningPLUS+ degree capstone course. Students in the science degree will work with their faculty advisor to select from AGR, BIO, and HRT, for their supervised study experience.

Students are urged to follow the recommended pathway for this degree when making elective selections.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Student who are planning to transfer are urged to acquaint themselves with the requirements of the major department in the college or university to which transfer is contemplated and to consult with their counselor or advisor at Virginia Highlands Community College (VHCC) in planning their program and selecting electives.

Curriculum & Program Requirements

Agricultural and Natural Resources Technology

Horticulture Technology

Associate of Applied Science

Program Coordinator: Ben Casteel • bcasteel1@vhcc.edu • 276-739-2441

Length: Four semesters (two years)

Purpose: The Horticulture Industry is one of the fastest growing industries in the VHCC service region. The Horticulture program is designed to prepare students for employment in the horticulture industry or a related field and to provide training for those who are currently working in the field and wish to improve their knowledge and skills. Students will not only develop skills in crop production, but also interpersonal and business management skills.

Occupational Objectives: Graduates of the program are prepared for managerial/supervisory level positions in areas that include landscape design and installation, grounds maintenance, turf grass maintenance, floral designer, greenhouse and nursery management, garden center operation, and sales and marketing and related industries.

Program Requirements: The curriculum is designed to integrate courses in nursery management, greenhouse management, turf management and related areas, general education, and electives. Students are advised to follow the curriculum as outlined in the College catalog and consult with their faculty advisor or counselor in planning their programs and selecting electives. A program-specific SDV 101 section that is taught by the program coordinator is available, and students are strongly encouraged to enroll in this section during the first semester. Students planning to transfer should explore opportunities with their faculty advisor or counselor. Upon satisfactory completion of the four-semester curriculum, the student will be awarded an Associate of Applied Science Degree in Horticulture Technology.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
HRT 100	Intro. to Horticulture	2	2	3
HRT 205	Soils	2	2	3
HRT 246 or BIO 215	Herbaceous Plants or Plant Life of Virginia	2	2	3
ENG 111 or ENG 115	College Composition I or Technical Writing	3	0	3
HRT 207	Plant Pest Management*	2	2	3
SDV 101	Orientation to College Success	1	0	1
	Total	**12**	**8**	**16**
Second Semester (Spring)				
HRT 245	Woody Plants	2	2	3
HRT 134	Four Seasons Food Production	2	2	3
HRT 275	Landscape Construction and Maintenance*	2	2	3
HRT 231	Planting Design I*	2	2	3
EEE	Humanities Elective	3	0	3
	Total	**11**	**8**	**15**
Summer Semester				
HRT 197 or 297	Cooperative Education	0	3	3
PED	Physical Education	0	2	1
	Total	**0**	5	**4**
Third Semester (Fall)				
HRT 259	Arboriculture*	2	2	3
EEE	Social Science Elective	3	0	3
HRT 295	Topics in _____	2	2	3
BIO 101	General Biology I	3	3	4
MTH 111	Basic Technical Mathematics	3	0	3
	Total	**13**	**7**	**16**
Fourth Semester (Spring)				
CST 100	Public Speaking	3	0	3
HRT 115	Plant Propagation	2	2	3
HRT 227	Professional Landscape Management	2	2	3
EEE	Social Science Elective	3	0	3
HRT 226	Greenhouse Management	2	2	3
	Total	**12**	**6**	**15**
Total Minimum Credits for AAS Degree				**66**

*Denotes a course with an industry-recognized credential.

Students are urged to follow the default pathways for this degree when making elective selections.

Horticulture Technology (AAS)
Horticulture Technology - Specialization in Business and Entrepreneurship (AAS)

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Horticulture Technology-Specialization in Business and Entrepreneurship

Associate of Applied Science

Program Coordinator: Ben Casteel • bcasteel1@vhcc.edu • 276-739-2441

Length: Four semesters (two years)

Purpose: The Horticulture Industry is one of the fastest growing industries in the VHCC service region. The Horticulture Technology Specialization: Business and Entrepreneurship program is designed to prepare students for employment or ownership in the horticulture industry or a related field. The specialization is designed to provide training for those who are currently working in the field and wish to improve their knowledge and skills. Students will not only develop skills applicable to nursery and garden center management, but they will also develop interpersonal and business management skills.

Occupational Objectives: Graduates of the program are prepared for managerial/supervisory or ownership level positions in the horticulture industry. These areas include greenhouse and nursery management, garden center operation, sales and marketing, and related industries.

Program Requirements: The curriculum is designed to integrate courses in nursery management, greenhouse management, turf management and related areas, general education, and electives. Students are advised to follow the curriculum as outlined in the College catalog and consult with their faculty advisor or counselor in planning their programs and selecting electives. Students planning to transfer should explore opportunities with their faculty advisor or counselor. Upon satisfactory completion of the four-semester curriculum, the student will be awarded an Associate of Applied Science Degree in Horticulture Technology – Specialization in Business and Entrepreneurship.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
HRT 100	Introduction to Horticulture	2	2	3
BUS 100	Introduction to Business	3	0	3
HRT 207	Plant Pest Management*	2	2	3
ENG 111 or ENG 115	College Composition I or Technical Writing	3	0	3
EEE	Social Science Elective	3	0	3
SDV 101	Orientation to College Success	1	0	1
	Total	**14**	**4**	**16**
Second Semester (Spring)				
HRT 225	Nursery and Garden Center Management	2	2	3
BUS EEE	Business/Entrepreneurship Elective	3	0	3
HRT 275	Landscape Construction and Maintenance*	2	2	3
HRT 231	Planting Design I*	2	2	3
EEE	Social Science Elective	3	0	3
	Total	**12**	**6**	**15**
Summer Semester				
HRT 197 or 297	Cooperative Education	0	3	3
PED	Physical Education	0	2	1
	Total	**0**	**5**	**4**
Third Semester (Fall)				
CST 100	Principles of Public Speaking	3	0	3
MTH 111	Basic Technical Mathematics	3	0	3
HRT 246 or BIO 215	Herbaceous Plants or Plant Life of VA	2	2-3	3
BIO 101	General Biology	3	3	4
HRT 259	Arboriculture	2	2	3
	Total	**13**	**7-8**	**16**
Fourth Semester (Spring)				
MKT 100	Principles of Marketing	3	0	3
HRT 245	Woody Plants	2	2	3
HRT 226	Greenhouse Management	2	2	3
EEE	Humanities Elective	3	0	3
HRT 227	Professional Landscape Management	2	2	3
	Total	**12**	**6**	**15**
Total Minimum Credits for AAS Degree				**66**

*Denotes a course with an industry-recognized credential.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Agriculture Management

Career Studies Certificate

Program Coordinator: Ben Casteel • bcasteel1@vhcc.edu • 276-739-2441

Length: Two semesters (one year)

Purpose: Students will develop skills directly applicable to agricultural production and management. This Career Studies Certificate will focus on introductory animal, plant, and soils science and technology.

*Denotes a course with an industry-recognized credential.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
AGR 141 (Fall)	Introduction to Animal Science and Technology	3	2	4
AGR 142 (Fall)	Introduction to Plant Science and Technology	2	2	3
AGR 143 (Spring)	Introduction to Agribusiness and Financial Management	2	2	3
AGR 144 (Spring)	Agriculture Human Resource Management	3	0	3
HRT 205 (Fall)	Soils	2	2	3
HRT 207 (Fall)	Plant Pest Management*	2	2	3
Total Credits for Career Studies Certificate		**14**	**10**	**19**

Horticulture Production

Career Studies Certificate

Program Coordinator: Ben Casteel • bcasteel1@vhcc.edu • 276-739-2441

Length: Two semesters (one year)

Purpose: To provide the knowledge and skills needed for entry-level positions in horticulture. Also appropriate for personal growth and development.

*Denotes a course with an industry-recognized credential.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
HRT 100	Intro. To Horticulture	2	2	3
HRT 207	Plant Pest Management*	2	3	3
HRT 246	Herbaceous Plants	2	2	3
HRT 205	Soils	2	2	3
HRT 245	Woody Plants	2	2	3
EEE	Horticulture Elective	2	2	3
Total Credits for Career Studies Certificate		**12**	**13**	**18**

Curriculum & Program Requirements

Business

Accounting

Associate of Applied Science

Program Coordinator: Ben Bullen • bbullen@vhcc.edu • 276-739-2452

Length: Four semesters (two years)

Purpose: With the rapid development of business and industry in Virginia, there is a great demand for qualified personnel who can accumulate, analyze, and interpret data, which is essential for reporting and decision-making. The Associate of Applied Science Degree curriculum in Accounting is designed primarily for persons who seek full-time employment in the accounting field immediately upon completion of the community college curriculum. Persons who are seeking their first employment in an accounting position in addition to those presently in accounting who are seeking a promotion may benefit from this curriculum.

Occupational Objectives: Accounting Clerk, Accounting Trainee, Accounting Technician, Junior Accountant, Accountant

Admission Requirements: In addition to the admission requirements established for the college entry into the Associate of Applied Science program in Accounting requires proficiency in high school English and mathematics. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses. Proficiency in keyboarding is required. Students may enroll in AST 114 to upgrade keyboarding skills.

Program Requirements: The first two semesters (first year) of the Associate of Applied Science Degree curriculum in Accounting are similar to the AAS degree in Business Technology with a major in Management. In the second year, each student will pursue his specialty in Accounting. The curriculum will include technical courses in accounting, related areas, general education, and electives. Instruction will include both the theoretical concepts and practical applications needed for future success in accounting. Each student is urged to consult with his/her counselor and faculty advisor in planning their program and selecting their electives. Courses within this curriculum may be applied to a four-year program at the discretion of the admitting institution. Upon successful completion of the four-semester curriculum listed, the graduate will be awarded the Associate of Applied Science Degree in Business Technology with a major in Accounting.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment. Upon the student's request, courses may be modified to provide possible transfer acceptability by four-year colleges and universities.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
SDV 101	Orientation to College Success	1	0	1
ENG 111	College Composition I	3	0	3
ACC 211	Principles of Accounting I	4	0	4
MTH 132	Business Mathematics	3	0	3
BUS 100	Introduction to Business	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
	Total	**17**	**0**	**17**
Second Semester (Spring)				
ACC 212	Principles of Accounting II	4	0	4
BUS 200	Principles of Management	3	0	3
ITE 140	Spreadsheet Software	3	0	3
ACC 215	Computerized Accounting	4	0	4
EEE	Humanities Elective	3	0	3
	Total	**17**	**0**	**17**
Third Semester (Fall)				
ACC 221	Intermediate Accounting I	4	0	4
ACC 231	Cost Accounting I	3	0	3
BUS 241	Business Law I	3	0	3
CST 100	Principles of Public Speaking	3	0	3
ACC 261	Principles of Federal Taxation I	3	0	3
	Total	**16**	**0**	**16**
Fourth Semester (Spring)				
ACC 222	Intermediate Accounting II	4	0	4
PSY 200	Principles of Psychology	3	0	3
FIN 215	Financial Management	3	0	3
BUS 225	[1]Applied Business Statistics	3	0	3
SDV 106	Preparation for Employment	1	0	1
EEE	General Education Elective	3	0	3
	Total	**17**	**0**	**17**
Total Minimum Credits for AAS Degree				**67**

Footnote:

[1]Prerequisite: Math 132.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Management

Associate of Applied Science Degree

Program Coordinator: Ben Bullen • bbullen@vhcc.edu • 276-739-2452

Length: Four semesters (two years)

Purpose: With the rapid development of business and industry in Virginia, there is a great demand for qualified management personnel to assist in this economic growth. The Associate of Applied Science Degree curriculum in Management is designed primarily for persons who seek full-time employment in various managerial positions immediately upon completion of the community college curriculum. Persons who are seeking their first employment in a managerial position as well as those presently in management who are seeking a promotion may benefit from this curriculum.

Occupational Objectives: Management Trainee, Manager of Small Business, Industrial Supervisor, Branch Manager, Department Head

Admission Requirements: In addition to the admission requirements established for the college, entry into the Associate of Applied Science Degree program in Management requires proficiency in high school English and mathematics. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses. Proficiency in keyboarding is highly recommended. Students may enroll in AST 114 to upgrade keyboarding skills.

Program Requirements: The first two semesters (first year) of the Associate of Applied Science Degree curriculum in Management are similar to the AAS degree in Business Technology with a major in Accounting. In the second year each student will pursue his or her specialty in management. The curriculum will include technical courses in business and industrial management, courses in related areas, general education and electives. Instruction will include both the theoretical concepts and practical applications needed for future success in a management career. Upon successful completion of the curriculum, the student will be awarded the Associate of Applied Science Degree in Business Technology with a major in Management.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment entry. Upon the student's request, courses may be modified to provide possible transfer acceptability by four-year colleges and universities.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ACC 211	Principles of Accounting	4	0	4
ENG 111	College Composition I	3	0	3
BUS 100	Introduction to Business	3	0	3
MTH 132	Business Mathematics	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
SDV 101	Orientation to College Success	1	0	1
	Total	**17**	**0**	**17**
Second Semester (Spring)				
ACC 212	Principles of Accounting II	4	0	4
BUS 200	Principles of Management	3	0	3
CST 100	Principles of Public Speaking	3	0	3
ITE 140	Spreadsheet Software	3	0	3
ECO 201	Principles of Macroeconomics	3	0	3
	Total	**16**	**0**	**16**
Third Semester (Fall)				
BUS 241	Business Law I	3	0	3
BUS 205	Human Resource Management	3	0	3
MKT 100	Principles of Marketing	3	0	3
ECO 202	Principles of Microeconomics	3	0	3
EEE	Degree Related Elective	3	0	3
EEE	Humanities Elective	3	0	3
	Total	**18**	**0**	**18**
Fourth Semester (Spring)				
BUS 242	Business Law II	3	0	3
FIN 215	Financial Management	3	0	3
PSY 120	Human Relations	3	0	3
BUS 225	[1]Applied Business Statistics	3	0	3
SDV 106	Preparation for Employment	1	0	1
BUS 290	Coordinated Internship	3	0	3
	Total	**16**	**0**	**16**
Total Minimum Credits for AAS Degree				**67**

Footnote:

[1]Prerequisite: MTH 132.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Accounting and Information Systems Technology

Certificate

Program Coordinator: Ben Bullen • bbullen@vhcc.edu • 276-739-2452

Length: Two semesters (one year)

Purpose: This certificate program in Accounting and Information Systems Technology is designed to provide individuals with basic skills in accounting and computer information systems which will enable them to obtain employment immediately upon completion of the two-semester program. With the present growth in this area, there is a need for personnel who possess basic skills in accounting and personal computers who are unable to pursue a two-year degree program.

Occupational Objectives: Computerized Accounting Clerk, Computerized Inventory Clerk, Computerized Payroll Clerk, Computerized Bookkeeping Clerk, Computerized Information Input Clerk

Admission Requirements: In addition to the admission requirements established for the college, entry into the Accounting and Information Systems Technology program requires proficiency in high school English and mathematics. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses.

Program Requirements: Proficiency in keyboarding is highly recommended. Students may enroll in AST 114 to upgrade keyboarding skills. Upon successful completion of the curriculum, the student will be awarded a Certificate in Accounting and Information Systems Technology.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ACC 211	Principles of Accounting I	4	0	4
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
MTH 132	Business Mathematics	3	0	3
ENG 111	College Composition I	3	0	3
BUS 100	Introduction to Business	3	0	3
SDV 101	Orientation to College Success	1	0	1
	Total	**17**	**0**	**17**
Second Semester (Spring)				
ACC 212	Principles of Accounting II	4	0	4
ACC 215	Computerized Accounting	4	0	4
BUS 241	Business Law	3	0	3
ITE 140	Spreadsheet Software	3	0	3
CST 100	Principles of Public Speaking	3	0	3
	Total	**17**	**0**	**17**
Total Minimum Credits for Certificate				**34**

Supervision and Management

Certificate

Program Coordinator: Ben Bullen • bbullen@vhcc.edu • 276-739-2452

Length: Two semesters (one year)

Purpose: With increased development of business, industry, and government in Virginia, there is a great need for qualified management personnel. The supervision and management program is designed to train personnel for full-time employment upon completion of the course requirements. In addition, the curriculum furnishes the student the option to transfer into the AAS degree Management program.

Occupational Objectives: Entry Level Management, Industrial Supervision, Small Business Management

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to Supervision and Management certificate curriculum. Proficiency in high school English and mathematics is required. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses.

Program Requirements: The one year curriculum provides training in general business, accounting, management, and information systems. In addition to this, the curriculum includes supportive courses as a preparation for entrance into the job market. Upon successful completion of the curriculum, the student will be awarded a Certificate in Supervision and Management.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ACC 211	Principles of Accounting I	4	0	4
BUS 100	Introduction to Business	3	0	3
BUS 205	Human Resource Management	3	0	3
ENG 111	College Composition I	3	0	3
MTH 132	Business Mathematics	3	0	3
SDV 101	Orientation to College Success	1	0	1
	Total	**17**	**0**	**17**
Second Semester (Spring)				
BUS 200	Principles of Management	3	0	3
BUS 241	Business Law	3	0	3
BUS 225	[1]Applied Business Statistics	3	0	3
CST 100	Principles of Public Speaking	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
PSY 120	[2]Human Relations	3	0	3
	Total	**18**	**0**	**18**
Total Minimum Credits for Certificate				**35**

Footnotes:

[1]Prerequisite: MTH 132.

[2]Psychology 200 may substitute for PSY 120.

Culinary Arts

Cooperative Career Studies Certificate

Dual Enrollment with Washington County Career & Technical Education Center, Smyth County Career & Technical Education Center, and Virginia High School Only

Students must meet enrollment and eligibility requirements for the Dual Enrollment Sites listed above. Contact centers directly for enrollment information.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
HRI 106	Principles of Culinary Arts I	3	0	3
HRI 107	Principles of Culinary Arts II	3	0	3
HRI 128	Principles of Baking	2	3	3
HRI 158	Sanitation and Safety	3	0	3
Total Credits for Career Studies Certificate		**11**	**3**	**12**

Industrial Supervision

Career Studies Certificate

Program Coordinator: Ben Bullen • bbullen@vhcc.edu • 276-739-2452

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
PSY 120	Human Relations	3	0	3
BUS 200	Principles of Management	3	0	3
BUS 241	Business Law I	3	0	3
CST 100	Principles of Public Speaking	3	0	3
MKT 100	Principles of Marketing	3	0	3
SAF 127	Industrial Safety	2	0	2
Total Credits for Career Studies Certificate		**17**	0	**17**

Small Business Management

Career Studies Certificate

Program Coordinator: Ben Bullen • bbullen@vhcc.edu • 276-739-2452

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
MKT 100	Introduction to Marketing	3	0	3
BUS 100	Introduction to Business	3	0	3
BUS 200	Principles of Management	3	0	3
BUS 241	Business Law I	3	0	3
BUS 295	NX Level for Entrepreneurs	3	0	3
Total Credits for Career Studies Certificate		**15**	0	**15**

Retail Management

Career Studies Certificate

Program Coordinator: Ben Bullen • bbullen@vhcc.edu • 276-739-2452

Length: Two Semesters

Purpose: Designed for the retail industry, the Career Studies Certificate in Retail Management provides successful students with the knowledge, skills and competency required for managerial success.

Occupational Objectives: Managers, Assistant Managers and Department Managers.

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Retail Management Certificate.

Program Requirements: The curriculum will include technical, industrial, and behavioral management courses that will prepare students for future success in a management career. Upon completion of the program, students are awarded the Career Studies Certificate in Retail Management.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester				
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
MKT 100	Principles of Marketing	3	0	3
AST 205	Business Communication	3	0	3
BUS 205	Human Resource Management	3	0	3
	Total	**12**	**0**	**12**
Second Semester				
BUS 200	Principles of Management	3	0	3
BUS 201	Organizational Behavior	3	0	3
FIN 215	Financial Management	3	0	3
MKT 216	Retail Management	3	0	3
	Total	**12**	**0**	**12**
Total Credits for Career Studies Certificate				**24**

Administrative Support Technology - Executive Administrative Assistant

Associate of Applied Science

Program Coordinator: Nan Jones • njones@vhcc.edu • 276-739-2465

Length: Four semesters (two years)

Purpose: With the rapid development of business and industry in Virginia, there is a great demand for qualified personnel in office occupations. The Associate of Applied Science Degree curriculum in Administrative Support Technology is designed to prepare persons for full-time employment immediately upon completion of the community college program. Persons who are seeking their first employment in an office position as well as those who are seeking a promotion may benefit from this curriculum.

Occupational Objectives: Office Specialist, Executive Secretary, Executive Administrative, Assistant, Office Manager, Related Office Occupations, Executive Office Assistant

Admissions Requirements: In addition to the admission requirements established for the college entry into the Associate of Applied Science Degree curriculum in Administrative Support Technology requires proficiency in high school English and mathematics. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses.

Advanced Placement: Students who have completed training in Office Technology courses at the high school level or who have had appropriate occupational experience may apply for advance placement with credit. Credit by examination will be the basis upon which such advance placement will be granted. Students currently holding either the CPS or PLS certification may also be granted up to 25 semester hours of credit. The student may then elect to enroll in an accelerated program to complete the AAS degree requirements in less than two years or take appropriate advanced courses for further occupational preparation.

Program Requirements: The two-year curriculum in Administrative Support Technology combines instruction in the many areas required for competence as a secretary in business, government, industry, law offices, and other organizations. The curriculum will include courses in Administrative Support Technology, related areas, general education and electives. Students are advised to consult with their faculty advisor and counselor in planning their programs. Upon satisfactory completion of the four semester curriculum listed below, the graduate will be awarded the Associate of Applied Science Degree in Business Technology with a major in Administrative Support Technology, Executive Administrative Assistant.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment entry. Upon the student's request, courses may be modified to provide possible transfer acceptability by four-year colleges and universities.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
AST 101	Keyboarding I[1]	4	0	4
AST 107	Proofreading and Editing	3	0	3
EEE	Social Science Elective	3	0	3
MTH 132	Business Mathematics	3	0	3
	Total	**17**	**0**	**17**
Second Semester (Spring)				
AST 102	Keyboarding II[2]	4	0	4
AST 171	Intro. To Call Center Services	3	0	3
AST 141	Word Processing I[2]	3	0	3
AST 137	Records Management	3	0	3
PED	Physical Education	0	2-3	1
EEE	Social Science Elective	3	0	3
	Total	**16**	**2-3**	**17**
Third Semester (Fall)				
AST 136	Office Record Keeping	3	0	3
AST 205	Business Communications	3	0	3
AST 238	Word Processing Advanced Operations[3]	3	0	3
AST 232	Microcomputer Office Applications[2]	3	0	3
AST 230	Intro. To Office Technology	3	0	3
AST 154	Voice Recognition Applications	2	0	2
	Total	**17**	**0**	**17**
Fourth Semester (Spring)				
BUS 241	Business Law I	3	0	3
AST 236	Specialized Software Applications[4]	3	0	3
AST 243	Office Administration I[5]	3	0	3
AST 206	Professional Development	3	0	3
EEE	Humanities Elective	3	0	3
	Total	**15**	**0**	**15**
Total Minimum Credits for AAS Degree				**66**

Footnotes:

[1]Students who pass the Keyboarding Exemption Test will be granted credit for this course. Testing date is published in the class schedule.

[2]Prerequisite- AST 101.

[3]Prerequisite- AST 141.

[4]Prerequisite- AST 141. Additional recommended prerequisite- AST 238. *

[5]. Prerequisite- AST 141. Additional recommended prerequisites- AST 137, AST 238, and AST 232. *

*Exceptions can be granted with faculty or division approval.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Administrative Support Technology - Specialization in Legal Assisting/Paralegal

Associate of Applied Science Degree

Program Coordinator: Nan Jones • njones@vhcc.edu • 276-739-2465

Length: Four Semesters (two years)

Purpose: The curriculum is designed to provide an individual with a sufficient level of knowledge, understanding, and proficiency to perform specific tasks in a legal environment. A legal assistant will have a basic understanding of the general processes of American law, and will have the knowledge and proficiency to perform specific tasks under the supervision of a lawyer.

Occupational Objectives: The Administrative Support Technology with a Specialization in Legal Assisting/Paralegal will help prepare you for a wide range of entry level positions in the legal fields with opportunities in: Law Firms, Private Corporations, Mortgage Companies, Government, Banks, Administrative Agencies, Title Insurance Companies

Admissions Requirements: In addition to the admission requirements established for the college, entry into the Associate of Applied Science Degree curriculum in Administrative Support Technology requires proficiency in high school English and mathematics. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses.

Advanced Placement: Students who have completed training in Office Technology courses at the high school level or who have had appropriate occupational experience may apply for advance placement with credit. Credit by examination will be the basis upon which such advance placement will be granted. Students currently holding either the CPS or PLS certification may also be granted up to 25 semester hours of credit. The student may then elect to enroll in an accelerated program to complete the AAS degree requirements in less than two years or take appropriate advanced courses for further occupational preparation.

Program Requirements: The two-year curriculum in Administrative Support Technology combines instruction in the many areas required for competence as a legal assistant in business, government, industry, law offices, and other organizations. The curriculum will include courses in Administrative Support Technology, specialized courses in legal assisting, general education and electives. Students are advised to consult with their faculty advisor and counselor in planning their programs. Upon satisfactory completion of the four semester curriculum listed below, the graduate will be awarded the Associate of Applied Science Degree in Business Technology with a major in Administrative Support Technology - Specialization in Legal Assisting/Paralegal.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment entry. Upon the student's request, courses may be modified to provide possible transfer acceptability by four-year colleges and universities.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
AST 101	Keyboarding I[1]	4	0	4
MTH 132	Business Mathematics	3	0	3
LGL 110	Intro to Law and the Legal Assistant	3	0	3
AST 107	Proofreading and Editing	3	0	3
	Total	**17**	**0**	**17**
Second Semester (Spring)				
AST 102	Keyboarding II[2]	4	0	4
AST 137	Records Management	3	0	3
LGL 127	Legal Research and Writing	3	0	3
AST 141	Word Processing I[2]	3	0	3
EEE	Social Science Elective	3	0	3
	Total	**16**	**0**	**16**
Third Semester (Fall)				
AST 154	Voice Recognition Applications	2	0	2
AST 232	Microcomputer Office Applications[2]	3	0	3
AST 230	Intro. To Office Technology	3	0	3
AST 136	Office Record Keeping[3]	3	0	3
AST 205	Business Communications	3	0	3
AST 238	Word Processing Advanced Operations[4]	3	0	3
	Total	**17**	**0**	**17**
Fourth Semester (Spring)				
AST 236	Specialized Software Applications[5]	3	0	3
EEE	Social Science Elective	3	0	3
AST 243	Office Administration[6]	3	0	3
AST 206	Professional Development	3	0	3
EEE	Humanities Elective	3	0	3
LGL EEE	LGL Elective	3	0	3
	Total	**18**	**0**	**18**
Total Minimum Credits for AAS Degree				**68**

Footnotes:

[1]Students who pass the Keyboarding Exemption Test will be granted credit for this course. Testing date is published in the class schedule.

[2]Prerequisite- AST 101.

[3]ACC 211 should be taken in place of AST 136 if you intend to transfer.

[4]Prerequisite- AST 141.

[5]Prerequisite- AST 141. Additional recommended prerequisite- AST 238. *

[6]Prerequisite- AST 141. Additional recommended prerequisites- AST 137, AST 238, and AST 232. *

*Exceptions can be granted with faculty or division approval.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Administrative Support Technology - Specialization in Medical Office Specialist

Associate of Applied Science Degree

Program Coordinator: Nan Jones • njones@vhcc.edu • 276-739-2465

Length: Four semesters (two years)

Purpose: This curriculum is designed to provide specialized administrative support technology education in the medical field. It is recommended for students interested in a professional career as a medical office assistant in a private medical practice, in a hospital setting, and in other health care organizations. In addition, the Administrative Support Technology curriculum offers basic skills training and advanced training complementary to the information systems demands of the electronic office. Included are skills in word processing, microcomputer usage, and human relations.

Occupational Objectives: Medical Office Assistant, Medical Secretary/Administrative Assistant, Medical Transcriptionist, Medical Receptionist and Information Clerk, Medical Records and Health Information Technician, Hospital Ward or Office Clerk

Admissions Requirements: In addition to the admission requirements established for the college, entry into the Associate of Applied Science Degree curriculum in Administrative Support Technology - Medical Office Specialist requires proficiency in high school English and mathematics. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses.

Advanced Placement: Students who have completed training in Office Technology courses at the high school level or who have had appropriate occupational experience may apply for advance placement with credit. Credit by examination will be the basis upon which such advance placement will be granted. Students currently holding either the CPS or PLS certification may also be granted up to 25 semester hours of credit. The student may then elect to enroll in an accelerated program to complete the AAS degree requirements in less than two years or take appropriate advanced courses for further occupational preparation.

Program Requirements: The two-year curriculum in Administrative Support Technology combines instruction in the many areas required for competence as a secretary in business, government, industry, law offices, and other organizations. The curriculum will include courses in Administrative Support Technology, medical transcription, medical terminology, general education and electives. Students are advised to consult with their faculty advisor and counselor in planning their programs. Upon satisfactory completion of the four semester curriculum listed below, the graduate will be awarded the Associate of Applied Science Degree in Business Technology with a major in Administrative Support Technology - Medical Office Specialist.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment entry. Upon the student's request, courses may be modified to provide possible transfer acceptability by four-year colleges and universities.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
AST 101	[1]Keyboarding I	4	0	4
HIM 113	Medical Terminology and Disease Processes I	3	0	3
AST 107	Proofreading and Editing	3	0	3
EEE	Humanities Elective	3	0	3
	Total	**17**	**0**	**17**
Second Semester (Spring)				
AST 102	Keyboarding II[2]	4	0	4
AST 137	Records Management	3	0	3
MTH 132	Business Mathematics	3	0	3
AST 141	Word Processing I[2]	3	0	3
AST 176	Medical Office/Unit Management	3	0	3
	Total	**16**	**0**	**16**
Third Semester (Fall)				
AST 232	Microcomputer Office Applications[2]	3	0	3
AST 154	Voice Recognition Applications	2	0	2
AST 230	Intro. To Office Technology	3	0	3
AST 136	Office Record Keeping	3	0	3
AST 205	Business Communications	3	0	3
AST 238	Word Processing Advanced Operations[3]	3	0	3
	Total	**17**	**0**	**17**
Fourth Semester (Spring)				
EEE	Social Science Elective	3	0	3
AST 236	Specialized Software Applications[4]	3	0	3
EEE	Social Science Elective	3	0	3
AST 243	Office Administration I[5]	3	0	3
AST 206	Professional Development	3	0	3
AST 271	Medical Office Procedures I	3	0	3
	Total	**18**	**0**	**18**
Total Minimum Credits for AAS Degree				**68**

Footnotes:

[1]Students who pass the Keyboarding Exemption Test will be granted credit for this course. Testing date is published in the class schedule.

[2]Prerequisite: AST 101.

[3]Prerequisite: AST 141.

[4]Prerequisite: AST 141. Additional recommended prerequisite: AST 238. *

[5]Prerequisite AST 141. Additional recommended prerequisites: AST 137, AST 238, and AST 232. *

*Exceptions can be granted with faculty or division approval.

Students are urged to follow the recommended pathway for this degree when choosing electives

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Medical Coding Specialist

Career Studies Certificate

Program Coordinator: Nan Jones • njones@vhcc.edu • 276-739-2465
Length: Two Semesters

Purpose: There is an increased need for qualified personnel in medical offices due to the requirements of insurance and medical agencies. This program is designed to train personnel for full-time employment upon completion of the course requirements. In addition, the curriculum furnishes the student the opportunity to take courses that prepare them for certification exams.

Occupational Objectives: Medical Office Clerk**,** Medical Records Worker, Medical Coder

Admissions Requirements:

- Completion of the VHCC Application
- Graduation from high school or satisfactory completion of the GED with all transcripts on file with Student Services

Program Requirements: The two-semester curriculum provides training in medical terminology, health records management, coding for health records, and health record applications.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
AST 101	Keyboarding I	4	0	4
AST 107	Editing & Proofreading Skills	3	0	3
HIM 113	Med. Terminology and Disease Processes I	3	0	3
HIM 253	Health Records Coding	4	0	4
	Total	**14**	**0**	**14**
Second Semester (Spring)				
AST 271	Medical Office Procedures I	3	0	3
HIM 254	Advanced Coding and Reimbursement	4	0	4
AST 137	Records Management	3	0	3
HIM 163	Anatomy and Physiology for Administrative Health Prof.	3	0	3
	Total	**13**	**0**	**13**
Total Credits for Career Studies Certificate				**27**

Clerical Studies

Certificate

Program Coordinator: Nan Jones • njones@vhcc.edu • 276-739-2465

Length: Two semesters (one year)

Purpose: With the increased development of business, industry, and government in Virginia, there is a great need for qualified personnel in the clerical area of office occupations. The clerical program is designed to train personnel for full-time employment upon completion of the course requirements. In addition, the curriculum furnishes the student the opportunity to elect to transfer into the AAS degree program if she/he so wishes.

Occupational Objectives: Receptionist, Records Clerk, Typist, Office Clerk, Office Assistant

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to Clerical Studies curriculum. Proficiency in high school English and mathematics is required. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses.

Program Requirements: The two-semester curriculum provides training in keyboarding, filing, word processing, and office record keeping or business electives. In addition to this, the curriculum includes supportive courses as a preparation for entrance into the job market. Upon successful completion of the curriculum, the student will be awarded a Certificate in Clerical Studies.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
AST 101	Keyboarding I[1]	4	0	4
AST 107	Proofreading and Editing	3	0	3
AST 136	Office Record Keeping	3	0	3
AST 154	Voice Recognition Applications	2	0	2
	Total	**16**	**0**	**16**
Second Semester (Spring)				
AST 102	Keyboarding II[2]	4	0	4
AST 171	Intro. To Call Center Services	3	0	3
AST 137	Records Management	3	0	3
AST 141	Word Processing I[2]	3	0	3
MTH 132	Business Mathematics	3	0	3
	Total	**16**	**0**	**16**
Total Minimum Credits for Certificate				**32**

Footnotes:

[1]Students who pass the Keyboarding Exemption Test will be granted credit for this course. Testing date is published in the class schedule.

[2]Prerequisite: AST 101.

Curriculum & Program Requirements

Health

Emergency Medical Services Technology - Paramedic

Associate of Applied Science Degree

Program Director: Bill Akers, Jr., MS, NRP • bill.akers@sw.edu
276-964-7729
Length: Five semesters

Offered in cooperation with Southwest Virginia Community College. Degree awarded by Virginia Highlands Community College.
Purpose: The purpose of this curriculum is to produce competent entry- level Paramedics who can provide the highest level of out-of-hospital care. Upon completion of the program, students will be eligible for National Registry testing and certification. This credential leads to Paramedic licensure or certification in Virginia and most other states.

Employment opportunities: Employment opportunities for Paramedics are available with ambulance; fire and rescue services; hospitals; local, state and federal government agencies.

Program Goal: To prepare competent entry-level Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains with or without exit points at the Advanced Emergency Medical Technician and/or Emergency Medical Technician, and/or Emergency Medical Responder levels.

Program Learning Outcomes:
Upon successful completion, students will be able to:
•Perform current techniques in pre-hospital emergency care to include signs and symptoms of illness, injuries, medical emergencies, appropriate medical techniques, and ambulance operations.
•Assess, extricate, and care for victims of trauma incidents utilizing the following management skills; scene size-up, disentanglement, victim stabilization for single and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures.
•Describe the basic pharmacological background and actions of drugs, regulations, human body systems, pharmacokinetics, and drug calculations.
•Demonstrate the advanced life support skills approach to emergency care of the emotionally disturbed to include emotional aspects, approach to the patient, psychiatric emergencies and techniques of management.
•Perform an advanced physical assessment on an emergency patient to include the physical exam, integrative and on-going exams, and communicate/document the findings to the patient and others.
•Perform a pediatric assessment, manage airway and respiratory emergencies, cardiovascular emergencies, neonatal emergencies, and Sudden Infant Death Syndrome (SIDS). Treat children with special healthcare needs.
•Recognize and intervene in medical emergencies related to toxicology, hazardous materials, infectious disease, and hematology. Include poisoning, drug overdose, and transmission of infectious diseases.
•Identify pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with cardiovascular disease/injury based on 3-lead and 12-lead cardiac monitoring and interpretation. Define cardiovascular anatomy and physiology, cardiovascular pathologies and management, and adjunctive diagnostics.
•Utilize assessment findings to formulate a field impression and implement the treatment plan for obstetric, neonatal, pediatric, geriatric, and chronic-care patients.

Employment Opportunities:
Employment opportunities for paramedics are available with ambulance; fire and rescue services; hospitals; local, state and federal government agencies.

Accreditation:
The Southwest Virginia Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
9355 - 113th St. N, #7709
Seminole, FL 33775
727-210-2350
www.caahep.org

To contact the CoAEMSP:
8301 Lakeview Parkway, Suite 111-312
Rowlett, TX 75088
214-703-8445
Fax: 214-703-8992
www.coaemsp.org

Licensure: Meets state educational requirements for licensure NREMT- AL, AK, AZ, AR, CA, CO, CT, DC, DE, FL, GA, HI, ID, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY

Does not meet state educational requirements for licensure NREMT- IL, MT

Sources cited: Further information regarding EMS certifications may be found at: https://nasemso.org/

Statement for Emergency Medical Services (EMS):
Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Virginia Highlands Community College Associate Degree in Emergency Medical Services Technology program provides the following information for all prospective and current students:

The National Assoc. of EMS Officials (NASEMSO) has ruled EMS provider licensure and certification to be synonymous and National Registry certification is recognized for reciprocity in 48 of our 50 states.

Virginia Highlands Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

Admission Requirements*:* Prior to the starting program courses, the applicant must:

1. Meet eligibility requirements as stipulated by the Virginia Office of EMS, https://www.vdh.virginia.gov/emergency-medical-services/education-certification/how-to-become-an-emergency-medical-services-provider-in-virginia/; and
2. Meet the college's general admission requirements.

Selection Process*:* To be eligible for selection to the program, interested persons should **complete the following process by May 15:**

1. Submit a college admission application. https://www.vhcc.edu/future-students/ready-to-enroll-now
2. Submit an application to the program (separate document) with required attachments.
3. Have transcripts of previous college courses sent to the college.

At that time the first round of students will be selected. Should openings still be available, persons who apply or meet requirements after May 15 will be considered.

PROGRAM REQUIREMENTS:
Physical Requirements: An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description https://www.vdh.virginia.gov.

Academic Requirements: Students must make a "C" or better in all program cores courses. Any student receiving a grade less than "C" will be placed on programmatic academic probation. That course shall be remediated. Remediated course must be completed with a final grade of "C" or better.
Clinical and Behavioral Requirements: Selected and supervised student experience is required by the program and will be accomplished at selected regional health care facilities. The student is responsible for transportation to these facilities as well as to any scheduled field trips.
Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student might be asked to withdraw from the program.
Other Requirements: Applicants accepted to the program are required to submit a health certificate signed by a licensed physician, physician's assistant, or RNP and should include documentation of measles, mumps, Rubella (MMR) and chicken pox exposure or inoculations; documentation of Hepatitis B inoculation; Tuberculosis testing; and overall general health of the applicant. A criminal background check and drug screening is also done to confirm compliance with state regulations.
The purchase of items such as uniforms, liability insurance, and other accessories is the financial responsibility of the individual student. Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity to be advantageous in subsequent course scheduling.
Program Director: Bill Akers, Jr., MS, NRP, 279.964.7729
bill.akers@sw.edu

Please see the CoAEMSP Outcomes Summary 1 - 2020 for program pass rates, retention, and job placement.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Summer)				
EMS 100	CPR for Healthcare Providers	1	0	1
EMS 111	Emergency Medical Technician	5	4	7
EMS 120	EMT – Basic Clinical	0	2	1
BIO 145	[2]Human Anatomy & Physiology for Health Sciences	3	3	4
	Total	**9**	**9**	**13**
Second Semester (Fall)				
SDV 101	[3]College Success Skills	1	0	1
EMS 121	Preparatory Foundations	2	0	2
EMS 123	EMS Clinical Preparation	0	2	1
EMS 125	Basic Pharmacology	1	0	1
EMS 126	Basic Pharmacology Lab	0	2	1
EMS 127	Airway, Shock and Resuscitation	1	0	1
EMS 128	Airway, Shock and Resusc. Lab	0	2	1
EMS 135	Emergency Medical Care	2	0	2
EMS 136	Emergency Medical Care Lab	0	2	1
EMS 141	Cardiovascular Care	1	0	2
EMS 142	Cardiovascular Care Lab	0	2	1
	Total	**8**	**10**	**14**
First Semester (Summer)				
Third Semester (Spring)				
EMS 137	Trauma Care	1	0	1
EMS 138	Trauma Care Lab	0	2	1
EMS 139	Special Populations	1	0	1
EMS 140	Special Populations Lab	0	2	1
EMS 170	ALS Internship I	0	3	1
EMS 175	Paramedic Clinical Experience I	0	3	1
ENG 111	College Composition I	3	0	3
PSY 230	[4]Developmental Psychology	3	0	3
	Total	**8**	**10**	**12**
Fourth Semester (Fall)				
EMS 202	Paramedic Pharmacology	2	0	2
EMS 203	Advanced Patient Care	2		2
EMS 204	Advanced Patient Care Lab	0	2	2
EMS 206	Pathophysiology for Health Professions	3	0	3
EMS 247	Paramedic Clinical Experience II	0	3	1
EMS 248	Paramedic Comprehensive Field Experience	0	6	2
	Total	**7**	**11**	**12**
Fifth Semester (Spring)				
EMS 210	EMS Operations	0	2	1
EMS 212	Leadership and Professional Development	1	0	1
EMS 165	Advanced Cardiac Life Support	1	0	1
EMS 163	Prehospital Trauma Life Support	1	0	1
EMS 167	Emergency Pediatric Care	1	0	1
EMS 164	Advanced Medical Life Support	1	0	1
EMS 216	Paramedic Review	0	2	1
EMS 249	Paramedic Capstone Internship	0	6	2
HUM	[5]Humanities Elective	3	0	3
EEE	[6]General Education Elective	3	0	3
	Total	**11**	**10**	**15**
Total Minimum Credits for AAS Degree				**66**

Footnotes:

[1] Developmental coursework may require additional semesters to complete program.

[2]A 4-credit Anatomy & Physiology course. BIO 141 - 142 are recommended if the student is planning to transfer to another medically related program; otherwise, BIO 145 is recommended.

[3]SDV 101 is an approved substitute.

4Social Science subject areas: PSY/PLS/ECO/HIS/SOC. Recommend PSY 230.

Humanities/Fine Arts subject areas: MUS/ART/PHI/SPA/REL. Choose from the following list: ART 101, ENG 241, 243, 251, MUS 121, REL 230, others as approved by the program director.

[6]The general education elective must be a course in one of the general education categories – communication, humanities/fine arts, social/behavioral sciences, or natural sciences/mathematics. Students who complete BIO 141 and BIO 142 in lieu of BIO 145 are exempt from the general education elective.

Please refer to Course Listings in back of catalog for all prerequisites and corequisites.

Emergency Medical Technician

Career Studies Certificate

Program Director: Bill Akers, Jr., MS, NRP, Program Director • bill.akers@sw.edu • 276-964-7729
Length: One Semester

Offered in cooperation with Southwest Virginia Community College. Career Studies Certificate awarded by Virginia Highlands Community College.

Purpose: The purpose of this curriculum is to produce competent, entry-level Emergency Medical Technicians who can provide basic life support and care to the sick and injured via the Emergency Medical Services (EMS) infrastructure. Upon successful completion of the program, students will be eligible for National Registry testing and certification in the Commonwealth of Virginia. Employment opportunities for EMTs are available with ambulance services, fire and rescue departments, hospitals, local, state and federal government agencies, and humanitarian relief organizations.

Program Goals: At the completion of the program:

1. The student will demonstrate technical proficiency in all skills necessary to fulfill the role of an entry-level EMT.
2. The graduate of the program will demonstrate the ability to comprehend, apply, and evaluate the clinical information relative to his/her role as an entry-level EMT,
3. The student will demonstrate personal behaviors consistent with professional and employer expectations for the entry-level EMT.

Approval: This program is approved by the Virginia Office of Emergency Medical Services

Admission Requirements: Admission to the program will be governed by the requirements for general admission to the College and the Commonwealth of Virginia Office of Emergency Medical Services. Individuals who have a felony conviction may not be eligible to take the certification exam.

PROGRAM REQUIREMENTS:

Physical Requirements: This program requires extensive walking, stooping, bending, pushing, pulling, climbing stairs, and lifting. Lifting and carrying requirements: at least 125 pounds; motor coordination is necessary because over uneven terrain, the patients', EMTs' and other workers' well-being must not be jeopardized. Further, extensive use of sight, hearing, and speaking is required. An EMS provider is faced with many physical and psychological challenges. Please refer to the Virginia Office of Emergency Medical Services web site for a more detailed functional job description-http://www.vdh.virginia.gov.

Academic Requirements: Any student receiving a grade of less than "C" in any of the required program courses will be placed on programmatic academic probation. That course shall be remediated once. Remediated courses must be completed with a final grade of "C" or better.

Clinical and Behavioral Requirements: Selected and supervised student clinical experience is required by the program and will be accomplished at selected, regional health care facilities and licensed EMS agencies. The student is responsible for transportation to these facilities, as well as to any scheduled field trips or combined program classes. Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student may be asked to withdraw from the program.

Other Requirements: In addition to basic college costs such as tuition and fees, this program requires expenditures for uniforms, books, immunizations and physical, testing fees, certification courses and some medical equipment items. Students are also responsible for their own transportation to clinical sites.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
EMS 111	Emergency Medical Technician	5	4	7
EMS 120	EMT-Basic Clinical	0	2	1
HLT 105	Cardiopulmonary Resuscitation	1	0	1
	Total	**6**	**6**	**9**
Total Credits for Career Studies Certificate				**9**

Emergency Medical Technician - Plus

Career Studies Certificate

Program Director: Bill Akers, Jr., MS, NRP, Program Director • bill.akers@sw.edu • 276-964-7729
Length: One Semester

Offered in cooperation with Southwest Virginia Community College. Career Studies Certificate awarded by Virginia Highlands Community College.

Purpose: This Career Studies Certificate leads to entry-level employment opportunities in the field of Emergency Medical Services. This curriculum prepares students to assess and care for patients at the basic life support (BLS) level. Successful completion of required courses allows students to sit for the National Registry of EMTs Emergency Medical Technician certification exam.

Program Goals: At the completion of the program:

1. The student will demonstrate technical proficiency in all skills necessary to fulfill the role of an entry-level EMT.
2. The graduate of the program will demonstrate the ability to comprehend, apply, and evaluate the clinical information relative to his/her role as an entry-level EMT.
3. The student will demonstrate personal behaviors consistent with professional and employer expectations for the entry-level EMT.

Approval: This program is approved by the Virginia Office of Emergency Medical Services.

Admission Requirements: Admission to the program will be governed by the requirements for general admission to the College and the Commonwealth of Virginia Office of Emergency Medical Services. Individuals who have a felony conviction may not be eligible to take the certification exam.

PROGRAM REQUIREMENTS:

Physical Requirements: This program requires extensive walking, stooping, bending, pushing, pulling, climbing stairs, and lifting. Lifting and carrying requirements: at least 125 pounds; Motor coordination is necessary because over uneven terrain, the patients', EMTs', and other workers' well-being must not be jeopardized. Further, extensive use of sight, hearing, and speaking is required. An EMS provider is faced with many physical and psychological challenges. Please refer to the Virginia Office of Emergency Medical Services web site for a more detailed functional job description – www.vdh.virginia.gov.

Academic Requirements: Any student receiving a grade of less than "C" in any of the EMS courses will be placed on programmatic academic probation. That course shall be remediated once. Remediated courses must be completed with a final grade of "C" or better.

Clinical and Behavioral Requirements: Selected and supervised student clinical experience is required by the program and will be accomplished at selected, regional health care facilities and licensed EMS agencies. The student is responsible for transportation to these facilities, as well as to any scheduled field trips or combined program classes. Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student may be asked to withdraw from the program.

Other Requirements: In addition to basic college costs such as tuition and fees, this program requires expenditures for uniforms, books, immunizations and physical, testing fees, certification courses and some medical equipment items. Students are also responsible for their own transportation to clinical sites.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
EMS 100	CPR for Healthcare Providers[1]	1	0	1
EMS 111	Emergency Medical Technician[2]	5	4	7
EMS 120	EMT-Basic Clinical	0	2	1
ENG 111	College Composition I	3	0	3
SDV 100	College Success Skills	1	0	1
EEE	Program Elective[3]	3	0	3
	Total	**13**	**6**	**16**
Total Credits for Career Studies Certificate				**16**

Footnotes:
[1]HLT 105 is an approved substitute.
[2]The combination of EMS 112 and 113 (Seven credits total) may be substituted for EMS 111.
[3]Select from ENG 112, PSY 200 or PSY 230

Advanced Emergency Medical Technician

Career Studies Certificate

Program Director: Bill Akers, Jr., MS, NRP • bill.akers@sw.edu • 276-964-7729
Length: Two semesters

Offered in cooperation with Southwest Virginia Community College. Career Studies Certificate awarded by Virginia Highlands Community College.

Purpose: The purpose of this curriculum is to produce competent entry-level Advanced EMTs who can provide the highest level of out-of-hospital care. Upon completion of the program, students will be eligible for National Registry testing and certification. This credential leads to Advanced EMT certification in Virginia and most other states.

Program Goals: To prepare competent entry-level Advanced EMTs in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains with or without exit points at the Advanced Emergency Medical Technician and/or Emergency Medical Technician, and/or Emergency Medical Responder levels.

Program Learning Outcomes:
Upon successful completion, students will be able to:

1. Perform current techniques in pre-hospital emergency care to include signs and symptoms of illness, injuries, medical emergencies, appropriate medical techniques, and ambulance operations.
2. Assess, extricate, and care for victims of trauma incidents utilizing the following management skills; scene size-up, disentanglement, victim stabilization for single and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures.
3. Describe the basic pharmacological background and actions of drugs, regulations, human body systems, pharmacokinetics, and drug calculations.
4. Perform an advanced physical assessment on an emergency patient to include the physical exam, integrative and on-going exams, and communicate/document the findings to the patient and others.
5. Perform a pediatric assessment, manage airway and respiratory emergencies, cardiovascular emergencies, neonatal emergencies, and Sudden Infant Death Syndrome (SIDS). Treat children with special healthcare needs.
6. Recognize and intervene in medical emergencies related to toxicology, hazardous materials, infectious disease, and hematology. Include poisoning, drug overdose, and transmission of infectious diseases.

Employment Opportunities:
Employment opportunities for Advanced EMTs are available with ambulance; fire and rescue services; hospitals; local, state and federal government agencies.

Accreditation:
The Southwest Virginia Advanced EMT Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
9355 - 113th St. N, #7709
Seminole, FL 33775
727-210-2350
www.caahep.org

To contact the CoAEMSP:
8301 Lakeview Parkway, Suite 111-312
Rowlett, TX 75088
214-703-8445
Fax: 214-703-8992
www.coaemsp.org"

Licensure: Meets state educational requirements for licensure NREMT- AL, AK, AZ, AR, CA, CO, CT, DC, DE, FL, GA, HI, ID, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY

Does not meet the state educational requirements for licensure IL, MT

Sources cited: Further information regarding EMS certifications may be found at: https://nasemso.org/

Statement for Emergency Medical Services (EMS):
Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Virginia Highlands Community College Associate Degree in Emergency Medical Services Technology program provides the following information for all prospective and current students:
The National Assoc. of EMS Officials (NASEMSO) has ruled EMS provider licensure and certification to be synonymous and National Registry certification is recognized for reciprocity in 48 of our 50 states.

Virginia Highlands Community College is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

Admission Requirements:

Prior to the starting program courses, the applicant must:

1. Meet eligibility requirements as stipulated by the Virginia Office of EMS, https://www.vdh.virginia.gov/emergency-medical-services/education-certification/how-to-become-an-emergency-medical-services-provider-in-virginia/ and
2. Meet the college's general admission requirements.

Selection Process: To be eligible for selection to the program, interested persons should complete the following process by May 15:

1. Submit a college admission application. https://www.vhcc.edu/future-students/ready-to-enroll-now
2. Submit an application to the program (separate document) with required attachments.
3. Have transcripts of previous college courses sent to the college.

At that time the first round of students will be selected.
Should openings still be available, persons who apply or meet requirements after May 15 will be considered.

PROGRAM REQUIREMENTS:
Physical Requirements: An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description https://www.vdh.virginia.gov/.

Academic Requirements: Students must make a "C" or better in all program cores courses. Any student receiving a grade less than "C" will be placed on programmatic academic probation. That course shall be remediated. Remediated course must be completed with a final grade of "C" or better.

Clinical and Behavioral Requirements: Selected and supervised student experience is required by the program and will be accomplished at selected regional health care facilities. The student is responsible for transportation to these facilities as well as to any scheduled field trips.
Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student might be asked to withdraw from the program.

Other Requirements: Applicants accepted to the program are required to submit a health certificate signed by a licensed physician, physician's assistant or RNP and should include documentation of measles, mumps, Rubella (MMR) and chicken pox exposure or inoculations; documentation of Hepatitis B inoculation; Tuberculosis testing; and overall general health of the applicant. A criminal background check and drug screening is also done to confirm compliance with state regulations.

The purchase of items such as uniforms, liability insurance and other accessories is the financial responsibility of the individual student. Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity to be advantageous in subsequent course scheduling.
Program Director: Bill Akers Jr., MS, NRP, 276.964.7729, bill.akers@sw.edu

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester				
EMS 121	Preparatory Foundations	2	0	2
EMS 123	EMS Clinical Preparation	0	2	1
EMS 125	Basic Pharmacology	1	0	1
EMS 126	Basic Pharmacology Lab	0	2	1
EMS 127	Airway, Shock and Resuscitation	1	0	1
EMS 128	Airway, Shock and Resusc. Lab	0	2	1
EMS 135	Emergency Medical Care	2	0	2
EMS 136	Emergency Medical Care Lab	0	2	1
EMS 141	Cardiovascular Care	1	0	2
EMS 142	Cardiovascular Care Lab	0	2	1
SDV 100	College Success Skills	1	0	1
	Total	**8**	**10**	**14**
Second Semester				
EMS 137	Trauma Care	1	0	1
EMS 138	Trauma Care Lab	0	2	1
EMS 170	ALS Internship I	0	3	1
	Total	**1**	**5**	**3**
Total Credits for Career Studies Certificate				**17**

Please refer to Course Listings in back of catalog for all prerequisites and corequisites.

Intermediate to Paramedic Bridge

Career Studies Certificate

Program Director: Bill Akers, Jr., MS, NRP, Program Director• bill.akers@sw.edu • 276-964-7729
Length: Three semesters

Offered in cooperation with Southwest Virginia Community College. Career Studies Certificate awarded by Virginia Highlands Community College.

Purpose: The purpose of this curriculum is to produce competent entry- level Paramedics who can provide the highest level of out-of-hospital care. Upon completion of the program, students will be eligible for National Registry testing and certification. This credential leads to Paramedic licensure or certification in Virginia and most other states. Employment opportunities for Paramedics are available with ambulance; fire and rescue services; hospitals; local, state and federal government agencies.

Program Goals: At the completion of the program the graduate will be able to demonstrate:

1. The Ability to comprehend, apply, and evaluate the clinical information relative to his role as an entry-level paramedic;
2. Technical proficiency in all skills necessary to fulfill the role of an entry-level paramedic; and
3. Personal behaviors consistent with professional and employer expectations for the entry-level paramedic.

Accreditation: This program is accredited nationally by the Committee on Accreditation of Allied Health Educational Programs (CAAHEP), 25400
U.S. Highway 19 North, Suite 158, Clearwater FL, 33763, phone 727-210- 2350.

Admission Requirements: Prior to the starting program courses, the applicant must:

1. Meet eligibility requirements as stipulated by the Virginia Office of EMS; and
2. Meet the college's general admission requirements.
3. Be certified as an EMT-Intermediate and have three years' experience at or above that level.

Selection Process: To be eligible for selection to the program, interested person should complete the following process by May 15:

1. Submit a college admission application.
2. Submit an application to the program (separate document) with required attachments.
3. Have transcripts of previous college courses sent to the college.

At that time the first round of students will be selected.
Should openings still be available, persons who apply or meet requirements after May 15 will be considered.

PROGRAM REQUIREMENTS:
Physical Requirements: An EMS provider is faced with many physical and psychological challenges. Please refer to the Office of Emergency Medical Services web site for a more detailed functional job description https://www.vdh.virginia.gov/.

Academic Requirements: Students must make a "C" or better in all program cores courses. Any student receiving a grade less than "C" will be placed on programmatic academic probation. That course shall be remediated. Remediated course must be completed with a final grade of "C" or better.

Clinical and Behavioral Requirements: Selected and supervised student experience is required by the program and will be accomplished at selected, regional health care facilities. The student is responsible for transportation to these facilities, as well as to any scheduled field trips.
Program preceptors will observe and evaluate the student's suitability for the profession. If the student does not exhibit those documented behaviors required of the EMS professional, the student might be asked to withdraw from the program.

Other Requirements: Applicants accepted to the program are required to submit a health certificate signed by a licensed physician, physician's assistant or RNP and should include documentation of measles, mumps, Rubella (MMR) and chicken pox exposure or inoculations; documentation of Hepatitis B inoculation; Tuberculosis testing; and overall general health of the applicant. A criminal background check and drug screening is also done to confirm compliance with state regulations. See https://www.vdh.virginia.gov/.

The purchase of items such as uniforms, liability insurance and other accessories is the financial responsibility of the individual student. Students who elect to take support courses recommended by the Program Director prior to formal acceptance into the program will find this activity to be advantageous in subsequent course scheduling.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Summer)				
EMS 123	EMS Clinical Preparation	0	2	1
EMS 213	Paramedic Skills Review	0	4	2
BIO 145	Human Anatomy & Physiology	3	3	4
	Total	**39**	**9**	**7**
Second Semester (Fall)				
EMS 202	Paramedic Pharmacology	2	0	2
EMS 203	Advanced Patient Care	2	0	2
EMS 204	Advanced Patient Care Lab	0	2	2
EMS 206	Pathophysiology for Health Professions	3	0	3
EMS 247	Paramedic Clinical Experience II	0	3	1
EMS 248	Paramedic Comprehensive Field Experience	0	6	2
	Total	**7**	**11**	**12**
Third Semester (Spring)				
EMS 210	EMS Operations	0	2	1
EMS 212	Leadership and Professional Development	1	0	1
EMS 165	Advanced Cardiac Life Support	1	0	1
EMS 163	Prehospital Trauma Life Support	1	0	1
EMS 167	Emergency Pediatric Care	1	0	1
EMS 164	Advanced Medical Life Support	1	0	1
EMS 216	Paramedic Review	0	2	1
EMS 249	Paramedic Capstone Internship	0	6	2
	Total	**5**	**10**	**9**
	Total Credits for Career Studies Certificate			**28**

Footnotes:

[1]EMS 213 MUST be passed to receive credit for 1st year courses.

[2]Students should take BIO 141 and 142 or BIO 145. It is recommended that students who are planning to transfer to another medically related program complete BIO 141-142.

Please refer to Course Listings in back of catalog for all prerequisites and corequisites.

Nursing

Associate of Applied Science Degree

Interim Dean of Nursing: Beth Wright, DNP, MSN, RN
ewright@vhcc.edu • 276-739-2439
Nursing Program Options and Length: (Length includes pre-requisites, general education courses, and nursing courses)
Track 1: Traditional Day Program 5 semesters
Track 2: LPN to RN Transition Day Program 5 semesters
Track 3: Part-time Evening/Weekend: 10 semesters
Track 4: LPN to RN Transition Part-time Evening/Weekend: 8 semesters

About the Program: The Virginia Highlands Community College Nursing Program was part of the Virginia Appalachian Tricollege Nursing Program for nearly 50 years. While new as a stand-alone program the history and reputation of nursing at VHCC remains. The program follows the Virginia Community College System (VCCS) common curriculum as mandated for all VCCS nursing programs.

State Approval and Accreditation Status: The Associate degree nursing program at VHCC is located in Abingdon, Virginia and is approved by the Virginia Board of Nursing, Perimeter Center 9960 Mayland Drive, Suite 300, Henrico, VA 23233-1463 (804)367-4515. The VHCC Nursing program is accredited by the Accreditation Commission for Education in Nursing (ACEN) 3390 Peachtree Road NE, Suite 1400 Atlanta, GA 30326 (404) 975-5000, https://www.acenursing.org/. The most recent ACEN accreditation decision made by the ACEN Board of Commissioners for the Virginia Highlands Community College Associate degree nursing program is continuing accreditation. ACEN is officially recognized as the national accrediting agency for nursing education by the Council on Post-secondary Accreditation (COPA) and by the U.S. Department of Education.

Purpose/Mission/Goal: The purpose of the nursing program at VHCC and other nursing programs of the Virginia Community College System (VCCS) is to provide affordable, community access to quality nursing education. The VCCS nursing programs prepare qualified students to provide safe, competent, entry-level nursing care in 21st century healthcare environments. Students are prepared to meet the ever-increasing complexity of the healthcare needs of the citizens of Virginia. After successful completion of the program, students are eligible to apply for the NCLEX RN exam provided by the National Council of State Boards of Nursing for licensure as a Registered Nurse.

Student Learning Outcomes:

Client Centered Care -Provide client-centered care promoting therapeutic relationships, caring behaviors, and self-determination across the lifespan for diverse populations.
Safety-Practice safe nursing care that minimizes risk of harm across systems and client populations.
Clinical Judgement-Demonstrate nursing judgment through the use of clinical reasoning, the nursing process, and evidence-based practice in the provision of safe, quality care.
Professional Behaviors-Practice professional behaviors that encompass the legal/ethical framework while incorporating self-reflection, leadership and a commitment to recognize the value of life-long learning.
Quality Improvement-Manage client care through quality improvement processes, information technology, and fiscal responsibility to **meet** client needs and support organizational outcomes.
Collaboration- Demonstrate principles of collaborative practice within the nursing and interdisciplinary teams fostering mutual respect and shared decision-making to achieve stated outcomes of care.

Program Outcomes
80% First-time pass rate of the NCLEX RN
65% Student Ontime Completion Rate of program length
85% Job Placement rate

Employment Opportunities: Employment opportunities for the Registered Nurse (RN) include, but are not limited to, staff positions in hospitals, nursing homes, health departments, physician offices, clinics, home health agencies, public schools, day care centers, and civil service.

Admission to Program: All Tracks admit once a year. Tracks 2, 3, and 4 admit students in the Summer session. Track 1 admit students in the Fall session.
Admission Requirements: Admission to the VHCC Nursing Program is a selective process. The program is open to applicants who are free of any physical or mental condition which might adversely affect performance as a member of the nursing profession. In addition to the requirements for admission to the college, the applicant must meet the following requirements:

1. Graduation from high school or satisfactory completion of the GED.

2. Good standing with the most recently attended institution with a minimum GPA of 2.0.
3. Demonstrated competency in science as evidenced by
   a. General Biology with lab (high school or college) with a grade C or better OR
   b. Chemistry with lab (high school or college) with a grade C or better OR
   c. Completion of BIO 141 and 142 with a C or better. Note: BIO 101 or CHM 5 can be taken to meet this requirement.
4. Demonstrated proficiency in mathematics as evidenced by
   a. MTE1-5 or MDE10 either through the Virginia Placement Test (VPT or prescribed developmental work within the last 6 years. OR
   b. HSGPA & Algebra II 3.0 or higher within the last 5 years,
   c. GED Math score of 165 or above within the last 6 years,
   d. OR SAT math score of 470 or ACT math score of 17 within last 5 years, OR
   e. Completion of college-level math class equivalent to MTH 1-5 OR
   f. ATI TEAS math score of 45th national percentile rank or an individual score of 65 or higher.
5. Demonstrated competency in English as evidenced by
   a. Completion of VPT English with placement into ENG111 or ENG III + EDE 11 within the last 6 years. OR
   b. OR Completion of a college level English course equivalent to ENG 111 with grade C or better
   c. SAT English/Reading/Writing score 400 or ACT Reading and Writing score 15 within last 6 years OR
   d. Successfully completed applicable English developmental courses within last 6 years OR
   e. GED- English score of 165 within last 6 years OR
   f. HSGPA 2.0 or higher within last 6 years.
6. Completion of the nursing entrance test (Test of Essential Academic Skills, or TEAS) with a **National Percentile Rank** of 45 or above prior to application. Nursing preadmission results will be accepted if completed within 5 years of applying to the nursing program.
7. A 2.5 cumulative grade point average (GPA)for ENG 111, BIO 141, PSY 230, ITE 119, and SDV 101. These courses must be completed prior to enrollment in nursing (NSG) classes.

Licensed Practical Nurse Transition Advance Placement: (Tracks 2 & 4):
The VHCC Nursing Program's Advance Placement or "Transition Program," is designed to grant advanced placement to LPNs who meet the pre-requisite requirements. This program is designed to recognize the common abilities of nurses and to bridge the difference between LPN and RN knowledge base.

In addition to meeting the above admission requirements LPN applicants must also:

1. Include a copy of current LPN license AND

2. Documentation of graduation from an approved LPN program AND

3. Proof of work experience: LPNs who graduated before May 15, 2018 must provide documentation of 2000 hours of LPN work experience in direct patient care during the past three years with written verification from employer at the time of application AND.

4. LPN to RN Transition applicants for Track 2 and Track 4 must also complete BO 142 and BIO 150

All applicants must complete a Nursing Application for each academic year interested in being considered for the Nursing Program.

Applications for the Nursing Program are online at https://www.vhcc.edu/future-students/nurse-ready. Students are encouraged to submit their application when they demonstrate proficiency in Math/English/Science and a TEAS National percentile rank score of 45th or higher. Students may be accepted on a contingency basis until completion of the following courses with at least a 2.5 GPA: SDV-101, ENG 111, PSY 230, BIO 141 and ITE 119. Once these criteria have been met an official acceptance letter may be sent to the applicant. The priority deadline for applications is March 15. Applications will continue to be accepted after the priority deadline only if seats are available.

The Admissions Office will suspend processing an application if all transcripts are not included. Transcripts from other Virginia Community Colleges are not required; however, any Virginia Community Colleges attended must be listed on both the Admissions Application and the Nursing Application.

Students residing in the college service area (Washington County, the western portion of Smyth County, or the city of Bristol) will be given priority consideration for admission to the program. Out-of-region applicants will only be considered for openings in the Nursing program after all qualified in-region applicants are considered (see Admission Priorities). To be considered in-region, an applicant must be domiciled within the service region for 12 months prior to the program application deadline.

Further details can be located at https://www.vhcc.edu/future-students/nurse-ready.

About the Nursing Application Selection Process:

The number of qualified applicants offered admission to the VHCC Nursing Program is contingent upon the space available in each track. When the number of qualified applicants exceeds the number of slots available, acceptance will occur using selection criteria consisting of the TEAS score and the overall GPA in ENG-111, BIO 141, SDV-101, PSY-230 and ITE 119.

Transfer of Nursing Credit: Students seeking to transfer credit from nursing programs at other institutions will be considered on an individual basis. Requested transfer courses will be evaluated for currency, comparability, relevancy to the nursing program degree, calculation of credit including didactic and clinical time and the grade earned. Transcripts of students transferring from non-regionally accredited colleges and universities will be evaluated on a course-by-course basis by the Coordinator of Admissions and Records.

Students must meet the admission requirements identified by the college and the VHCC Nursing Program. The student may be asked to provide course descriptions, documentation of completed direct patient care clinical time, course syllabi, achievement or progressive testing scores, demonstration of competency in critical nursing skills, and selected data from the course instructor or program director in order to determine placement in the nursing program. Consideration will be subject to availability of space. Since there frequently are differences among nursing programs, students wishing to transfer should be aware that there may be an interruption in program progression. Applicants must be in good standing at their previous college with a "C" average or better and must provide documentation from the Nursing School Program Director of eligibility to return to that nursing program as well as documentation of the number of hours of clinical experiences providing direct patient care supervised by a qualified instructor. Nursing courses which are being transferred must have been completed within three (3) years prior to admission to the nursing program.

Decisions on admission offers to transferring applicants will be determined by the VHCC Nursing Program faculty following official transcript analysis, review of completed nursing course outlines, and space and faculty availability. A transferring student must demonstrate expected level proficiencies by testing including demonstration of competency in critical skills. The transferring applicant may have to repeat courses.

Notification of United States Department of Education Regulation

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Virginia Highlands Community College (VHCC) Associate Degree in Nursing (ADN) program provides the following information for all prospective and current students:

The VHCC ADN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia. In addition, the VHCC ADN program meets all requirements for nationally recognized accreditation by the Accrediting Commission for Education in Nursing.

The Commonwealth of Virginia participates with 32 other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. The Uniform Licensing Requirements (ULRs) are found at: https://www.ncsbn.org/NLC_ULRs.pdf.

States currently in the NLC are found at: https://www.ncsbn.org/nlcmemberstates.pdf. Prospective and current students are strongly encouraged to evaluate all state requirements in jurisdictions where they intend to practice nursing. A list of all state requirements is found at: https://www.ncsbn.org/14730.htm.

VHCC has not determined if the ADN program meets the requirements of any other states.

This statement serves to meet the US DOE regulation until further notice.

Program Requirements: The VHCC Nursing Program is dependent on use of local clinical agencies to meet the experiential or clinical learning needs of its students. In order to protect patients and visitors as well as students, clinical agencies require that each student have proof of completion of clinical requirements. Students who do not complete and/or maintain clinical requirements by established deadlines will be prohibited from attending clinicals and will be administratively withdrawn from the nursing clinical course.

Prior to beginning clinicals, the student must provide the required clinical requirement documentation.

1. Forms required by clinical agency.

2. Annual Student Statement of Health Form.
3. Student Information; Physical, and Immunization Forms. The physical examination form must be completed by a medical practitioner, MD, PA, or CNP.
    a. Immunizations include Tetanus, Mumps-Measles-Rubella (MMR), Varicella, Hepatitis B, Influenza, and COVID
    b. Must complete the 2-Step tuberculosis testing or documented alternate requirement as applicable.
    c. Documentation of ability to perform physical demands required in direct patient care activities.
4. Purchase a background check, drug screen, and medical document package.
5. Clearance of criminal background check and drug testing prior to enrolling in NSG clinical courses.
6. Copy of course completion card for Cardiopulmonary Resuscitation (CPR)- American Heart Association, Basic Life Support (BLS) for Healthcare Providers completed during the summer (May 15 – August 1) prior to admission to NSG courses and maintained throughout the program.
7. Proof of health insurance
8. Review of and adherence to Standards of Safe Clinical performance.

The cost of these requirements is the responsibility of the student.

Criminal Background Checks/Barrier Crimes: The State Board of Nursing has the authority to deny license to any applicant who has violated any of the provisions of 54.1-3007 of the Code of Virginia. Most healthcare organizations are prohibited from hiring persons who have been convicted of certain criminal acts (For a list of crimes under this category refer to the Virginia Board of Nursing webpage under the heading, Licensure/Applicants: Article 90-55, click on the link, Joint statement of the Department of Health and The Department of Health Professions on Impact of Criminal Convictions on Nursing Licensure or Certification and Employment in Virginia, Revised December 2020). Students with criminal convictions must meet with the Dean of Nursing. Permission for clinical assignments must be received from clinical affiliations for applicable students. Clinical facilities that will not approve student placement results in students being unable to complete program requirements and ineligible to continue the program. Students with positive drug screens are addressed individually and may results in being prohibited from clinical activities and therefore, unable to complete the program requirements. Contact the Dean of Nursing for clarification of specific issues.

Performance Standards for Clinical Laboratory Assignments:

Students must be able to perform all essential job functions or performance standards in clinical settings with reasonable accommodation. The following performance standards are consistent with those identified by the Southern Regional Education Boards and include, but are not limited to:

1. Critical thinking: Critical thinking ability sufficient for clinical judgment and delivery of safe patient care.
2. Interpersonal abilities: Interpersonal abilities sufficient to interact with clients, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds.
3. Communication: Communication abilities sufficient for interaction with others in verbal and written form.
4. Mobility: Physical abilities sufficient to move from room to room and maneuver in small spaces.
5. Motor skills: Gross and fine motor abilities sufficient to provide safe and effective nursing care.
6. Physical demands: Physical demands in this program include duties that frequently require squatting, bending, kneeling, reaching, and stair climbing; lifting and carrying up to 50 pounds; frequent pushing and pulling up to 200 pounds with assistance; occasional lifting up to 200 pounds with assistance and occasional carrying up to 51-74 pounds.
7. Hearing: Auditory ability sufficient to monitor and assess health needs.
8. Visual: Visual ability sufficient for nursing observation and assessment.
9. Tactile: Tactile ability sufficient for physical assessment.

These guidelines serve as essential elements basic to eligibility requirements for clinical participation in the VHCC Nursing Program.

Financial Requirements:
In addition to the usual college tuition and fees, the nursing program requires pre-admission testing and other expenses in which students are responsible for. These include a digital device such as a laptop or tablet to use in classroom and lab, uniforms/shoes, watch, stethoscope, standardized program progressive products, textbooks, electronic technology, CastleBranch Criminal Background, drug screening, and document manager, CPR certification, Physical exam and Immunizations, and Tuberculosis testing, and Health Insurance. Students are responsible for these costs as well as the cost of transportation to and from the College and health agencies used for clinical experiences. Refer to the VHCC Nursing Handbook for further details. Refund of cost of tuition is dependent on the academic calendar last day to drop and receive a refund. Refund of other costs such as health physical examination, immunizations, CPR, and CastleBranch are not refundable. Cost associated with textbooks, ATI, uniforms (and accessories) are contingent upon the individual vendor.

Financial Aid
VHCC strives to assure that no one be denied the opportunity of attending the College for financial reasons. Students are encouraged to contact the Financial Aid office at VHCC to determine eligibility. Refer to the Financial Aid section in the Student Catalog for requirements. Potential scholarships are available through the VHCC Foundation.

Student Accommodations Statement: Students admitted to the VHCC Nursing Program can be expected to complete course requirements that prepare them to perform essential job functions as a registered professional nurse. Those functions or skills that are essential to the profession must be performed with or without accommodations. Any student who thinks he/she does not possess one or more of these functions should contact the Office of Disability Services. Provisions for accommodations will be made in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

Course Requirements: The academic calendar will be followed and is available on the VHCC website. Course calendars provided by faculty follow the academic calendar and students are expected to abide by the course calendar. Students must complete all courses listed in the first year of the curriculum before entering the second year. Exceptions due to unusual circumstances must be approved by the Dean of Nursing. A student must have a "C" (80%) or above in theory plus "satisfactory" in clinical performance in all nursing courses to remain in the program. A grade of "C" or above in any related requirement is a prerequisite for continuing in the nursing program.

The student is required to complete a sequence of courses and learning experiences provided at the college and selected community agencies such as hospitals, nursing homes, clinics, physicians' offices and comparable facilities. The nursing faculty will supervise and evaluate the student's suitability for nursing and direct patient care. The nursing program faculty reserves the right

to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable demeanor/attendance.

Course Delivery
Nursing courses are delivered face to face, online, hybrid or a combination of delivery methods, Extenuating circumstances may alter the method of course delivery.

Program Progression, Reapplication/Readmission Requirements: All nursing courses in the curriculum, must be completed in sequence prior to progressing to the next semester. Students must earn a minimum grade of "C" (80) in all nursing courses, a minimum grade of "C" in all non-nursing courses and maintain a minimum cumulative GPA of 2.0 to remain eligible for continued enrollment in the nursing program. In addition, during the NSG 106 or NSG 115 course, a Comprehensive Drug Calculation Exam (CDCE) will be administered to verify skills. Students must achieve at least 90 percent or higher score on the CDCE with no more than three attempts in order to achieve a passing grade in the course. Any student who earns a final grade lower than a "C" in a required course (either general education or nursing courses) must repeat the course and earn a final grade of "C" or better before taking the next course in the sequence.

Clinical performance in a course is graded as Satisfactory/Unsatisfactory. A student who does not meet the clinical learning outcomes will fail the course.

The following are program progression policies according to the VCCS Common Curriculum:

1. Students who are not successful in any first semester nursing (NSG) course must reapply to the nursing program.
2. Any student who drops or withdraws from NSG 106 or NSG 200 must also drop or withdraw from NSG 100 due to the inability to complete clinical requirements.
3. A student may continue in NSG 200 regardless of dropping or withdrawing from NSG 100 and/or NSG 106.
4. Any student who drops or withdraws from NSG 252 or NSG 270 must withdraw from the other course.

VHCC Nursing Progression Policies:

1. A student is allowed two enrollments for the traditional student Tracks 1 and/or Track 3 and two enrollments for the LPN to RN Tracks 2 and/or 4. A withdrawal is considered an enrollment. However, due to the pandemic for the academic years 2019-2021, a withdrawal will not be considered an enrollment for this period only.
2. Re-admission must occur no later than three years from successful completion of NSG 100 or 115, otherwise the student will have to repeat all nursing courses.
3. A student who wishes to reenter the nursing curriculum at any other level (e.g., NSG 152, 170, 210, 211, 230, 252, 270) must write a letter to the program Dean requesting readmission in the semester prior to the semester of enrollment. Each student's application for readmission will be considered by the nursing faculty and the decision to readmit will be based on additional requested data, prior performance in the nursing program, and space availability. Based on the course(s) that must be repeated, the student who is readmitted may be required to complete a skills competency course or demonstrate competency in critical nursing skills before beginning the repeated course.
4. According to the VCCS Policy 5.7.4, "A student will normally be limited to two enrollments in the same credit course." Any exception to this policy must be approved by the program Dean and the vice president of instruction and student services.

A student must obtain permission from the Dean of VHCC Nursing Program to continue in the Nursing Program under the following conditions:

- Repeating a course with a grade below "C";
- Withdrawal from a nursing course;
- Cumulative GPA below 2.0.

Any student who is not enrolled in nursing courses for one semester or longer must meet clinical agency requirements including a new criminal background check and drug screen; documentation of current CPR and health insurance, statement of health, and physical prior to returning to reenrolling in nursing courses. A student who is not enrolled in nursing courses for one semester or longer, will be required to demonstrate competency in critical nursing skills including head-to-toe assessments, before reenrolling in the program. Failure to demonstrate skills/assessment competencies before the course begins will result in the student not being allowed to reenroll in the program. If competency is not demonstrated the student may be required to repeat NSG 106 and/or NSG 200.

Clinical Contracts: The VHCC Nursing Program has contracts with clinical agencies for both student and patient safety. If students cannot comply with these contractual requirements, they will not be able to participate in clinical activities and will be asked to withdraw from the program. General guidelines follow:

1. Clinical agencies reserve the right to dismiss a student from their agency at any time with due cause. This will be done with advance notice except in an emergency.
2. Published policies of the clinical agency must be followed. Each student must successfully complete an orientation program prior to participating in activities at any clinical facility.
3. Clinical facilities require that all students have documentation of ability to perform the physical demands required in direct patient care activities.
4. Immunizations must be current.
5. Student releases any clinical agency, its agents and employees from any liability for any injury or death to himself or damage to his property arising out of agreement or use of the clinical agencies.
6. Proof of HIPAA and CPR completion must be provided.
7. Clinical facilities require a criminal background check and drug screen clearance as a condition for student placement.
8. Proper uniform and name badge must be worn when participating in clinical activities.
9. Proof of Health Insurance

Nursing Track 1: 2 Year Curriculum

The VHCC Nursing Program offers an opportunity for recent high school graduates and other eligible adults to complete the nursing degree program after two years of full time attendance (4 semesters and 1 summer session). This is a rigorous and academically challenging program.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Summer Session- Year 1				
BIO 141	Human Anatomy and Physiology I	3	3	4
ENG 111	College Composition I	3	0	3
ITE 119	Information Literacy	3	0	3
PSY 230	Developmental Psychology	3	0	3
SDV 101	Orientation to College Success	1	0	1
	Total	**13**	**3**	**14**
Fall Semester- Year 1				
BIO 142	Human Anatomy & Physiology II	3	3	4
NSG 100	Intro to Nursing Concepts	3	3	4
NSG 106	Competencies for Nursing Practice	0	6	2
NSG 130	Professional Nursing Concepts	1	0	1
NSG 200	Health Promotion & Assessment	2	3	3
	Total	**9**	**15**	**14**
Spring Semester- Year 1				
BIO 150	Microbiology for Health Sciences	3	3	4
NSG 152	Health Care Participant	2	3	3
NSG 170	Health/Illness Concepts	4	6	6
	Total	**9**	**12**	**13**
Fall Semester- Year 2				
ENG 112	College Composition II	3	0	3
NSG 210	Health Care Concepts I	3	6	5
NUR 211	Health Care Concepts II	3	6	5
	Total	**9**	**12**	**13**
Spring Semester- Year 2				
NSG 230	Advanced Professional Nursing Concepts	2	0	2
NSG 252	Complex Health Care Concepts	4	0	4
NSG 270	Nursing Capstone	0	12	4
HUM	See list of approved electives.[1]	3	0	3
	Total	**9**	**12**	**13**
Total Minimum Credits for AAS Degree				**67**

Footnote:

[1] Recommended Humanities elective may be selected from ART 201-202 History of Art I-II; CST 130 Introduction to Theater; CST 151-152 Film Appreciation; I-II; ENG 245 British Literature; ENG 246 American Literature; Humanities 200 or higher; MUS 221-222 Music History I-II; PHI 100 Introduction to Philosophy; PHI 260 Studies in Eastern Thinking; REL 200 Old Testament; REL 210 New Testament; REL 230 Religions of the World

Nursing Track 2: LPN to RN Transition Curriculum

Students who are LPNs are required to complete at least 22 hours of the general education courses before beginning the LPN to RN nursing classes. The length of this track depends on the amount of time needed to complete the general education classes. The nursing classes can be completed in one year.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Pre-Nursing Courses				
BIO 141	Human Anatomy & Physiology I	3	3	4
BIO 142	Human Anatomy & Physiology II	3	3	4
BIO 150	Microbiology for Health Sciences	3	3	4
ENG 111	College Composition I	3	0	3
ITE 119	Information Literacy	3	0	3
PSY 230	Developmental Psychology	3	0	3
SDV 101	Orientation to College Success	1	0	1
	Total	**19**	**9**	**22**
Summer Session - Year 1				
NSG 115[1]	Health Care Concepts for Transition	3	6	5
NSG 200	Health Promotion and Assessment	2	3	3
	Total	**5**	**9**	**8**
Fall Semester - Year 1				
ENG 112	College Composition II	3	0	3
NSG 210	Health Care Concepts I	3	6	5
NSG 211	Health Care Concepts II	3	6	5
	Total	**9**	**12**	**13**
Spring Semester - Year 1				
NSG 230	Advanced Professional Nursing Concepts	2	0	2
NSG 252	Complex Health Care Concepts	4	0	4
NSG 270	Nursing Capstone	0	12	4
HUM	See list of approved electives.[2]	3	0	3
	Total	**9**	**12**	**13**
Total Minimum Credits for AAS Degree				**56**

Footnotes:

[1]Upon completion of NSG 115, credit will be awarded for NSG 100, 106, 130, 152, 170 (16 credits). These credits will appear on the student's official transcript.

[2] Recommended Humanities elective may be selected from ART 201-202 History of Art I-II; CST 130 Introduction to Theater; CST 151-152 Film Appreciation; I-II; ENG 245 British Literature; ENG 246 American Literature; Humanities 200 or higher; MUS 221-222 Music History I-II; PHI 100 Introduction to Philosophy; PHI 260 Studies in Eastern Thinking; REL 200 Old Testament; REL 210 New Testament; REL 230 Religions of the World

Nursing Track 3: Part-time Evening/Weekend Curriculum

The VHCC Nursing Program Part-Time Evening/Weekend Track is specifically designed for working adults or other adults who are interested in becoming a RN but have other responsibilities that interfere with their abilities to attend the rigorous scheduling of Track 1. Classes will be provided in a combination of evening, weekend, and online learning. Some specialty clinical activities can only be scheduled through the week. Every effort is made to limit the frequency of this occurring. The program is designed at a slower pace and may be completed in 4 years.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Pre-Nursing Courses – Year 1				
ENG 111	College Composition I	3	0	3
BIO 141	Human Anatomy & Physiology I	3	3	4
BIO 142	Anatomy & Physiology II	3	3	4
ITE 119	Information Literacy	3	0	3
SDV 101	Orientation to College Success	1	0	1
PSY 230	Developmental Psychology	3	0	3
	Total	**16**	**6**	**18**
Summer Semester – Year 2				
NSG 200	Health Promotion & Assessment	2	3	3
BIO 150	Microbiology for Health Sciences	3	3	4
	Total	**5**	**6**	**7**
Fall Semester – Year 2				
NSG 100	Introduction to Nursing Concepts	3	3	4
NSG 106	Competencies for Nursing Practice	0	6	2
NSG 130	Professional Nursing Concepts	1	0	1
	Total	**4**	**9**	**7**
Spring Semester – Year 2				
NSG 170	Health/Illness Concepts	4	6	6
NSG 152	Health Care Participant	2	3	3
	Total	**6**	**9**	**9**
Summer Session – No Scheduled Classes				
Fall Semester – Year 3				
NSG 211	Health Care Concepts II	3	6	5
	Total	**3**	**6**	**5**
Spring Semester – Year 3				
NSG 210	Health Care Concepts I	3	6	5
	Total	**3**	**6**	**5**
Summer Semester – Year 3				
HUM	See list of approved electives.[1]	3	0	3
ENG 112	College Composition II	3	0	3
	Total	**6**	**0**	**6**
Fall Semester – Year 4				
NSG 252	Complex Health Care Concepts	4	0	4
	Total	**4**	**0**	**4**
Spring Semester – Year 4				
NSG 230	Advanced Professional Nursing Concepts	2	0	2
NSG 270	Nursing Capstone	0	12	4
	Total	**2**	**12**	**6**
Total Minimum Credits for AAS Degree				**67**

Footnote:
[1]Recommended Humanities elective may be selected from ART 201-202 History of Art I-II; CST 130 Introduction to Theater; CST 151-152 Film Appreciation; I-II; ENG 245 British Literature; ENG 246 American Literature; Humanities 200 or higher; MUS 221-222 Music History I-II; PHI 100 Introduction to Philosophy; PHI 260 Studies in Eastern Thinking; REL 200 Old Testament; REL 210 New Testament; REL 230 Religions of the World

Nursing Track 4: Part-time Evening/Weekend LPN to RN Transition Curriculum

A part-time evening/weekend LPN to RN Transition Track is available for LPNs who work and/or wish to attend part time. General education courses can be completed as night classes or by online learning options such as web based learning. Nursing classes and clinical are taught on evenings and weekends on an extended plan. Some specialty clinical activities can only be scheduled through the week. Every effort is made to limit the frequency of this occurring. General education courses listed in Year 1 must be completed before the student will be able to begin Year 2.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Pre-Nursing Course Year 1				
BIO 150	Microbiology for Health Sciences	3	3	4
ENG 111	College Composition I	3	0	3
ITE 119	Information Literacy	3	0	3
SDV 101	Orientation to College Success	1	0	1
BIO 141	Human Anatomy and Physiology I	3	3	4
PSY 230	Developmental Psychology	3	0	3
BIO 142	Human Anatomy and Physiology II	3	3	4
	Total	**19**	**9**	**22**
Summer Session - Year 2				
NSG 115	Health Care Concepts for Transition[1]	3	6	5
NSG 200	Health Promotion	2	3	3
	Total	**5**	**9**	**8**
Fall Semester - Year 2				
NSG 211	Health Care Concepts II	3	6	5
	Total	**3**	**6**	**5**
Spring Semester - Year 2				
NSG 210	Health Care Concepts I	3	6	5
	Total	**3**	**6**	**5**
Summer Session - Year 3				
ENG 112	College Composition II	3	0	3
HUM EEE[2]	See list of approved electives in footnote.	3	0	3
	Total	**6**	**0**	**6**
Fall Semester - Year 3				
NSG 252	Complex Health Care Concepts	4	0	4
	Total	**4**	**0**	**4**
Spring Semester - Year 3				
NSG 230	Advance Professional Nursing Concepts	2	0	2
NSG 270	Nursing Capstone	0	12	4
	Total	**2**	**12**	**6**
Total Minimum Credits for AAS Degree				**56**

Footnotes:

[1]Upon completion of NSG 115, credit will be awarded for NSG 100, 106, 130, 152, 170 (16 credits). These credits will appear on the student's official transcript.

[2] Recommended Humanities elective may be selected from ART 201-202 History of Art I-II; CST 130 Introduction to Theater; CST 151-152 Film Appreciation; I-II; ENG 245 British Literature; ENG 246 American Literature; Humanities 200 or higher; MUS 221-222 Music History I-II; PHI 100 Introduction to Philosophy; PHI 260 Studies in Eastern Thinking; REL 200 Old Testament; REL 210 New Testament; REL 230 Religions of the World

Practical Nursing

Certificate

Program Coordinator: Brigitte Casteel, RN, MSN • bcasteel@vhcc.edu • 276-739-2482
Length: Three semesters

Purpose/Mission/Goal: The 12-month certificate curriculum in practical nursing is designed to prepare selected students to qualify as contributing members of the health team providing safe and competent nursing care under the direction of registered nurses and doctors. Upon successful completion of the curriculum, students will be eligible to apply to take the National Council Licensure Examination PN leading to licensure as a Licensed Practical Nurse (LPN).

Occupational Objective: Employment opportunities for the LPN include, but are not limited to, staff positions in hospitals, long-term care facilities, physician offices, clinics, home health agencies, public schools, day care centers, and other health related agencies under the direction of registered nurses and doctors.

Program Student Learning Outcomes:

1. Safety- Perform basic nursing skills in a safe, legal, and ethical manner for patients across the lifespan in a variety of settings including health promotion and treatment of illness.
2. Teamwork- Collaborate and communicate with all members of the healthcare team to ensure safe, quality patient care.
3. Relationship- Centered Care-Provide safe, holistic, culturally appropriate nursing care using evidence-based practice and the nursing process.
4. Quality- Assume responsibility and accountability for the quality of nursing care provided to patients and their families in a variety of healthcare settings.
5. System-Based Care- Apply knowledge of the community, the healthcare system, and the needs of the individual/ family to ensure the delivery of cost-effective quality patient-centered care.
6. Professional Development- Function to the full scope of safe nursing practice specific to practical nursing, seeking assistance in situations beyond individual expertise to provide safe, quality care.

Admission Requirements: Admission to the VHCC Practical Nursing Program is a selective process. The program is open to applicants who are free of any physical or mental condition which might adversely affect performance as a member of the healthcare team. In addition to the requirements for admission to the college, the applicant must meet the following requirements by the application deadline:

1. Graduation from high school or satisfactory completion of the GED.
2. Good standing with the most recently attended institution with a minimum GPA of 2.0.
3. Demonstrated proficiency in mathematics as evidenced by:
   - MTE 1-4 or MDE 10 either through the Virginia Placement Test (VPT) OR prescribed developmental work within the last 6 years OR
   - Completion of a college level math course equivalent to MTE 1-4 with a grade of C or better OR
   - SAT Score of 470/ACT Score 17 within the last 6 years, OR
   - GED- Math score of 155 165 or above within the last 6 years, OR
   - Has successfully completed developmental courses within the last 6 years, OR
   - High School GPA (HSGPA) 2.0 or higher & Algebra II, o within the last 6 years with a "C" or better OR
   - HSCGPA 3.0 or higher & Algebra I within last 6 years with a C or better
   - ATI TEAS math rank of 40th national percentile rank or higher
4. Demonstrated competency in English as evidenced by:
   - Virginia Placement Test with placement in ENG 111 or ENG 111 plus EDE 11 within the last 6 years, OR
   - Completion of a college level English course equivalent to ENG 111 with grade of C or better, OR
   - ACT Reading and Writing Score 15 or above within the last 6 years, OR
   - SAT Reading/Writing 400 or above within the last 6 years, OR
   - GED- English score of 165 or above within the last 6 years, OR
   - Successfully completed applicable English developmental courses within the last 6 years OR
   - High School GPA (HSGPA) 2.0 or higher within the last 6 years
5. Demonstrated competency in Science Biology as evidenced by:
   - One unit of high school Biology or college equivalent with grade C or better OR
   - Completion of BIO 145 with grade of C or better OR
   - Completion of PNE 155 (Body Structure and Function) with grade of C or better OR
   - Completion of BOTH BIO 141 and BIO 142 with grade of C or better
6. Completion of the Test of Essential Academic Skills (TEAS) with a National Percentile Rank score of 40 or above.
7. A 2.0 grade point average (GPA) for high school courses** or a 2.0 curricular GPA for college coursework.
8. A 2.0 cumulative grade point average (GPA) for ENG 111, PNE 155, PSY 230, ITE 119, and SDV 101.
9. Completion of Practical Nursing Application for each academic year interested in being considered.

Application: Applications for the Practical Nursing program are online at https://www.vhcc.edu/future-students/nurse-ready. Students are encouraged to submit their application when they have completed the admission requirements of demonstrating proficiency in Math/English/Science, a TEAS score of 40th or higher percentile rank and completion of the 1st semester general education courses. Once the criteria have been met an official acceptance letter will be sent to the applicant. The priority deadline for applications is April 15. Applications will continue to be accepted after the priority deadline only if seats are available.

The application process includes uploading official high school transcripts, all college transcripts; GED test scores (if applicable), and a copy of TEAS results.

If all transcripts are not included, the Admissions Office will suspend processing an application.

Transcripts from other Virginia Community Colleges are not required; however, any Virginia Community Colleges attended must be listed on both the Admissions Application and the Practical Nursing Application.

All prerequisites (general biology, English and math proficiency) must be met and all documents submitted by the application deadline.

Further details of the application process can be found at www.vhcc.edu/medapp (click Future Students > Admissions > Applications & Forms > Medical Program Applications).

Out-of-region applicants will only be considered for openings in the practical nursing program after all qualified in-region applicants are considered (see VHCC Student Handbook, Admission Priorities). To be considered in-region, an applicant must be domiciled within the service region for 12 months prior to the program application deadline.

Transfer of Nursing Credit: Students seeking to transfer credit from nursing programs at other institutions will be considered on an individual basis. Requested transfer courses will be evaluated for currency, comparability, relevancy to the nursing program degree, calculation of credit including didactic and clinical time and the grade earned. Transcripts of students transferring from non-regionally accredited colleges and universities will be evaluated on a course-by-course basis by the Coordinator of Admissions and Records.

Students must meet the admission requirements identified by the college and the VHCC PN Program. The student may be asked to provide course descriptions, documentation of completed direct patient care clinical time, course syllabi, achievement or progressive testing scores, demonstration of competency in critical nursing skills, and selected data from the course instructor or program director in order to determine placement in the nursing program. Consideration will be subject to availability of space. Since there frequently are differences among nursing programs, students wishing to transfer should be aware that there may be an interruption in program progression. Applicants must be in good standing at their previous college with a "C" average or better and must provide documentation from the Nursing School Program Director of eligibility to return to that nursing program as well as documentation of the number of hours of clinical experiences providing direct patient care supervised by a qualified instructor. Nursing courses which are being transferred must have been completed within three (3) years prior to admission to the nursing program.

Decisions on admission offers to transferring applicants will be determined by the VHCC PN Coordinator following official transcript analysis, review of completed nursing course outlines, and space and faculty availability. A transferring student must demonstrate expected level proficiencies by testing including demonstration of competency in critical skills. The transferring applicant may have to repeat courses.

Notification of United States Department of Education Regulation

Pursuant to United States Department of Education (US DOE) regulation 34 CFR 668.43 (a) (5) (v), the Virginia Highlands Community College (VHCC) Practical Nursing program provides the following information for all prospective and current students:

The VHCC PN program meets all Virginia Board of Nursing requirements for pre-licensure nursing education programs in the Commonwealth of Virginia.

The Commonwealth of Virginia participates with 32 other states in the National Council of State Boards of Nursing (NCSBN) National Licensing Compact (NLC) to allow nurses licensed in one state to provide nursing care across state lines in other compact states. The Uniform Licensing Requirements (ULRs) are found at: https://www.ncsbn.org/NLC_ULRs.pdf.

States currently in the NLC are found at: https://www.ncsbn.org/nlcmemberstates.pdf. Prospective and current students are strongly encouraged to evaluate all state requirements in jurisdictions where they intend to practice nursing. A list of all state requirements is found at: https://www.ncsbn.org/14730.htm.

VHCC has not determined if the PN program meets the requirements of any other states.

This statement serves to meet the US DOE regulation until further notice.

Program Requirements: The PN program is dependent on use of local clinical agencies to meet the experiential or clinical learning needs of its students. In order to protect patients and visitors as well as students, clinical agencies require that each student have proof of completion of clinical requirements. Students who do not complete and/or maintain clinical requirements by established deadlines will be prohibited from attending clinicals and will be administratively withdrawn from the nursing clinical course. Prior to enrollment in any PNE course, the student must provide the following documentation:

1. Required Student Forms.
2. Annual Student Statement of Health Form
3. Student Information, Physical, Immunization Forms.
   a. A physical examination from must be completed by a medical practitioner, MD, PA, or CNP.
   b. Immunizations including Tetanus, Mumps-Measles-Rubella (MMR), Varicella, Hepatitis B, Influenza, and COVID
   c. Current 2-Step Tuberculosis testing for tuberculosis, either Mantoux Tuberculin Skin Test (TB Tine Test is not accepted) or chest X-ray if applicable.
   d. Documentation of ability to perform physical demands required in direct patient care activities.
4. Purchase a background check, drug screen, and medical document package.
5. Clearance of criminal background check and drug testing.
6. Proof of CPR certification, American Heart Association, Basic Life Support (BLS) for Healthcare Providers completed during the summer (May 15 – August 1) prior to admission to PNE courses and maintained throughout the program.

The cost of these requirements is the responsibility of the student.

Special Note: The State Board of Nursing has the authority to deny license to any applicant who has violated any of the provisions of 54.1-3007 of the Code of Virginia. Most healthcare organizations are prohibited from hiring persons who have been convicted of certain criminal acts (For a list of crimes under this category refer to the Virginia Board of Nursing webpage under the heading, Licensure/Applicants: Article 90-55, click on the link, Joint statement of the Department of Health and The Department of Health Professions on Impact of Criminal Convictions on Nursing Licensure or Certification and Employment in Virginia, Revised December 2020). Students with criminal convictions must meet with the Dean of Nursing. Permission for clinical assignments must be received from clinical affiliations for applicable students. Clinical facilities that will not approve student placement results in students being unable to complete program requirements and ineligible to continue the program. Students with positive drug screens are addressed individually and may results in being prohibited from clinical activities and therefore, unable to complete the program requirements. Contact the Dean of Nursing for clarification of specific issues.

Performance Standards for Clinical Laboratory Assignments:

Students must be able to perform all essential job functions or performance standards in clinical settings with reasonable accommodation. The following performance standards are consistent with those identified by the Southern Regional Education Boards and include, but are not limited to:

1. Critical thinking: Critical thinking ability sufficient for clinical judgment and delivery of safe patient care.

2. Interpersonal abilities: Interpersonal abilities sufficient to interact with clients, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds.

3. Communication: Communication abilities sufficient for interaction with others in verbal and written form.

4. Mobility: Physical abilities sufficient to move from room to room and maneuver in small spaces.

5. Motor skills: Gross and fine motor abilities sufficient to provide safe and effective nursing care.

6. Physical demands: Physical demands in this program include duties that frequently require squatting, bending, kneeling, reaching, and stair climbing; lifting and carrying up to 50 pounds; frequent pushing and pulling up to 200 pounds with assistance; occasional lifting up to 200 pounds with assistance and occasional carrying up to 51-74 pounds.

7. Hearing: Auditory ability sufficient to monitor and assess health needs.

8. Visual: Visual ability sufficient for nursing observation and assessment.

9. Tactile: Tactile ability sufficient for physical assessment.

Financial Requirements:
In addition to the usual college tuition and fees, the nursing program requires pre-admission testing and other expenses in which students are responsible for. These include a digital device such as a laptop or tablet to use in classroom and lab, uniforms/shoes, watch, stethoscope, standardized program progressive products, textbooks, electronic technology, CastleBranch Criminal Background, drug screening, and document manager, HIPAA certification, CPR certification, Physical exam and Immunizations, and Tuberculosis testing, and Health Insurance. Students are responsible for these costs as well as the cost of transportation to and from the College and health agencies used for clinical experiences. Refer to the VHCC PN Handbook for further details. Refund of cost of tuition is dependent on the academic calendar last day to drop and receive a refund. Refund of other costs such as health physical examination, immunizations, CPR, and CastleBranch are not refundable. Cost associated with textbooks and uniforms (and accessories) are contingent upon the individual vendor.

Financial Aid
VHCC strives to assure that no one be denied the opportunity of attending the College for financial reasons. Students are encouraged to contact the Financial Aid office at VHCC to determine eligibility. Refer to the Financial Aid section in the Student Catalog for requirements. Potential scholarships are available through the VHCC Foundation.

Course Requirements: The student is required to complete a sequence of courses and learning experiences provided at the college and selected community agencies such as hospitals, long-term care facilities, clinics, physicians' offices and comparable facilities. The practical nursing faculty will observe and evaluate the student's suitability for nursing and direct patient care.

Students must complete all courses sequentially as listed in the curriculum. A student must have a "C" or above in theory plus "satisfactory" in clinical performance in all nursing courses to remain in the program. A grade of "C" or above in any related requirements is a prerequisite for continuing in the nursing program.

The nursing program faculty reserves the right to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable demeanor/attendance.

Program Progression: Students must earn a minimum grade of "C" in all required courses and maintain a minimum cumulative GPA of 2.0 to remain eligible for continued enrollment in the nursing program. Any student who earns a final grade lower than a "C" in a required course (either general education or nursing courses) must repeat the course and earn a final grade of "C" or better before taking the next course in the sequence.

A student must obtain permission from the Dean of Nursing to continue in the Practical Nursing Program under the following conditions:

1. Repeating a course with a grade below "C"
2. Withdrawal from a nursing course
3. Cumulative GPA below 2.0.

Reapplication/Readmission Requirements: Students who are not successful in the first practical nursing course, PNE 161, must reapply to the program. A new practical nursing program application packet must be submitted by the application deadline.

A student who wishes to reenter the practical nursing curriculum at any other level must write a letter to the program coordinator and the Dean of Nursing requesting readmission in the semester prior to the semester of enrollment. Re-enrollment must occur no later than three years from successful completion of PNE 161 or the student will have to repeat all practical nursing courses.

The student may be required to enroll in and satisfactorily complete specific courses before readmission. Additional data may be required including a new criminal background check and medical records.

The decision to readmit will be based on additional data, prior performance in the practical nursing program, and space availability.

Based on the course(s) that must be repeated, the student who is readmitted may be required to complete a skills competency course or demonstrate competency in critical nursing skills before progressing to the next level.

A student who has two academic failures or withdrawals in separate semesters will be ineligible for reenrollment in the program. A withdrawal is considered an enrollment. However, due to the pandemic for the academic years 2019-2021, a withdrawal will not be considered an enrollment for this period only. Such a student may not be readmitted if the cumulative grade point average is less than 2.0, including all courses attempted other than practical nursing courses.

According to the VCCS Policy 5.6.3 and VHCC Policy 5.7.4 "A student will normally be limited to two enrollments in the same credit course." Any exception to this policy must be approved by the program dean and the vice president of instruction and student services.

Clinical Contracts: Virginia Highlands Community College has contracts with clinical agencies for both student and patient safety. If students cannot comply with these contractual requirements, they will not be able to participate in clinical activities and will be asked to withdraw from the program. General guidelines follow:

1. Clinical agencies reserve the right to dismiss a student from their agency at any time with due cause. This will be done with advance notice except in an emergency.
2. Published policies of the clinical agency must be followed. Each student must successfully complete an orientation program prior to participating in activities at any clinical facility.
3. Clinical facilities require that all students have documentation of ability to perform the physical demands required in direct patient care activities.
4. Immunizations must be current.
5. Student releases any clinical agency, its agents and employees from any liability for any injury or death to himself or damage to his property arising out of agreement or use of the clinical agencies.
6. Proof of HIPAA, CPR Certification, and health insurance must be provided.

Curriculum: The practical nursing certificate program offers an opportunity for recent high school graduates and other eligible adults to complete the program requirements after 12 months of full-time attendance (1 summer session and 2 semesters).

Students have the option to complete all general education courses required by the practical nursing certificate curriculum before beginning nursing classes.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Summer)				
PNE 155	[1]Body Structures and Functions	3		3
PSY 230	Developmental Psychology	3	0	3
ITE 119	Information Literacy	3	0	3
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
	Total	**13**	**3**	**13**
Second Semester (Fall)				
PNE 161	Nursing in Health Changes I	4	6	6
PNE 162	Nursing in Health Changes II	6	12	10
	Total	**10**	**18**	**16**
Third Semester (Spring)				
PNE 163	Nursing in Health Changes III	4	15	9
PNE 145	Trends in Practical Nursing	1	0	1
PNE 173	Pharmacology for Practical Nurses	2	0	2
	Total	**7**	**15**	**12**
Total Minimum Credits for Certificate				**41**

Footnote:

[1]BIO 141 and 142 are acceptable substitutes recommended for progression to the LPN to RN Program. BIO 145 acceptable substitution for PNE 155.

Health Sciences

Certificate

Program Coordinator: Nicole Freeman • nfreeman@vhcc.edu • 276-739-2537
Length: Two semesters (one year)

Purpose: The growth and development of health professions as well as the changes in health care, requires the health care provider be multi-skilled and well prepared. This program is designed for those individuals interested in entering the health professions. The program will enable students interested in health care professions to acquire an academic foundation to continue their education in one of the health programs. Students should consult an academic advisor for any course substitutions to this curriculum.

Occupational Objective: Preparation for entry into the health professions.

Admission Requirements: The applicant must meet the general requirements for admission to the College including any developmental coursework.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
BIO 141	Human Anatomy & Physiology I	3	3	4
SDV 101	Orientation to College Success	1	0	1
EEE	Humanities Elective (REL 230, ENG 241, 243, 251, MUS 221, or ART 201)	3	0	3
PSY 230	Developmental Psychology	3	0	3
MTH 154 or HLT 143	Quantitative Reasoning or Medical Terminology[1]	3	0	3
	Total	**16**	**3**	**17**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
BIO 142	Human Anatomy & Physiology II	3	3	4
EEE	Degree-related elective [2]	3	3	4
ITE 119	Information Literacy	3	0	3
MDL 105	Phlebotomy [3]	2	6	4
	Total	**14**	**12**	**18**
Total Minimum Credits for Certificate				**35**

[1]Students planning to pursue RAD should take MTH 154; students should see an advisor. Students planning to pursue Associates Degree in Nursing (ADN) should take HLT 143; students should see an advisor.

[2] Students planning to pursue RAD should take HLT 143; students should see an advisor. Students planning to pursue Associates Degree in Nursing (ADN) should take BIO 150; students should see an advisor.

[3]Students are eligible to sit for the CPT (Certified Phlebotomy Technician) exam through NHA after successful completion of the course.

Nurse Aide

Career Studies Certificate

Program Coordinator: Beth Wright • NEB 144B • 276-739-2440
Interim Dean of Nursing
Length: Two semesters

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
HLT 105	CPR	1	0	1
HCT 101	Health Care Tech I[1,2]	3	0	3
HCT 102	Health Care Tech II[1,2]	1	6	3
PSY 230	Developmental Psychology	3	0	3
	Total	**8**	**6**	**10**
Second Semester (Spring)				
ITE 119	Information Literacy	3	0	3
HLT 143	Medical Terminology	3	0	3
HUM	Recommendations: REL 230, MUS 221, or ART 201	3	0	3
	Total	**9**	**0**	**9**
Total Credits for Career Studies Certificate				**19**

Footnotes:

[1]Approved by the Virginia Board of Nursing and prepares you to take the Nurse Aid licensure exam.

[2]Criminal background may prevent you from participating in required clinical work. Students may be required to complete a background check at their own expense.

Medical Assisting

Career Studies Certificate

Program Coordinator: Kim Felty • kfelty@vhcc.edu • (276)739-2534

Length: Two Semesters

Purpose: This program will prepare individuals to serve as medical assistants in various medical office settings. Medical assistants typically do the following:

- Record patient history and personal information
- Measure vital signs, such as blood pressure
- Help the physician with patient examinations
- Give patients injections or medications as directed by the physician and as permitted by state law
- Schedule patient appointments
- Prepare blood samples for laboratory tests
- Enter patient information into medical records

Occupational Objectives: This program is designed to provide essential technological and practical knowledge required for a medical assistant to perform patient clinical skills in various medical office settings. Training experiences in nearby medical offices are provided.

At the successful completion of this program, the student will be eligible to take the CCMA exam offered by the National Healthcareer Association (NHA) for entry into the profession as a Certified Clinical Medical Assistant (CCMA) or the RMA exam offered by American Medical Technologists (AMT) for entry into the profession as a Registered Medical Assistant (RMA). Graduates are also eligible to take the CPT (Certified Phlebotomy Technician) exam.

The number of qualified applicants offered admission to the medical assisting program is contingent upon the space available in the classrooms and medical assistant laboratories, the program's access to sufficient clinical spaces in the region's healthcare settings in order to meet the program's learning outcomes, and the number of qualified medical assisting faculty to teach the students in classrooms, labs, and clinical settings.

This program demands a high level of English proficiency as well as extensive reading and writing.

Admission Requirements

- Completion of the VHCC Application
- Graduation from high school or satisfactory completion of the GED with all transcripts on file with Student Services
- Completion of a high school or college science course with a "C" or better or documented proficiency.
- Completion of Algebra I with a "C" or better or documented proficiency.
- Completion of high school or college computer applications course with a "C" or better or documented proficiency.
- Achievement of a minimum GPA (high school or college) or 2.0.
- Each year, Medical Assisting Program application packets, including transcripts, will be accepted in the Admissions Office until the established deadline.
- Participation in program informational session and possible interview.
- Completion of the Health Occupations Aptitude Examination (HOAE)

Special Program Requirements

- Students in medical assisting program incur a variety of expenses in addition to college tuition and fees. These include, but are not limited to, the cost of uniforms, accessories, and travel to clinical assignments. Students are also responsible for testing fees.
- A strict dress code is required in the clinical setting. Students may be dismissed if they fail to comply with this dress code.
- Students are required to complete learning experiences at local clinics, private offices, and/or other community-based agencies. Students may be required to attend both day and/or evening clinical assignments.
- Students must provide their own transportation to clinical assignments. Strict attendance is required at clinical sites.
- Students must comply with all clinical contract protocols including immunization requirements, drug screening and background checks. The cost for criminal background checks, drug screenings, immunizations, and physicals will be the responsibility of the student. Students with criminal convictions who do not self-disclose this information are subject to dismissal from the program.
- Students must maintain current American Heart Association Basic Cardiac Life Support for Healthcare Providers.
- While enrolled in clinical courses, students may not replace or take the responsibility of "qualified" staff in affiliated facilities. However, after demonstrating proficiency, students may be permitted to perform specified procedures under careful supervision.
- Students are expected to demonstrate professional behavior consistent with standards associated with health care practitioners.
- Each course in the program major must be completed with a grade of "C" or better before taking the next course in the sequence and to satisfy graduation requirements, unless waived by the Division Dean upon the recommendation of the Program Director.
- All courses in the major must be taken in the sequence prescribed in the VHCC Catalog, unless otherwise approved by the Program Coordinator or Division Dean.
- Satisfactory physical and mental health must be maintained for continuance in the program. Applicants must be free of any physical and/or mental condition that might adversely affect their acceptance or performances in the program. The College reserves the right to require medical examinations to verify continuing compliance. Students with pre-existing physical and/or mental conditions which might adversely affect performance in the program who do not self-disclose this information are subject to dismissal from the program.

Program Re-Enrollment Requirements for Medical Assisting Students

Any student who has voluntarily withdrawn or who has been withdrawn due to unsatisfactory academic or clinical performance may apply for re-admission the following academic year. Acceptance will be based upon space availability, successful fulfillment of any contingencies agreed to in writing at the time of withdrawal, and Program Director approval.

Program Requirements:

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Semester 1				
MDA 100	Intro. to Medical Assisting	2	0	2
MDA 101	Medical Assistant Science I	4	2	5
MDA 107	Pharmacology for Medical Assistants	2	0	2
MDA 104	Medical Assistant Science IV	2	3	3
	Total	**10**	**5**	**12**
Semester 2				
MDA 102	Medical Assistant Science II	1	3	2
MDA 209	Medical Office Insurance	1	3	2
MDA 203	Medical Office Procedures	2	3	3

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
MDA 196	On-Site Training	0	12	4
HLT 105	Cardiopulmonary Resuscitation	1	0	1
	Total	**5**	**21**	**12**
Total Credits for Career Studies Certificate				**24**

After completion of this program, students can earn two credentials: CCMA (Certified Clinical Medical Assistant)/RMA (Registered Medical Assistant) and CPT (Certified Phlebotomy Technician).

Radiography

Associate of Applied Science Degree

Program Coordinator: Donna Corns • dcorns1@vhcc.edu • 276-739-2488 • SWCC 276-964-7642

Length: Two Years (six semesters) **

Program offered in cooperation with Southwest Virginia Community College. Degree awarded by Virginia Highlands Community College.

**Program with practical experience in a radiology department to complete requirements for ARRT certification.

Program Mission: The cooperative Radiologic Technology Program at Virginia Highlands Community College is dedicated to serve students from southwest Virginia and east Tennessee. The Program will provide a quality educational experience in the art and science of radiologic technology and help the students succeed, both academically and clinically, as entry-level radiographers. It is the Program's aim to provide a sound foundation for our students towards building a rewarding professional career, and an opportunity to qualify as a valued contributing member in the healthcare team for our region.

Accreditation: This program is fully accredited by the Joint Review Committee for Radiologic Technology Education (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, Illinois, 60606-3182, phone (312)704-5300. You may also contact JRCERT at mail@jrcert.org or at www.jrcert.org. Detailed Program Effectiveness Data is available from the link on the right side of the page. The JRCERT also publishes program effectiveness data, available at https://portal.jrcertaccreditation.org/accredited-educational-programs/details/3fdeb5d1-39bf-4da8-8aff-0f5fe1a817a0.

Occupational Objectives: Employment opportunities for well-trained registered radiographer are available in hospitals, clinics, education, industry, government agencies, and private offices.

•Upon completion of the radiography program, graduates will be required to take the American Registry of Radiologic Technologist national board examination to be eligible for employment in a hospital-based imaging department.

•State license requirements for employment outside a hospital setting vary from state to state.

•Licensure requirements can be obtained from the state's board of health. If a student plans to live or move outside Virginia, a list of state educational requirements can be obtained by consulting the program director.

Admission Requirements: In addition to the general admission requirements to the College, applicants must be high school graduates, or equivalent, and must reflect "C" average. A cumulative GPA of 2.0 must be achieved on all college work.

To meet the Radiography Program specific admission requirements the applicant must have completed and submit for file at the college by February 15th:

- One unit of biology with lab, and one unit of chemistry with lab with a "C" or better.
- Biology 101 and Chemistry 5 or 111 at VHCC will be considered equivalent to high school biology and chemistry.
- Students must be eligible for ENG 111 and MTH 154. All prescribed development work must be completed prior to admission to program.
- Submit a Radiography application (including all high school and college transcripts or copy of GED) by the February 15 deadline.
- Hospital observation requirement in a Radiology Department for a minimum of twelve (12) hours; this observation is to be documented by radiology personnel denoting date(s) and time(s) or alternative assignment during adverse conditions (See Program Director for applicability). Report (PDF) must be attached to the application sent to admissions, and emailed to dcorns1@vhcc.edu.
- Attend an information session with Radiography Program faculty.
- Applicants to the Radiography program must have taken the Test of Essential Academic Skills - also known as the ATI TEAS - Allied Health within the last five years. (We will also accept the ATI TEAS, if students have taken that version in order to apply to a nursing program.) The ATI TEAS Score Report (PDF) must be attached to the application sent to admissions, and emailed to dcorns1@vhcc.edu Register for the TEAS test at www.atitesting.com. Choose Abingdon, Virginia for testing delivered at Virginia Highlands

The Radiology Program admission requirements listed must be completed and on file by the established deadline.

Students should make their advisor aware of any plans to transfer to a senior institution. Students who are planning to transfer to a senior institution may be advised to take upper-level math and science courses as prerequisites to the Radiography Program.

Students selected for the Radiography Program are required to submit a Health Certificate complete with a physical examination/vaccination history signed by a physician prior to final admission to the program. The certificate will be furnished by the program and when returned, it will be kept on file for program documentation. Applicants are to wait for selection notification from the program before proceeding with the physical examination due to the expense involved.

When enrollments must be limited for any curriculum, priority shall be given to all qualified applicants who are residents of the political subdivisions (Washington County, the City of Bristol, and the western half of Smyth County), supporting the College and to Virginia residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the College. In addition, residents of localities with which the College has clinical-site or other agreements may receive equal consideration for admission. To be considered as a Virginia resident, an applicant must be domiciled within Virginia for 12 months prior to February 15. Applicants moving out-of-state between February 15 and the first day of classes will lose their preferred status and any offer of admission to the program will be withdrawn. Out-of-region applicants who are Virginia residents will be considered for program openings available after April 1 and out-of-state applicants for openings available May 1.

TECHNICAL STANDARDS:

Physical Demands:

A. Duties frequently require squatting, bending, kneeling, reaching, and stair climbing. Also includes occasional crawling and climbing.

B. Duties include lifting/positioning of patients and equipment required to provide care:

- frequent lifting and carrying up to 50 pounds
- frequent pushing and pulling up to 200 pounds with assistance
- occasional lifting up to 200 pounds with assistance
- occasional carrying up to 51-74 pounds

C. Duties require constant use of acute sense of sight, hearing, and touch.

- ability to read orders, test results, instructions, labels differentiate color, consistency
- must be able to hear heart sounds, etc.
- must be able to palpate and distinguish heat/cold

Environmental Conditions:

Environmental conditions include procedures that involve handling blood and body fluids using universal precautions.

Program Requirements: Upon admission and during the course of the program, the radiologic faculty will carefully observe and evaluate the student's suitability for the profession. If, in the opinion of the radiologic faculty, a student does not exhibit professional behavior, the student may be asked to withdraw from the program.

Once enrolled, students who receive a final grade lower than "C" in any of the courses in radiography or related areas must obtain permission from the program director to continue the major in radiography.

Selected learning experiences will be provided at the cooperating hospitals within the geographic areas served by the college. The student is expected to provide transportation to such facilities. Travel, time and expense, must be anticipated because of program design and location. Travel distance will vary from 1-60 miles one way from your home campus depending on the hospital clinical assignment.

The purchase of items such as student's uniforms, accessories, health and liability insurance are the financial responsibility of the individual student.

Criminal Background Checks/Drug Testing:

Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Cost for criminal background checks and drug testing will be the responsibility of the student.

Radiography is a cooperative program with Southwest Virginia Community College and Virginia Highlands Community College.

Program Contact: Donna Corns dcorns1@vhcc.edu, 276-739-2488 or at SWCC: donna.corns@sw.edu, 276-964-7642.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Summer Session				
RAD 105	Intro to Radiology Protection & Patient Care (Term II)	3	0	3
SDV 100	College Survival Skills	1	0	1
RAD 195	Ethics & Teamwork (Term II)	1	0	1
ENG 111	[1]College Composition	3	0	3
	Total	**8**	**0**	**8**
First Semester (Fall)				
MTH 154	Quantitative Reasoning	3	0	3
BIO 141	Human Anatomy & Physiology I	3	3	4
RAD 110	Imaging Equipment and Protection	3	0	3
RAD 121	Radiographic Procedures I	3	3	4
	Total	**12**	**6**	**14**
Second Semester (Spring)				
HLT 143	Medical Terminology	3	0	3
BIO 142	Human Anatomy and Physiology II	3	3	4
RAD 112	Radiologic Science II	3	3	4
RAD 221	Radiographic Procedures II	3	3	4
	Total	**12**	**9**	**15**
Summer Session				
RAD 205	Radiation Protection & Radiobiology (Term I)	3	0	3
RAD 190	[2]Coordinated Internship (Term I)	0	10	2
RAD 190	[3]Coordinated Internship (Term II)	0	15	3
	Total	**3**	**25**	**8**
Third Semester (Fall)				
RAD 290	Coordinated Internship	0	15	3
RAD 290	Coordinated Internship	0	15	3
RAD 246	Special Procedures	2	0	2
RAD 270	Digital Image Acquisition & Display	1	3	2
PSY 230	Developmental Psychology	3	0	3
	Total	**6**	**33**	**13**
Fourth Semester (Spring)				
RAD 290	Coordinated Internship	0	15	3
RAD 290	Coordinated Internship	0	15	3
RAD 240	Radiographic Pathology	3	0	3
RAD 215	Correlated Radiographic Theory	2	0	2
EEE	[4]Humanities/Fine Arts Elective	3	0	3
	Total	**8**	**30**	**14**
Total Minimum Credits for the AAS Degree				**72**

Footnotes:

1. Students who wish to pursue a Baccalaureate Degree are advised to take both ENG 111 and 112.

2. RAD 190 – 2 credit hour (Term I) - 5-week summer sessions will spend 30 hours per week for 5 weeks, equaling 150 total hours.

3. RAD 190 – 3 credit hour (Term II) – 5-week summer sessions will spend 40 hours per week for 5 weeks, equaling 200 total hours.

4. Students may substitute PSY 231-232 (both required) for PSY 230. Humanities/Fine Arts: Students may choose from the following courses: Philosophy, Religion, Music Appreciation and Art Appreciation.

Download the Radiography Handbook [pdf]

Download the Shadow/Observation Form [pdf]

Computerized Tomography

Career Studies Certificate

Program Coordinator: Donna Corns • dcorns1@vhcc.edu • 276-739-2488 • SWCC 276-964-7642
Length: Two Semesters

Program offered in cooperation with Southwest Virginia Community College. Career Studies Certificate awarded by Virginia Highlands Community College.
Purpose: The Career Studies Certificate in Computed Tomography Imaging is designed to prepare selected students to qualify as contributing members of the allied health interdisciplinary team. Upon completion of the curriculum (and successful completion and documentation of all required clinical competencies as set for by the American Registry of Radiologic Technologists), the student is eligible to apply to take the National Registry examination leading to advanced certification as a Registered Radiographer in CT by the ARRT.

Admission Requirements: The student in Computed Tomography must have completed an approved program in radiography, radiation therapy, or nuclear medicine technology (either ARRT or NMTCB). Students must be either ARRT or CNMT registered technologists in order to be eligible for entry into the CT program. All students must have a current CPR certification and must maintain that certification throughout the program. Applicants must have maintained a "C" average in past program courses in the discipline or certification.

Applicants must provide the following prior to consideration for admission.

- Application to VHCC
- Official transcripts of all other colleges attended
- CT Program Application

The student in Computerized Tomography must abide by all community college policies as well as hospital policies while enrolled in the program.

Program Requirements: Upon admission and during the course of study, the college and hospital faculty will carefully observe and evaluate the student's progress. If, in the opinion of the faculty, a student does not exhibit professional behavior, the student will be asked to withdraw from the program. Students will not be eligible to receive the certificate until a grade of "C" or better is obtained in each of the required courses.

Criminal Background Checks/Drug Testing: Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the program. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the program. Cost for criminal background checks and drug testing will be the responsibility of the student.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Fall Semester				
RAD 247	Cross Sectional Anatomy for CT/MR	3	0	3
RAD 242	CT Procedures and Instrumentation	2	0	2
RAD 195	Topics in Pharmacology for Technologies	1	0	1
RAD 196	On Site Training Clinical Internship in CT	0	5	1
	Total	**6**	**5**	**7**

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Spring Semester				
RAD 295	Topics in CT Registry Preparation	3	0	3
RAD 196	[1]On Site Training Clinical Internship in CT	0	10	2
HLT 143	Medical Terminology I	3	0	3
HLT 145	Ethics for Healthcare Personnel	2	0	2
	Total	**8**	**10**	**10**
Total Credits for Career Studies Certificate				**17**

Footnote:

[1]Students who can provide documentation of continuous employment in CT for a minimum of 1 year prior to the application deadline have the option of NOT completing the RAD 196 clinical class requirements.

Mammography Advanced Studies

Advanced Studies Curriculum

Curriculum Coordinator: Donna Corns • dcorns1@vhcc.edu • 276-739-2488 • SWCC 276-964-7642

Length: One semester

Program offered in cooperation with Southwest Virginia Community College. Credits awarded by Virginia Highlands Community College.

Purpose: The Mammography Advanced Studies curriculum is designed to prepare selected students to qualify as contributing members of the allied health interdisciplinary team. Upon completion of these advanced studies (and successful completion and documentation of all required clinical competencies as set for by the American Registry of Radiologic Technologists), the student is eligible to apply to take the National Registry examination leading to advanced certification as a Registered Mammographer by the ARRT.

Advanced Study Admission Requirements: The student in Mammography Advanced Studies must have completed an approved program in radiography. The student must be registered (or registry eligible) by the appropriate certification agency (ARRT). (Students applying for Advanced Studies in Mammography who are not ARRT registered or registry eligible must be in their last year of studies in an accredited Radiography program, and complete that radiography program before entering the RAD 196 clinical component of the advanced studies.) All students must have a current CPR certification and must maintain that certification throughout the program. Applicants must have maintained a "C" average in past program courses in the discipline or certification. Applicants must provide the following to be considered for admission.

- Application to VHCC
- Official transcripts of all other colleges attended submitted to the appropriate admissions office at VHCC
- Completed Mammography program application
- Copy of current ARRT certification card, or current unofficial Radiography Program transcript
- If you require the RAD 196 clinical education (75 total clinical hours):
  - Copy of current CPR certification by the American Heart Association
  - Current PPD
  - Immunization records (Varicella, MMR, Hepatitis B, Flu)
  - *HIPAA training, criminal background check, and drug screen will be required at the student's cost (approximately $95). Hospital facility orientation will be required. These must be complete before the student can begin clinical education. The faculty will provide instructions to students who are accepted into the Mammography Advanced Studies track.

The student in Mammography must abide by all community college policies as well as hospital policies while enrolled in the program.

Advanced Study Requirements: Upon admission and during the course of study, the college and hospital faculty will carefully observe and evaluate the student's progress. If, in the opinion of the faculty, a student does not exhibit professional behavior, the student will be asked to withdraw from the advanced study.

Students will not be eligible to receive the certificate until a grade of "C" or better is obtained in each of the required courses. Before entering the clinical areas, the student must receive complete clinical clearance. Please see Ms. Lee or Ms. Horn for details.

Criminal Background Checks/Drug Testing: Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students with convictions may be prohibited from clinical practice and may not complete the advanced study. Clinical agencies may require drug testing prior to placement of students for clinical rotations. Students with positive drug test results may be prohibited from clinical practice and may not complete the advanced study. Cost for criminal background checks and drug testing will be the responsibility of the student.

This advanced study curriculum is typically offered in a 10-week summer semester.

For further information contact: Donna Corns dcorns1@vhcc.edu or Wendy Horn Wendy.horn@sw.edu

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Summer Session				
RAD 233	Anatomy and Positioning of the Breast	1	0	1
RAD 234	Breast Imaging/Instrumentation	1	0	1
RAD 235	Quality Assurance in Mammography	1	0	1
RAD 196	On-Site Training Clinical Internship in Mammography	0	5	1
	Total	**3**	**5**	**4**
Total Credits				**4**

Students have the option of NOT completing the RAD 196 clinical class requirements; however, without clinical competencies, the student is ineligible to apply to sit for ARRT Registry examination, nor does the student complete MQSA requirements. Students can complete those competencies through employment, if their employer provides those cross-training opportunities.

Curriculum & Program Requirements

Industrial Technology

Air Conditioning, Refrigeration, and Heating

Associate of Applied Science Degree

Program Coordinator: Jim Kroll • jkroll@vhcc.edu • 276-739-2560

Length: Four semesters**

**Program can be completed in day or evening classes. The day program starts in even numbered years and the evening program starts in odd numbered years.

Purpose: The Air Conditioning, Refrigeration, & Heating curriculum is designed to provide up-to-date technical skills for employment in the growing $150 billion HVACR industry. VHCC's 4,500 sq. ft. lab is equipped with various manufacturers' equipment, with student time divided in half between classroom theory and lab projects. Students will operate "live" equipment to improve skills in troubleshooting, maintenance, and installation. In addition, students will utilize manufacturer-training software, audiovisual materials, and specially designed trainers for electricity and refrigeration. There is a growing demand for trained HVACR technicians, due to record equipment sales, the introduction of new refrigerants, and technical improvements in equipment. The curriculum satisfies the entry-level training requirements for students new to the HVACR industry, as well as updating the skills of those who want to improve their current skills for advancement in the workplace.

Occupational Objectives: Air Conditioning Technician, Heating Technician, Refrigeration Technician, HVACR Technician, HVACR Contractor, Controls Technician, Indoor Air Quality Technician, HVACR Technical Sales, HVACR Installation, Service Maintenance Technician

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Air Conditioning, Refrigeration and Heating programs. Proficiency in high school English and mathematics is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses. Students from other schools or colleges or with appropriate industrial experience may submit transcripts or other documentation for evaluation and advanced placement. The HVACR industry changes related to EPA regulations involving refrigerants, DOE efficiency requirements for equipment, and equipment manufacturer requirements for updated training, will require that students requesting credit for any AIR classes older than 8 years old, from VHCC or other sources, will need to demonstrate competency and an understanding of current HVACR procedures to the HVACR faculty in order to receive approval.

Program Requirements: The majority of the curriculum will consist of courses in Air Conditioning, Refrigeration and Heating, with the remaining courses in related subjects, general education, and electives. The program will consist of both theoretical concepts and practical applications needed for success in this skilled field. Each student is advised to consult with his/her advisor and counselor for program planning and in selecting electives.

Upon completion of the four-semester program listed in this catalog, the graduate will be awarded an Associate of Applied Science Degree. Program can be completed in day or evening classes. The day program starts in even numbered years and the evening program starts in odd numbered years.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
SDV 101	Orientation to College Success	1	0	1
MTH 111	Basic Technical Mathematics	3	0	3
AIR 111	Air Cond. & Ref. Controls I[1]	2	2	3
AIR 171	Refrigeration I[1]	4	6	6
AIR 121	Air Conditioning and Refrigeration I[1]	2	2	3
AIR 159	Heating and Cooling Safety	1	0	1
	Total	**13**	**10**	**17**
Second Semester (Spring)				
AIR 112	Air Cond. & Ref. Controls II[2]	2	2	3
AIR 276	Refrigerant Usage EPA Certification	1	0	1
AIR 172	Refrigeration II[2]	4	6	6
AIR 122	Air Conditioning and Refrigeration II[2]	2	2	3
ENG 115	Technical Writing	3	0	3
	Total	**12**	**10**	**16**
Third Semester (Fall)				
EEE	Humanities Elective	3	0	3
EEE	Social Science Elective	3	0	3
AIR 134	Circuits and Controls I	2	2	3
AIR 176	Air Conditioning	4	4	6
AIR 235	Heat Pumps	2	2	3
	Total	**14**	**8**	**18**
Fourth Semester (Spring)				
EEE	Social Science Elective	3	0	3
SAF 130	Industrial Safety – OSHA 10	1	0	1
AIR 154	Heating Systems I	2	2	3
AIR 165	Air Conditioning Systems I	2	3	3
AIR 205	Hydronics and Zoning	2	2	3
AIR 231	Circuits and Controls IV	3	3	4
	Total	**13**	**10**	**17**
Total Minimum Credits for AAS Degree				**68**

[1] Co-Requisite courses: AIR 111, AIR 171, AIR 121

[2] Co-Requisite Courses: AIR 112, AIR 172, AIR 122

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Refrigeration

Career Studies Certificate

Program Coordinator: Jim Kroll • jkroll@vhcc.edu • 276-739-2560
Length: One Semester

Purpose: Provide foundation training in Basic Refrigeration, including basic refrigeration system installation, components, leak testing, evacuation, operation, brazing, refrigerant recovery, refrigerant charging, and safety. Provide basic electrical training in Ohm's Law, series circuits, parallel circuits, and multi-meter use. This entry-level training is for students new to the HVACR industry, as well as updating the skills of those who want to improve their current skills for advancement in the workplace.

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Refrigeration Career Studies Certificate. Proficiency in high school mathematics is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Due to HVACR industry changes related to EPA regulations involving refrigerants, DOE efficiency requirements for equipment, and equipment manufacturer requirements for updated training, students requesting advanced placement credit for any AIR classes more than 8 years old, from VHCC or other sources, will need to demonstrate competency, and an understanding of current HVACR procedures to the HVACR faculty in order to receive approval.

Program Requirements: The majority of the curriculum will consist of courses in Basic Refrigeration. The program will consist of both theoretical concepts and practical applications needed for success in this skilled field. Training will include both classroom and hands-on with live equipment. Each student is advised to consult with his/her advisor and counselor for program planning. Upon successful completion, the student will be awarded a Career Studies Certificate Level I.

**Program can be completed in day or evening classes. The day program starts in even numbered years and the evening program starts in odd numbered years.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
SDV 101	Orientation to college Success	1	0	1
AIR 111	Air Conditioning and Refrigeration Controls I[1]	2	2	3
AIR 121	Air Conditioning and Refrigeration I[1]	2	2	3
AIR 159	Heating and Cooling Safety	1	0	1
AIR 171	Refrigeration I[1]	4	6	6
MTH 111	Basic Technical Mathematics	3	0	3
Total Credits for Career Studies Certificate		**13**	**10**	**17**

[1] Co-Requisite courses: AIR 111, AIR 171, AIR 121

Commercial Refrigeration

Career Studies Certificate

Program Coordinator: Jim Kroll • jkroll@vhcc.edu • 276-739-2560
Length: One Semester

Purpose: Provide training in Commercial Refrigeration, including the medium and low temperature refrigeration cycle, system installation, components, leak testing, evacuation, operation, refrigerant recovery, refrigerant charging, and safety. Provide basic electrical training in commercial refrigeration controls, including pressure, time, and temperature operated controls, defrost circuits, multi-meter use, and EPA regulations. This entry-level training is for students new to the HVACR industry, as well as updating the skills of those who want to improve their current skills for advancement in the workplace.

Admission Requirements: Students must complete the Refrigeration Career Studies Certificate prior to enrollment in the Commercial Refrigeration Career Studies Certificate unless the Program Coordinator grants approval. Proficiency in high school English is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Due to HVACR industry changes related to EPA regulations involving refrigerants, DOE efficiency requirements for equipment, and equipment manufacturer requirements for updated training, students requesting advanced placement credit for any AIR classes more than 8 years old, from VHCC or other sources, will need to demonstrate competency, and an understanding of current HVACR procedures to the HVACR faculty in order to receive approval.

Program Requirements: The majority of the curriculum will consist of courses in Commercial Refrigeration. The program will consist of both theoretical concepts and practical applications needed for success in this skilled field. Training will include both classroom and hands-on with live equipment. Each student is advised to consult with his/her advisor and counselor for program planning. Upon successful completion, the student will be awarded a Career Studies Certificate in Commercial Refrigeration.

**Program can be completed in day or evening classes. The day program starts in even numbered years and the evening program starts in odd numbered years.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Second Semester (Spring)				
AIR 112	Air Conditioning and Refrigeration Controls II[1]	2	2	3
AIR 122	Air Conditioning and Refrigeration II	2	2	3
AIR 172	Refrigeration II[1]	4	6	6
AIR 276	Refrigerant Usage EPA Certification[1]	1	0	1
ENG 115	Technical Writing	3	0	3
Total Credits for Career Studies Certificate		**12**	**10**	**16**

Footnote:
Students should have previous training and/or working knowledge of vapor-compression, common service equipment and procedures in HVAC/R.

[1] Co-Requisite Courses: AIR 112, AIR 172, AIR 122

Electrical Technology

Associate of Applied Science Degree

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453

Length: Four semesters (two years)

Purpose: The Associate of Applied Science Degree in Electrical Technology is designed to prepare students for employment upon graduation as electrical technicians with emphasis on installation, power distribution, controls, programmable controls, mechanical systems and the maintenance of industrial machinery.

Occupational Objectives:

Basic Electrician, Electrical/ Electronic Technician, Industrial Maintenance Technician, Industrial Technical Sales, Industrial Field Service, Maintenance Supervisor

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Electrical Technology curriculum. Proficiency in high school English and mathematics is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Program Requirements: The Electrical Technology Degree is a two-year program with two-thirds of the program content in electrical and mechanical courses, and the remaining one-third consists of math, social sciences, English, humanities, and physical education. Course content will include the theoretical concepts and practical applications as they pertain to industry needs. The graduate will be awarded the Associate of Applied Science in Electrical Technology upon satisfactory completion of the two-year program.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
DRF 161	Blueprint Reading	1	2	2
ELE 157	Electricity Fundamentals	3	6	6
ELE 111	Home Electric Power I	2	3	3
ENG 111 or	College Composition I or	3	0	3
ENG 115	Technical Writing			
SDV 101	Orientation to College Success	1	0	1
SAF 130	Industrial Safety – OSHA 10	1	0	1
	Total	**11**	**11**	**16**
Second Semester (Spring)				
MTH 111	Basic Technical Mathematics	3	0	3
ELE 112	Home Electric Power II	2	3	3
ELE 141	DC & AC Machines	3	3	4
ITE 100	Introduction to Information System[1]	3	0	3
ELE 131	National Electrical Code I	3	0	3
	Total	**14**	**6**	**16**
Third Semester (Fall)				
ELE 233	Programmable Logic Controllers I	2	3	3
ELE 245	Industrial Wiring	2	3	3
MEC 161	Hydraulics & Pneumatics	2	2	3
EEE	General Education Elective	3	0	3
EEE	Humanities Elective	3	0	3
	Total	**12**	**8**	**15**
Fourth Semester (Spring)				
ELE 234	Programmable Logic Controllers II	2	3	3
ELE 225	Electrical Control Systems	3	3	4
PED	Physical Education	0	2	1
ELE 175	Industrial Solid State Devices & Circuits	2	3	3
EEE	Social Science Elective	3	0	3
	Total	**10**	**11**	**14**
Fifth Semester (Summer)				
ELE 132	National Electric Code II	3	0	3
WEL 110	Welding Processes	2	3	3
	Total	**5**	**3**	**6**
Total Minimum Credits for AAS Degree				**67**

Footnote:

[1]ITE 115, ITE 119, or ITE 152 are acceptable substitutes

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Practical Electrical Technician

Career Studies Certificate

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453
Length: Two Semesters

Purpose: This program is designed to prepare the student for full-time employment as an electrician's helper, immediately upon completion of the program. A student who completes the program is capable of performing the job skills normally expected of beginning electricians, working with a licensed electrician.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ELE 111	Home Electric Power I	2	3	3
ELE 157	Electricity Fundamentals	3	6	6
SAF 130	Industrial Safety	1	0	1
	Total	**6**	**9**	**10**
Second Semester (Spring)				
ELE 112	Home Electric Power II	2	3	3
ELE 131	National Electric Code I	3	0	3
ELE 141	DC and AC machines	3	3	4
	Total	**8**	**6**	**10**
Total Credits for Career Studies Certificate				**20**

Advanced Practical Electrical Technician

Career Studies Certificate

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453
Length: Three Semesters

Purpose: This program is designed to prepare students for employment upon graduation as electrical technicians with emphasis on installation, power distribution, controls, programmable controls, mechanical systems and the maintenance of industrial machinery. Graduates are qualified for positions such as: Basic Electrician, Electrical/ Electronic Technician, Industrial Maintenance Technician, Industrial Technician.

Students must complete the Practical Electrical Technician Career Studies Certificate prior to enrollment in the Advanced Practical Electrical Technician Career Studies Certificate unless the Program Coordinator grants approval.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ELE 233	Programmable Logic Controller Systems I	2	3	3
MEC 161	Basic Fluid Mechanics-Hydraulics/Pneumatics	2	3	3
ELE 245	Industrial Wiring	2	2	3
	Total	**6**	**8**	**9**
Second Semester (Spring)				
ITE 100	Intro. Information Systems or Fundamentals of Computer Technology	3	0	3
ELE 175	Industrial Solid State Devices and Circuits	2	3	3
ELE 234	Programmable Logic Controller Systems II	2	3	3
ELE 225	Electrical Control Systems	3	3	4
	Total	**10**	**9**	**13**
Third Semester (Summer)				
ELE 132	National Electrical Code II	3	0	3
WEL 110	Welding Processes	2	3	3
	Total	**5**	**3**	**6**
Total Credits for Career Studies Certificate				**28**

Electrical Technology – Specialization in Mechatronics

Associate of Applied Science Degree

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453

Length: Four semesters (two years)

Purpose: The Associate of Applied Science Degree in Electrical Technology – Specialization in Mechatronics is designed to prepare students for employment upon graduation as electrical technicians with emphasis on installation, power distribution, controls, programmable controls, mechanical systems and the maintenance of industrial machinery.

Occupational Objectives: Basic Electrician, Electrical/ Electronic Technician, Electro-Mechanical Installer/Representative, Industrial Maintenance Technician, Industrial Technical Sales, Industrial Field Service, Maintenance Supervisor

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Electrical Technology – Specialization in Mechatronics curriculum. Proficiency in high school English and mathematics is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Program Requirements: The Electrical Technology Degree is a two-year program with two-thirds of the program content in electrical and mechanical courses, and the remaining one-third consists of math, social sciences, English, humanities, and physical education. The graduate will be awarded the Associate of Applied Science in Electrical Technology upon satisfactory completion of the two-year program. Course content will include the theoretical concepts and practical applications as they pertain to industry needs.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
DRF 161	Blueprint Reading	1	2	2
ELE 157	Electricity Fundamentals	3	6	6
MEC 140	Introduction to Mechatronics	2	2	3
SDV 101	Orientation to College Success	1	0	1
SAF 130	Industrial Safety – OSHA 10	1	0	1
	Total	**8**	**10**	**13**
Second Semester (Spring)				
MTH 111	Basic Technical Mathematics	3	0	3
ENG 111 or ENG 115	College Composition I or Technical Writing	3	0	3
ITE 100	Introduction to Information Systems[1]	3	0	3
ELE 141	DC & AC Machines	3	3	4
IND 243	Principles and Apps. of Mechatronics	2	2	3
	Total	**14**	**5**	**16**
Third Semester (Fall)				
EEE	General Education Elective	3	0	3
ELE 233	Programmable Logic Controllers I	2	3	3
MEC 161	Hydraulics & Pneumatics	2	2	3
ELE 245	Industrial Wiring	2	2	3
EEE	Social Science Elective	3	0	3
	Total	**12**	**7**	**15**
Fourth Semester (Spring)				
ELE 234	Programmable Logic Controllers II	2	3	3
ELE 225	Electrical Control Systems	3	3	4
PED	Physical Education	0	2	1
INS 232	Systems Troubleshooting	2	3	3
ELE 175	Ind. Solid State Devices & Circuits	2	3	3
EEE	Humanities Elective	3	0	3
	Total	**12**	**14**	**17**
Fifth Semester (Sumer)				
WEL 110	Welding Processes	2	3	3
ELE 132	National Electrical Code II	3	0	3
	Total	**5**	**3**	**6**
Total Minimum Credits for AAS Degree				**67**

Footnote:

[1]ITE 115, ITE 119, or ITE 152 are acceptable substitutes

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Applied Mechatronics

Career Studies Certificate

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453
Length: Two Semesters

Purpose: This program is intended for students with an electrical background. Those who complete the program have the skills to work as a Mechatronics Entry Level Maintenance Technician's Helper or Industrial Machine Operator.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ELE 157	Electricity Fundamentals	3	6	6
MEC 140	Introduction to Mechatronics	2	2	3
SAF 130	Industrial Safety – OSHA 10	1	0	1
	Total	**6**	**8**	**10**
Second Semester (Spring)				
IND 243	Principles and Applications of Mechatronics	2	2	3
ITE 100/ETR 166	Introduction to Information Systems	3	0	3
ELE 141	DC and AC Machines	3	3	4
	Total	**8**	**5**	**10**
Total Credits for Career Studies Certificate				**20**

Advanced Mechatronics

Career Studies Certificate

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453 **Length:** Three Semesters

Purpose: This program is intended for students with electrical and/or automation background. Those who complete the program have the skills to work as a Mechatronics Entry Level Maintenance Technician or Senior Level Industrial Machine Operator.

Students must complete the Applied Mechatronics Career Studies Certificate prior to enrollment in the Advanced Mechatronics Career Studies Certificate unless the Program Coordinator grants approval.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
MEC 161	Hydraulics and Pneumatics	2	2	3
ELE 233	Programmable Logic Controllers 1	2	2	3
ELE 245	Industrial Wiring	2	2	3
	Total	**6**	**6**	**9**
Second Semester (Spring)				
INS 232	Systems Troubleshooting	2	3	3
ELE 175	Industrial Solid State Devices and Circuits	2	2	3
ELE 234	Programmable Logic Controllers 2	2	2	3
ELE 225	Electrical Control Systems	3	3	4
	Total	**9**	**10**	**13**
Third Semester (Summer)				
ELE 132	National Electric Code 2	2	2	3
WEL 110	Welding Processes	2	3	3
	Total	**4**	**5**	**6**
Total Credits for Career Studies Certificate				**28**

Electricity

Certificate

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453

Length: Two semesters (one year)

Purpose: The Certificate program in Electricity is designed to prepare the student for full-time employment as an electrician, immediately upon completion of the program. A student who completes the program is capable of performing the job skills normally expected of beginning electricians, working with a licensed electrician.

Occupational Objectives: Residential, industrial, or maintenance electrician

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Electricity curriculum. Proficiency in high school English is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Program Requirements: Approximately two-thirds of the curriculum will include courses in electricity, with the remaining courses in related subjects, and general education. Instruction will include both the theoretical concepts and practical applications needed for future success as an electrician. Upon completion of the two-semester curriculum listed, the student will be awarded a Certificate in Electricity.

Virginia Tradesman Certification Program: Students who seek the Journeyman or Master levels of certification may, with appropriate documentation, help meet the practical experience requirement through the Cooperative Education Program.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111 or 115	College Composition I or Technical Writing	3	0	3
ECO 201 or ECO 202	Principles of Macroeconomics or Principles of Microeconomics[1]	3	0	3
ELE 111	Home Electric Power I	2	3	3
ELE 157	Electricity Fundamentals	3	6	6
SAF 130	Industrial Safety – OSHA 10	1	0	1
SDV 101	Orientation to College Success	1	0	1
	Total	**13**	**9**	**17**
Second Semester (Spring)				
MTH 111	Basic Technical Mathematics	3	0	3
ELE 141	DC & AC Machines	3	3	4
ELE 112	Home Electric Power II	2	3	3
ELE 131	National Electric Code I	3	0	3
	Total	**11**	**6**	**13**
Total Minimum Credits for Certificate				**30**

Approved general education electives are listed at http://www.vhcc.edu/GenEdCore.

Industrial Electricity

Career Studies Certificate

Program Coordinator: Donnie Melvin• dmelvin@vhcc.edu • 276-739-2453

Length: Two Semesters (One year)

Purpose: The Career Studies Certificate program in Industrial Electricity is designed to update the skills for full-time employment as an industrial electrician. A student who completes the program is capable of performing the job skills normally expected of beginning industrial electricians.

Occupational Objectives: Industrial or maintenance electrician.

Admission Requirements: See the section on admission requirements in this catalog. A student eligible for admission to the College can normally be considered for admission to the Industrial Electricity program.

Program Requirements: All courses in this curriculum will be technical electrical courses. These courses will be transferable to the regular Electricity Certificate or on of the three AAS programs in Electrical Technology.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ELE 157	Electricity Fundamentals	3	6	6
ELE 245	Industrial Wiring	2	3	3
ELE 233	Programmable Logic Controllers I	2	3	3
MEC 161	Hydraulics and Pneumatics	2	2	3
	Total	**9**	**14**	**15**
Second Semester (Spring)				
ELE 132	National Electric Code 2	3	0	3
ELE 141	DC & AC Machines	3	3	4
ELE 175	Industrial Solid State Devices	2	3	3
	Total	**8**	**6**	**10**
Total Credits for Career Studies Certificate				**25**

The above semester-by-semester sequence of courses may be modified when necessary. Please refer to the Program Choices section of this Catalog for a discussion of factors which affect planning and sequencing programs of study. Courses may be substituted or adjustments may be made by the College to meet program objectives and requirements.

Electrical Technology – Specialization in Energy Technology

Associate of Applied Science Degree

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453

Length: Four semesters (two years)

Purpose: The Associate of Applied Science Degree in Electrical Technology – Specialization in Energy Technology is designed to prepare students for employment upon graduation as electrical technicians with emphasis on installation, power distribution, controls, programmable controls, mechanical systems and the maintenance of industrial machinery.

Occupational Objectives: Basic Electrician, Electrical/ Electronic Technician, Power Systems Technician, Solar Power Technician, Maintenance Supervisor

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Electrical Technology – Specialization in Energy Technology curriculum. Proficiency in high school English and mathematics is required.

Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Program Requirements: The Electrical Technology Degree is a two-year program with two-thirds of the program content in electrical and mechanical courses, and the remaining one-third consists of math, social sciences, English, humanities, and physical education. The graduate will be awarded the Associate of Applied Science in Electrical Technology upon satisfactory completion of the two-year program. Course content will include the theoretical concepts and practical applications as they pertain to industry needs.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111 or	College Composition I or	3	0	3
ENG 115	Technical Writing			
DRF 161	Blueprint Reading	1	2	2
ELE 111	Home Electric Power I	2	3	3
ELE 157	Electricity Fundamentals	3	6	6
SAF 130	Industrial Safety – OSHA 10	1	0	1
SDV 101	Orientation to College Success	1	0	1
	Total	**11**	**11**	**16**
Second Semester (Spring)				
ITE 100	Introduction to Information Systems[1]	3	0	3
MTH 111	Basic Technical Mathematics	3	0	3
ELE 141	DC & AC Machines	3	3	4
ELE 112	Home Electric Power II	2	3	3
ELE 131	National Electrical Code I	3	0	3
	Total	**14**	**6**	**16**
Third Semester (Fall)				
ENE 100	Conventional and Alternate Energy Applications	3	3	4
MUS 121 or REL 230	Music Appreciation I or Religions of the World[2]	3	0	3
ELE 176	Introduction to Alternative Energy Including Hybrid Systems	2	3	3
ELE 245	Industrial Wiring	2	2	3
BUS 100	Introduction to Business [3]	3	0	3
	Total	**13**	**8**	**16**
Fourth Semester (Spring)				
ELE 177	Photovoltaic Energy Systems	3	3	4
ELE 175	Industrial Solid State Devices & Circuits	2	3	3
ENE 200	Power Monitoring	3	3	4
ELE 132	National Electrical Code II	3	0	3
PED	Physical Education	0	2	1
ECO 201 or PSY 120	Principles of Macroeconomics or Human Relations[4]	3	0	3
	Total	**14**	**11**	**18**
Total Minimum Credits for AAS Degree				**66**

Footnote:

[1]ITE 115, ITE 119, or ITE 152 are acceptable substitutes

[2]Recommended Humanities Elective

[3]Recommended General Education Elective

[4]Recommended Social Science Elective

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Solar Energy Technology

Certificate

Program Coordinator: Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453

Length: Two semesters (one year)

Purpose: The Certificate in Energy Technology is designed to prepare students for employment upon graduation as technicians to install solar power generation systems.

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Solar Energy Technology curriculum. Proficiency in high school English is required.

Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Program Requirements: The program contains twenty-five credits in electrical technology and energy technology courses. The remaining credits are in mathematics, English, and orientation.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ELE 157	Electricity Fundamentals	3	6	6
ELE 176	Introduction to Alternative Energy Including Hybrid Systems	2	3	3
SAF 130	Industrial Safety – OSHA 10	1	0	1
SDV 101	Orientation to College Success	1	0	1
ENG 111 or 115	College Composition I or Technical Writing	3	0	3
ELE 245	Industrial Wiring	2	2	3
ELE 131	National Electric Code I	3	0	3
	Total	**12**	**11**	**20**
Second Semester (Spring)				
ELE 177	Photovoltaic Energy Systems	3	3	4
ELE 141	DC/AC Machines	3	3	4
MTH 111	Basic Technical Mathematics	3	0	3
ELE 132	National Electric Code II	3	0	3
	Total	**12**	**6**	**14**
Total Credits for Career Studies Certificate				**34**

Computer Numerical Control Machine Operations

Associate of Applied Science Degree

Program Coordinator: Johnnie Keene• jkeene@vhcc.edu • 276-739-2455

Length: Four semesters (two years)

Purpose: In addition to satisfying the needs of those students who enroll for the four-semester program three other groups are served: First, those who have completed the **one-semester Precision Machining career studies certificate and the one-semester Advanced Precision Machining career studies certificate** programs presently being offered; second, graduates of other schools who have completed a comparable one-year program; third, machine tool operators in industry who want to upgrade their skills. The program is designed to provide both theory and shop experiences of an advanced nature in the machining field.

Occupational Objectives:

Machinist
Tool and Die Maker
Machine Shop Supervisor
Inspector
Computer Numerical Control Operator and Programmer

Admission Requirements: Students are required to meet the general requirements of the college as contained in this catalog. Students from other schools or colleges or with appropriate industrial experience should submit transcripts or other documentation for evaluation and advanced placement.

Program Requirements: The Computer Numerical Control Machine Operations Curriculum consists of courses in both the machining and general education areas. Instruction will include both concepts of machining and practical applications on machine tools. Each student should consult with his/her counselor and faculty advisor in planning a program and selecting his/her electives. Upon completion of the four-semester program listed on this page, the graduate will be awarded an Associate of Applied Science Degree.

Track 1: (Day)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
DRF 161	Blueprint Reading I	1	3	2
SAF 130	Industrial Safety – OSHA 10			
MAC 161	Machine Shop Practices I	2	3	3
MAC 162	Machine Shop Practices II	2	3	3
MAC 116	Machinist's Handbook	2	0	2
SDV 101	Orientation to College Success	1	0	1
MAC 121	Numerical Control I	1	2	2
MAC 122	Numerical Control II	1	2	2
	Total	**11**	**13**	**16**
Second Semester (Spring)				
MAC 111	Machine Trade Theory and Computation I	3	0	3
MAC 150	Introduction to Computer Aided Drafting	2	4	3
MAC 163	Machine Shop Practices I	2	3	3
MAC 164	Machine Shop Practices II	2	3	3
MAC 123	Numerical Control III	2	3	3
MAC 126	Introduction to CNC Programming	2	3	3
	Total	**13**	**16**	**18**
Third Semester (Fall)				
MAC 127	Advanced CNC Programming	3	0	3
MAC 209	Standards, Measurements and Calculations	3	0	3
ENG 115	Technical Writing	3	0	3
EEE	Social Science Elective[1]	3	0	3
MTH 111	Basic Technical Mathematics	3	0	3
	Total	**15**	**0**	**15**
Fourth Semester (Spring)				
MAC 206	Production Machining Techniques	4	6	6
MAC 290	Coordinated Internship or Technical Elective[2]	0-3	0-15	3
EEE	Humanities Elective[3]	3	0	3
PED	Physical Education[4]	0	3	1
EEE	Social Science Elective[1]	3	0	3
	Total	**10-13**	**9-24**	16
Total Minimum Credits for AAS Degree				65

Footnotes:

[1]Students must take 6 credits of social science. Recommended social science courses include ECO 201-202; GEO 210; HIS 101-102; HIS 121-122; PLS 135; PSY 200; SOC 200.

[2]Coordinated Internship: Students are encouraged to take MAC 290 after satisfactory completion of the third semester with approval of Faculty, or a student may take as a technical elective any 3 credit course with course prefix DRF, MAC, MEC, SAF, or WEL.

[3]Students must take 3 credits of humanities. Recommended humanities courses include ART 201, 202; MUS 121, 122; REL 200, 210, 230; CST 130, 151, 152; PHI 101; foreign language or literature.

[4]Students may substitute any HLT course for physical education requirements.

Computer Numerical Control Machine Operations

Associate of Applied Science Degree

Track 2: (Evening)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
MAC 161	Machine Shop Practices I	2	3	3
MAC 121	Numerical Control	1	2	2
SAF 130	Industrial Safety	1	0	1
SDV 101	Orientation to College Success	1	0	1
	Total	**5**	**5**	**7**
Second Semester (Spring)				
DRF 161	Blueprint Reading I	1	3	2
MAC 162	Machine Shop Practices II	2	3	3
MAC 116	Machinist Handbook	2	0	2
MAC 122	Numerical Control II	1	2	2
	Total	**6**	**8**	**9**
Third Semester (Fall)				
MAC 163	Machine Shop Practices III	2	3	3
MAC 150	Introduction to Computer Aided Manufacturing	2	4	3
MAC 123	Numerical Control III	2	3	3
	Total	**6**	**10**	**9**
Fourth Semester (Spring)				
MAC 164	Machine Shop Practices IV	2	3	3
MAC 126	Intro to Computer Numerical Control Programming	2	3	3
MAC 111	Machine Trade Theory & Computation I	3	0	3
	Total	**7**	**6**	**9**
Fifth Semester (Summer)				
ENG 115	Technical Writing	3	0	3
MTH 111	Basic Technical Mathematics	3	0	3
EEE	Social Science Elective[1]	3	0	3
MAC 209	Standards, Measurements, and Calculations	3	0	3
	Total	**12**	**0**	**12**
Sixth Semester (Fall)				
MAC 206	Production Machining Techniques	4	6	6
MAC 127	Advanced CNC Programming	3	0	3
PED	Physical Education[4]	0	3	1
	Total	**7**	**9**	**10**
Seventh Semester (Spring)				
MAC 290	Coordinated Internship or Technical Elective[2]	0-3	0-15	3
EEE	Humanities Elective[3]	3	0	3
EEE	Social Science Elective[1]	3	0	3
	Total	**6-9**	**0-15**	**9**
Total Minimum Credits for AAS Degree				**65**

Footnotes:

[1]Students must take 6 credits of social science. Recommended social science courses include ECO 201-202; GEO 210; HIS 101-102; HIS 121-122; PLS 135; PSY 200; SOC 200.

[2]Coordinated Internship: Students are encouraged to take MAC 290 after satisfactory completion of the third semester with approval of Faculty, or a student may take as a technical elective any 3 credit course with course prefix DRF, MAC, MEC, SAF, or WEL.

[3]Students must take 3 credits of humanities. Recommended humanities courses include ART 201, 202; MUS 121, 122; REL 200, 210, 230; CST 130, 151, 152; PHI 101; foreign language or literature.

[4]Students may substitute any HLT course for physical education requirements.

Precision Machining

Career Studies Certificate

Program Coordinator: Johnnie Keene• jkeene@vhcc.edu • 276-739-2455

Length: One Semester

Purpose: This program is designed to provide individuals with manual machining concepts, blueprint reading and inspection procedures. Upon completion of this program, graduates will be prepared for employment as a manual lathe or mill operator.

Occupational Objectives: The Precision Machining Career Studies Certificate provides the basic skills necessary to secure an entry level job as a manual machinist. Students develop the basic skills necessary to read blueprints, function as a Lathe Operator, Drill Press Operator, and Milling Machine Operator.

Admission Requirements: General college curricular admission.

Program Notes: Students are strongly encouraged to meet with the program coordinator either before registering for their first semester or early in their first semester of study. Students will be required to furnish clear lens safety glasses, leather work footwear, and proper clothing for working in the lab.

Program Requirements: The curriculum will consist of both hands-on learning and classroom instruction. The program can be completed in one to two semesters and will prepare graduates for entry-level positions. Graduates will also obtain the OSHA-10-hour General Industry safety certification.

Track 1: (Day)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
DRF 161	Blueprint Reading I	1	3	2
MAC 161	Machine Shop Practices I	2	3	3
MAC 121	Numerical Control I	1	2	2
SAF 130	Industrial Safety – OSHA 10	1	0	1
MAC 116	Machinist Handbook	2	0	2
MAC 122	Numerical Control II[1]	1	2	2
MAC 162	Machine Shop Practices II[2]	2	3	3
SDV 101	Orientation to College Success	1	0	1
Total Credits for Career Studies Certificate		**11**	**13**	**16**

Footnotes:
[1]Prerequisite: MAC 121
[2]Prerequisite or Corequisite: MAC 161

Track 2: (Evening)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
MAC 161	Machine Shop Practices I	2	3	3
MAC 121	Numerical Control	1	2	2
SAF 130	Industrial Safety	1	0	1
SDV 101	Orientation to College Success	1	0	1
	Total	**5**	**5**	**7**
Second Semester (Spring)				
DRF 161	Blueprint Reading I	1	3	2
MAC 162	Machine Shop Practices II	2	3	3
MAC 116	Machinist Handbook	2	0	2
MAC 122	Numerical Control II	1	2	2
	Total	**6**	**8**	**9**
Total Credits for Career Studies Certificate		**11**	**13**	**16**

Advanced Precision Machining

Career Studies Certificate

Program Coordinator: Johnnie Keene• jkeene@vhcc.edu • 276-739-2455
Length: One Semester

Purpose: This Career Studies Certificate is designed to provide individuals with advanced machining concepts on lathes and machining centers. Students will learn conventional and conversational programming on each machine. Upon completion of this program, graduates will be prepared for employment as CNC lathe or mill operator.

Occupational Objectives: The Advanced Precision Machining Career Studies Certificate provides the basic skills necessary to secure an entry level job as a CNC machinist. Students develop the basic skills necessary to Set-up, program and operate CNC lathes and machining centers.

Students must complete the Precision Machining Career Studies Certificate prior to enrollment in the Advanced Precision Machining Career Studies Certificate unless the Program Coordinator grants approval.

Track 1: (Day)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Spring)				
MAC 150	Introduction to Computer Aided Manufacturing	2	4	3
MAC 163	Machine Shop Practices III	2	3	3
MAC 164	Machine Shop Practices IV	2	3	3
MAC 123	Numerical Control III	2	3	3
MAC 126	Introductory CNC Programming	2	3	3
MAC 111	Machine Trade Theory and Computation I	3	0	3
Total		**13**	**16**	**18**

Track 2: (Evening)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
MAC 163	Machine Shop Practices III	2	3	3
MAC 150	Introduction to Computer Aided Manufacturing	2	4	3
MAC 123	Numerical Control III	2	3	3
	Total	**6**	**10**	**9**
Second Semester (Spring)				
MAC 164	Machine Shop Practices IV	2	3	3
MAC 126	Intro to Computer Numerical Control Programming	2	3	3
MAC 111	Machine Trade Theory & Computation I	3	0	3
	Total	**7**	**6**	**9**
Total Credits for Career Studies Certificate				**18**

Diesel Mechanic

Career Studies Certificate

Program Coordinator: Keith Harless • kharless@vhcc.edu

276-525-4578

Length: Two Semesters

Purpose: The Career Studies Certificate in Diesel Mechanics provides successful students with the knowledge, skills and competency required for basic diesel mechanic positions.

Occupational Objectives: Fulfill the need for Diesel Mechanics.

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Diesel Mechanic Studies Certificate.

Program Requirements: The curriculum will consist of both hands on learning and classroom instruction. The program can be completed in one year and will prepare graduates for entry-level diesel mechanic positions.

Track 1: (Day)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
DSL 111	Introduction to Diesel	1	2	2
DSL 152	Diesel Power Trains, Chassis, And Transmissions	2	4	4
DSL 143	Diesel Truck Electrical Systems	2	4	4
DSL 176	Transportation Air Conditioning	1	2	2
DSL 160	Air Brakes	2	2	3
	Total	**8**	**14**	**15**
Second Semester (Spring)				
DSL 121	Diesel Engines I	3	6	6
DSL 122	Diesel Engines II	3	6	6
	Total	**6**	**12**	**12**
Total Credits for Career Studies Certificate				**27**

Track 2: (Evening)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
DSL 121	Diesel Engines	3	6	6
DSL 122	Diesel Engines II	3	6	6
	Total	**6**	**12**	**12**
Second Semester (Spring)				
DSL 111	Introduction to Diesel	1	2	2
DSL 143	Diesel Truck Electrical Systems	2	4	4
DSL 152	Diesel Power Trains, Chassis, and Transmissions	2	4	4
DSL 160	Air Brakes	2	2	3
DSL 176	Transportation Air Conditioning	1	2	2
	Total	**8**	**14**	**15**
Total Credits for Career Studies Certificate				**27**

The AAS degree in Technical Studies is an available option for students who wish to further their studies following the completion of this program.

Welding

Career Studies Certificate

Program Coordinator: Eddie Fultz • efultz@vhcc.edu • 276-492-2065

Length: One-Two Semesters

Purpose: This program is designed to provide students training in blueprint/symbols reading, SMAW, FCAW, GMAW, and GTAW. Upon completion of Welding Career Studies Certificate, graduates will be prepared for employment as a basic welder.

Occupational Objectives: The Welding Career Studies Certificate provides the basic skills necessary to secure an entry level job as a manual or semiautomatic welder. Students will develop the basic skills necessary to read blueprints, and perform steel welds in 1F, 2F, 3F, 1G, 2G, and 3G positions. These will be accomplished in three different weld processes.

Program Notes: Along with the Career Studies Certificate in Welding, graduates will also obtain the OSHA-10-hour General Industry certification.

Track 1: (Day)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
WEL 120	Introduction to Welding	1	2	2
WEL 123	Shielded Metal Arc Welding (SMAW)	2	3	3
SAF 130	Industrial Safety – OSHA 10	1	0	1
WEL 150	Welding Drawing & Interpretation	3	0	3
WEL 160	Gas Metal Arc Welding (GMAW)	2	3	3
WEL 161	Fluxed Cored Arc Welding (FCAW)	2	3	3
WEL 164	Gas Tungsten Arc Welding (GTAW)	2	3	3
Total Credits for Career Studies Certificate		**13**	**14**	**18**

Track 2: (Evening)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
WEL 120	Introduction to Welding	1	2	2
WEL 123	Shielded Metal Arc Welding (SMAW)	2	3	3
SAF 130	Industrial Safety – OSHA 10	1	0	1
WEL 150	Welding Drawing & Interpretation	3	0	3
WEL 160	Gas Metal Arc Welding (GMAW)	2	3	3
	Total	**9**	**8**	**12**

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Second Semester (Spring)				
WEL 161	Fluxed Cored Arc Welding (FCAW)	2	3	3
WEL 164	Gas Tungsten Arc Welding (GTAW)	2	3	3
	Total	**4**	**6**	**6**
Total Credits for Career Studies Certificate				**18**

Advanced Welding

Career Studies Certificate

Program Coordinator: Eddie Fultz • efultz@vhcc.edu • 276-492-2065

Length: One Semester

Purpose: This will be a continuation of educational training in SMAW, GMAW, and GTAW. Students will receive training in advanced levels of welding in these processes. Oxy-fuel and plasma arc cutting will also be an added part of the advanced training.

Occupational Objectives: The Advanced Welding Career Studies Certificate provides the advanced skills necessary to secure a welder job position as an advanced trained manual or semiautomatic welder. These welds will be accomplished in three different weld processes and multiple positions. Blueprint reading and weld symbols will be utilized throughout these classes.

Students must complete the Welding Career Studies Certificate prior to enrollment in the Advanced Welding Career Studies Certificate unless the Program Coordinator grants approval

Track 1: (Day)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Spring)				
SDV 100	College Success Skills	1	0	1
HLT 106	First Aid and Safety	2	0	2
WEL 117	Oxyfuel Welding and Cutting	2	6	4
WEL 124	Shielded Metal Arc Welding (SMAW II)	2	3	3
WEL 130	Inert Gas Welding	2	6	4
WEL 136	Welding III (Inert Gas)	1	3	2
Total Credits for Career Studies Certificate		**10**	**18**	**16**

Track 2: (Evening)

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Spring)				
SDV 100	College Success Skills	1	0	1
HLT 106	First Aid and Safety	2	0	2
WEL 124	Shielded Metal Arc Welding (SMAW II)	2	3	3
WEL 136	Welding III (Inert Gas)	1	3	2
	Total	**6**	**6**	**8**
Second Semester (Summer)				
WEL 130	Inert Gas Welding	2	6	4
WEL 117	Oxyfuel Welding and Cutting	2	6	4
	Total	**4**	**12**	**8**
Total Credits for Career Studies Certificate				**16**

The AAS degree in Technical Studies is an available option for students who wish to further their studies following the completion of the Welding and Advanced Welding programs.

Technical Studies

Associate of Applied Science Degree

Program Coordinator: Dean of Professional & Technical Studies • 276-739-2401
Major: As needed
Length: Four Semesters

Purpose: The Associate of Applied Science Degree in Technical Studies is designed to provide a broad foundation of general education and technological knowledge, along with a concentration in a technical field that will prepare the graduate to enter or advance in technical fields upon graduation.

Occupation Objective: Technical training continues to be in high demand by employers and this degree allows a student to enter or advance in many different types of technical fields upon graduation based on their area of concentration.

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Technical Studies program. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses. See Table E. and Table M.

Program Requirements: The curriculum for the Technical Studies Degree combines general academic instruction in the humanities, social sciences, mathematics, science, and communication with a technical core of courses geared toward gaining competence for positions within business, industry, or government.

*Courses	**Credits**
General Education	
Communication	3-6
Humanities	3-6
Social/Behavioral Sciences	3-6
Mathematics/Natural Science	3-6
Subtotal	**15**
Other Requirements	
Student Development	1-2
Subtotal	**1-2**

Content Skills & Knowledge

One (1) or (2) existing certificates/career studies certificates may be combined with additional courses to create a coherent plan of study. May include experiential credit, such as credit for prior learning, internship credit, independent study, and/or apprenticeship credit.

Subtotal	**44-52**
TOTAL CREDITS REQUIRED	**60-69**

*Students should work with the Program Coordinator in their major as well as the Academic Counselor to determine their specific pathway and schedule.

Curriculum & Program Requirements

Information Technology

Information Systems Technology

Associate of Applied Science Degree

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Length: Four semesters (two years)

Purpose: The Associate of Applied Science program is designed to provide a broad base of information systems and computer software experience, which will prepare the graduate to enter the work force upon graduation. With the rapid development of business and industrial applications of information systems, there is a growing demand of qualified personnel in this area.

Occupational Objectives: Software Applications Programmer, Database Associate, Help Desk Technician, Program Tester, Web Page Developer

Admission Requirements: In addition to the admission requirements established for the college entry into the Associate of Applied Science Degree Program in Information Systems Technology requires proficiency in high school English and mathematics.

Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Keyboarding skills are highly recommended. Students may enroll in AST 114 or 101 to upgrade keyboarding skills.

Program Requirements: The curriculum includes courses in information systems, programming, web page design, help desk topics, productivity software, database management, business and related areas as well as general education. Instruction covers both the theoretical concepts and practical applications needed for future success in business and industry. Each student is urged to consult carefully with the counselor and a faculty advisor. Some courses within this curriculum may be applied to a four-year college program at the discretion of the admitting institution. Upon satisfactory completion of the four-semester curriculum listed, the graduate will be awarded the Associate of Applied Science Degree in Information Systems Technology.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment entry. Upon the student's request, courses may be modified to provide possible transfer acceptability by four-year colleges and universities.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
ITD 110	Web Page Design I	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ITE 182	User Support/Help Desk Principles	3	0	3
MTH 132	Business Mathematics	3	0	3
SDV 101	Orientation to College Success	1	0	1
	Total	**16**	**0**	**16**
Second Semester (Spring)				
ENG 112 or CST 100	College Composition II or Principles of Public Speaking	3	0	3
BUS 225	Applied Business Statistics[1]	3	0	3
EEE	Humanities Elective	3	0	3
CSC 221	Introduction to Problem Solving and Programming[2]	3	0	3
ITE 140	Spreadsheet Software	3	0	3
	Total	**15**	**0**	**15**
Third Semester (Fall)				
ITE 150	Desktop Database Software	4	0	4
ITN 154	Introduction to Networks- CISCO I	3	2	4
CSC 222	Object Oriented Programming[3]	4	0	4
ITP 140	Client Side Scripting	3	0	3
ECO 201 or ECO 202	Principles of Macroeconomics or Principles of Microeconomics	3	0	3
	Total	**17**	**2**	**18**
Fourth Semester (Spring)				
ITD 132	Structured Query Language[3]	4	0	4
ITN 113	Active Directory (Windows Server)	3	0	3
ITP 240	Server Side Scripting	3	0	3
EEE	Social Science Elective	3	0	3
EEE	Approved IT Elective or Co-op Education	3	0	3
SDV 106	Preparation for Employment	1	0	1
	Total	**17**	**0**	**17**
Total Minimum Credits for AAS Degree				**66**

Footnotes:

[1]Prerequisite: MTH 132.

[2] Prerequisite: ITE 115, ITE 119, or ITE 152 and MTH 132 or division approval

[3]Prerequisite: CSC 221 or Division approval

[4]Prerequisite: ITE 115, ITE 119, or ITE 152 or Division Approval.

VHCC policy requires that students must keep their IT skills up to date. Therefore, IT courses transferred from other institutions and IT courses completed at VHCC must not be more than 5 years old for IT majors. If a student can demonstrate competency, the student may appeal the rule by requesting departmental approval from the lead faculty in the IT Department.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Information Systems Technology - Specialization in Networking

Associate of Applied Science Degree

Program Coordinators: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Length: Four semesters (two years)

Purpose: The Associate of Applied Science program is designed to provide a broad base of information systems and computer software experiences, which will prepare the graduate to enter the work force upon graduation. With the rapid development of business and industrial applications of information systems, there is a growing demand of qualified personnel in this area.

Occupational Objectives: Network Administrator, Help Desk Technician, Computer Support Specialist

Admission Requirements: In addition to the admission requirements established for the college, entry into the Associate of Applied Science Degree Program in Information Systems Technology - Specialization in Networking requires proficiency in high school English and mathematics.

Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Keyboarding skills are highly recommended. Students may enroll in AST 114 or 101 to upgrade keyboarding skills.

Program Requirements: The curriculum includes courses in information systems, programming, operating systems, hardware, troubleshooting, server administration, help desk topics, productivity software, database management, business and related areas as well as general education. Instruction covers both the theoretical concepts and practical applications needed for future success in business and industry. Courses in operating systems and PC hardware prepare students for A+ certification. Each student is urged to consult carefully with the counselor and a faculty advisor. Some courses within this curriculum may be applied to a four-year college program at the discretion of the admitting institution. Upon satisfactory completion of the four-semester curriculum listed, the graduate will be awarded the Associate of Applied Science Degree in Information Systems Technology - Specialization in Networking.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment entry. Upon the student's request, courses may be modified to provide possible transfer acceptability by four-year colleges and universities.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ITE 182	User Support/Help Desk Principles	3	0	3
ITN 106	Micro. Operating Systems	3	0	3
ITN 154	Introduction to Networks - CISCO I	3	2	4
SDV 101	Orientation to College Success	1	0	1
	Total	**16**	**2**	**17**
Second Semester (Spring)				
EEE	Social Science Elective	3	0	3
CSC 221	Introduction to Problem Solving and Programming[1]	3	0	3
ITE 140	Spreadsheet Software	3	0	3
ITN 107	PC Hardware & Troubleshooting	3	0	3
ITN 155	Switching, Routing, and, Wireless Essentials -CISCO II[2]	3	2	4
	Total	**15**	**2**	**16**
Third Semester (Fall)				
ITN 260	Network Security Basics[3]	3	0	3
CSC 222	Objected Oriented Programming[4]	4	0	4
ITN 156	Enterprise Networking, Security, and Automation-CISCO III[5]	3	2	4
MTH 132	Business Mathematics	3	0	3
ECO 201 or ECO 202	Principles of Macroeconomics or Principles of Microeconomics	3	0	3
	Total	**16**	**2**	**17**
Fourth Semester (Spring)				
ITD 132	Structured Query Language[6]	4	0	4
ITN 113	Active Directory (Windows Server 2008)	3	0	3
EEE	Humanities Elective	3	0	3
BUS 225	Applied Business Statistics[7]	3	0	3
EEE	Approved IT Elective or Coordinated Internship	3	0	3
SDV 106	Preparation for Employment	1	0	1
	Total	**17**	**0**	**17**
Total Minimum Credits for AAS Degree				**67**

Footnotes:

[1] Prerequisite: ITE 115, ITE 119, or ITE 152 and MTH 132 or division approval

[2] Prerequisite: ITN 154

[3] Prerequisite or corequisite: ITN 154

[4] Prerequisite: CSC 221 or division approval

[5] Prerequisite: ITN 155

[6] Prerequisite: ITE 115, ITE 119, or ITE 152 or Division Approval.

[7] Prerequisite: MTH 132

VHCC policy requires that students must keep their IT skills up to date. Therefore, IT courses transferred from other institutions and IT courses completed at VHCC must not be more than 5 years old for IT majors. If a student can demonstrate competency, the student may appeal the rule by requesting departmental approval from the lead faculty in the IT Department.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Networking Fundamentals I

Career Studies Certificate

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Length: Two Semesters

Purpose
This certificate prepares students with introductory IT knowledge and skills to recognize, prevent and defend against threats to information and information systems. In order for students to be prepared in key areas of Cybersecurity and Network Administration, students need to be introduced to the basic topics of operating systems, computer hardware, networking concepts, programming and cybersecurity topics.

Occupational Objective
To create entry level employment opportunities in the network administration field.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
SDV 101	Orientation	1	0	1
ITN 106	Microcomputer Operating Systems[1]	3	0	3
ITN 154	Introduction to Networks - CISCO I	3	3	4
ITN 260	Network Security Basics[2]	3	0	3
	Total	**10**	**3**	**11**
Second Semester (Spring)				
ITN 107	Personal Computer Hardware and Troubleshooting[3]	3	0	3
ITN 155	Switching, Routing, and Wireless Essentials- CISCO II	3	2	4
CSC 221	Introduction to Problem Solving and Programming[4]	3	0	3
	Total	**9**	**0**	**10**
Total Credits for Career Studies Certificate		**21**		

Footnotes:

[1] Upon completion of ITN 106 student may take CompTIA A+ Core 2 exam
[2]Prerequisite or corequisite: ITN 154. Counts as IT Elective toward AAS Degree
[3]Upon completion of ITN 107 student may take CompTIA A+ Core 1 exam
[4] Prerequisite: ITE 115, 119, or 152 and MTH 132 or division approval.
Both Core 1 AND Core 2 exams must be passed in order to receive A+ certification through CompTIA.
Upon successful completion of A+ certification, testing fees may be reimbursed by the College

Student may take Cisco Certified Network Associate (CCNA) certification after completion of ITN 155
https://www.cisco.com/c/en/us/training-events/training-certifications/certifications/associate/ccna.html
Upon successful completion of certification, testing fees may be reimbursed by the College.

Networking Fundamentals II

Career Studies Certificate

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Length: Two Semesters

Purpose: This certificate prepares students with introductory IT knowledge and skills to recognize, prevent and defend against threats to information and information systems. In order for students to be prepared in key areas of Cybersecurity and Network Administration, students need to be introduced to the basic topics of operating systems, computer hardware, networking concepts, programming and cybersecurity topics.

Occupational Objective
To create entry level employment opportunities in the network administration field.

Students must complete the Networking Fundamentals I Career Studies Certificate prior to enrollment in the Networking Fundamentals II Career Studies Certificate unless the Program Coordinator grants approval.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ITN 156	Enterprise Networking, Security, and Automation—CISCO III[1]	4	0	4
CSC 222	Object Oriented Programming[2]	4	0	4
ITE 182	User Support/Helpdesk Principles	3	0	3
	Total	**11**	**0**	**11**
Second Semester (Spring)				
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ITN 113	Active Directory	3	0	3
ITE 140	Spreadsheet Software	3	0	3
	Total	**9**	**0**	**9**
Total Credits for Career Studies Certificate				**20**

Footnote:

[1]Prerequisite: ITN 155

[2]Prerequisite: CSC 221 or Division approval

Networking A+

Certificate

Program Coordinators: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Length: Three semesters
(1 year beginning in summer term)

Purpose: With the increased development of business, industry, and government in Virginia, there is a need for qualified personnel in information systems technology and networking. This certificate program is designed to train personnel for full-time employment upon completion of the course requirements. In addition, the curriculum furnishes the student the option to transfer into the AAS degree programs.

Occupational Objectives: Network Technician, Help Desk Technician, Computer Support Technician

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to the Networking Certificate. Proficiency in high school English and mathematics is required. Students who are not proficient in English and mathematics will be required to correct their deficiencies in developmental courses. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Program Requirements: The three-semester curriculum provides training in information systems, A+, help desk and Windows server. In addition, the curriculum includes supportive courses as a preparation for entrance into the job market. Upon successful completion of the curriculum, the student will be awarded a Certificate in Networking.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Summer Session				
ENG 111	College Composition I	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
	Total	**6**	**0**	**6**
First Semester (Fall)				
SDV 101	Orientation to College Success	1	0	1
MTH 132	Business Mathematics	3	0	3
ITN 106	Micro. Operating Systems	3	0	3
ITN 154	Introduction to Networks - CISCO I	3	2	4
ITE 182	User Support/Help Desk Principles	3	0	3
	Total	**13**	**2**	**14**
Second Semester (Spring)				
ITE 140	Spreadsheet Software or Approved IST elective	3	0	3
CSC 221	Introduction to Problem Solving and Programming[1]	3	0	3
ITN 107	PC Hardware & Troubleshooting	3	0	3
ITN 113	Active Directory (Windows Server 2008)	3	0	3
EEE	Social Science Elective	3	0	3
	Total	**15**	**0**	**15**
Total Minimum Credits for Certificate				**35**

[1] Prerequisite: ITE 115, 119, or 152 and MTH 132 or division approval

VHCC policy requires that students must keep their IT skills up to date. Therefore, IT courses transferred from other institutions and IT courses completed at VHCC must not be more than 5 years old for IT majors. If a student can demonstrate competency, the student may appeal the rule by requesting departmental approval from the lead faculty in the IT Department.

Students are urged to follow the recommended pathway for this certificate when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

CISCO Networking and A+

Career Studies Certificate

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
ITN 106	Microcomputer Operating Systems	3	0	3
ITN 107	Pers. Computer Hardware and Troubleshooting	3	0	3
ITN 154	Introduction to Networks- CISCO I	4	0	4
ITN 155	Switching, Routing, and Wireless Essentials-CISCO II[1]	4	0	4
ITN 156	Enterprise Networking, Security, and Automation-CISCO III[2]	4	0	4
ITN 260	Network Security Basics [3]	4	0	4
Total Credits for Career Studies Certificate		**22**	**0**	**22**

Footnotes:

[1]Prerequisite: ITN 154

[2]Prerequisite: ITN 155

[3]Prerequisite or co-requisite: ITN 154

ITN 106 and ITN 107 prepares student for the A+ certification.

ITN 154, ITN 155, and ITN 156, prepares student for CCNA (CISCO Certified Network Associate).

Web Programming and Design

Certificate

Program Coordinators: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Length: Three semesters
(1 year beginning in summer term)

Purpose: With the increased development of business, industry, and government in Virginia, there is a need for qualified personnel in information systems technology and web design. This certificate program is designed to train personnel for full-time employment upon completion of the course requirements. In addition, the curriculum furnishes the student the option to transfer into the AAS degree programs.

Occupational Objectives: Web Programmer, Web Designer, Support for Web Developer

Admission Requirements: A student eligible for admission to the College can normally be considered for admission to Web Design Certificate. Proficiency in high school English and mathematics is required.

Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Program Requirements: The two-semester curriculum provides training in information systems, web design, and graphics. In addition, the curriculum includes supportive courses as a preparation for entrance into the job market. Upon successful completion of the curriculum, the student will be awarded a Certificate in Web Design.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
Summer Session				
ENG 111	College Composition I	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
	Total	**6**	**0**	**6**
First Semester (Fall)				
SDV 101	Orientation to College Success	1	0	1
MTH 132	Business Mathematics	3	0	3
ITD 110	Web Page Design I	3	0	3
EEE	Approved IT Elective	3	0	3
ITP 140	Client Side Scripting	3	0	3
	Total	**13**	**0**	**13**
Second Semester (Spring)				
ENG 112 or CST 100	College Composition II or Principles of Public Speaking	3	0	3
ITE 140	Spreadsheet Software	3	0	3
CSC 221	Introduction to Problem Solving and Programming	3	0	3
ITP 240	Server Side Scripting	3	0	3
EEE	Social Science elective	3	0	3
	Total	**15**	**0**	**15**
Total Minimum Credits for Certificate				**34**

[1] Prerequisite: ITE 115, 119, or 152 and MTH 132 or division approval

VHCC policy requires that students must keep their IT skills up to date. Therefore, IT courses transferred from other institutions and IT courses completed at VHCC must not be more than 5 years old for IT majors. If a student can demonstrate competency, the student may appeal the rule by requesting departmental approval from the program coordinator.

Students are urged to follow the recommended pathway for this certificate when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Web Design and Development

Career Studies Certificate

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ITD 110	Web Page Design I	3	0	3
ITP 140	Client Side Scripting	3	0	3
ITP 240	Server Side Scripting	3	0	3
EEE	Approved IT Elective[1]	3	0	3
Total Credits for Career Studies Certificate		**15**	**0**	**15**

Cyber Security

Career Studies Certificate

Program Coordinator: Dr. James Baker • jbaker@vhcc.edu • 276-739-2415

Length: Two Semesters (One year)

Purpose: This career studies certificate in Cybersecurity is designed to prepare students for employment as Network security specialists or Internet security specialists. This career studies certificate also helps prepare students for the CompTIA Security+ certificate.

Occupational Objectives: Network security specialists or Internet security specialists.

Admission Requirements: See the section on admission requirements in this catalog. A student eligible for admission to the College can normally be considered for admission to the Cyber Security program.

Criminal background may prevent you from obtaining employment in this field.

Program Requirements: All courses in this curriculum will be information technology essentials or networking courses. Upon completion of the program, the student will be awarded a Career Studies Certificate in Cyber Security.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ITE 105	Cyber Careers and Ethics	2	0	2
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ITN 154	Introduction to Networks – CISCO I[1]	3	2	4
CSC 222	Object Oriented Programming[2]	4	0	4
ITN 260	Network Security Basics[3]	3	0	3
	Total	**15**	**2**	**16**
Second Semester (Spring)				
ITN 170	Linux I[4]	3	0	3
ITN 261	Network Attacks, Computer Crime, and Hacking	3	0	3
ITN 262	Network Communication, Security, and Authentication	3	0	3
ITN 266	Network Security Layers	3	0	3
	Total	**12**	**0**	**12**
Total Credits for Career Studies Certificate				**28**

Footnotes:

[1]ITN 101 will substitute

[2]Prerequisite: CSC 221 or Division approval

[3]Prerequisite or Corequisite of ITN 154 or ITN 101

[4]ITN 111 or ITN 171 will substitute

Database Security and Design

Career Studies Certificate

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ITE 150	Desktop Database Software	4	0	4
ITD 132	Structured Query Language[1]	4	0	4
ITN 113	Active Directory (Windows Server 2008)	3	0	3
ITP 240	Server Side Scripting or Recommended IT Elective[2]	3	0	3
Total Credits for Career Studies Certificate		**17**	**0**	**17**

Footnotes:

[1].Prerequisite: ITE 115, ITE 119, ITE 152 or Division Approval.

[2].Recommended IT Elective is ITD 110. Contact an IST Advisor for more information about additional approved IT Electives.

Computer Programming

Career Studies Certificate

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
CSC 221	Introduction to Problem Solving and Programming [1]	3	0	3
CSC 222	Object Oriented Programming[2]	4	0	4
EEE	[2]Approved IT Elective	3	0	3
Total Credits for Career Studies Certificate		**13**	**0**	**13**

Footnotes:

[1] Prerequisite: ITE 115, 119, or 152 and MTH 132 or division approval

[1] Prerequisites: CSC 221. Other object-oriented or event-driven programming language may be substituted with faculty or division approval.

[2]Recommended IT Elective is ITD 110. Contact an IST Advisor for more information about additional approved IT Electives.

Software Applications Specialist

Career Studies Certificate

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
AST 141	Word Processing I[1]	3	0	3
ITE 140	Spreadsheet Software	3	0	3
ITE 150	Desktop Database Software	4	0	4
ITE 182	User Support/Help Desk Principles	3	0	3
Total for Career Studies Certificate		**16**	**0**	**16**

Footnote:
[1]Prerequisite- AST 101. Exceptions can be granted with faculty or division approval.

Program prepares student for Microsoft certification in Word, Excel, and Access. Contact an IST advisor for more information.

User Support Specialist

Career Studies Certificate

Program Coordinator: Tamara Lasley • tlasley@vhcc.edu • 276-739-2503

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
ITN 106	Micro. Operating Systems	3	0	3
ITN 107	PC Hardware & Troubleshooting	3	0	3
ITE 182	User Support/Help Desk Principles	3	0	3
ITN 113	Active Directory (Windows Server 2008)	3	0	3
EEE	Approved IT Elective[1]	3	0	3
Total Credits for Career Studies Certificate		**15**	**0**	**15**

Footnote:
[1]Recommended IT Elective is ITE 140. Contact an IST Advisor for more information about additional approved IT Electives.

ITN 106/107 prepares student for the A+ certification. Combining the Software Applications and User Support certificates is recommended for both software and hardware support specialists.

Small Unmanned Aerial Systems (sUAS)

Career Studies Certificate

Program Coordinator: Tamara Lasley, • tlasley@vhcc.edu • 276-739-2503

Program Description: This career studies certificate is designed to prepare participants to skillfully fly and maintain a sUAS and to earn the FAA part 107 certificate. If you want to commercially fly a drone legally, you **must earn your FAA** Part 107 remote pilot Certification. Knowledge of the safe and legal operation of an unmanned aircraft (drone) and the collection of imagery for customers is on the forefront of employer demand for many new and emerging fields. This program develops these competencies and allows participants to succeed in this challenging and demanding field. The novice pilot will learn manual flight skills and how to legally fly in a commercial operation. This curriculum uses program related electives from fields such as IT, Science, Agriculture, Horticulture, Electricity, and Criminal Justice, allowing students to graduate with both an AAS degree and this Career Studies Certificate.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
UMS 107	Small Unmanned Aircraft Systems (UAS) remote Pilot Ground School[1]	3	0	3
UMS 111	Small Unmanned Aircraft Systems (UAS) I	3	0	3
UMS 177	Small Unmanned Aircraft Systems (UAS) Components and Maintenance	2	2	3
EEE	Program Related Elective[2]	3	0	3
EEE	Program Related Elective[2]	3	0	3
EEE	Program Related Elective[2]	3	0	3
Total Credits for Career Studies Certificate		**17**	**2**	**18**

Footnotes:

[1]Students must be 16 years of age to sit for FAA Part 107 remote Pilot Certification.

[2]Program related electives include any 100/200 level course from fields of study such as Science (BIO, CHM, GOL, PHY, EGR). Agriculture (AGR, HRT), Information Systems Technology (ITE, ITN, ITP, ITD), Electricity (ELE) or Criminal Justice (ADJ). Other electives may be approved by division dean.

Curriculum & Program Requirements

Public Service

Criminal Justice

Associate of Applied Science Degree

Program Coordinator: Robin Widener • rwidener@vhcc.edu • 276-739-2408

Length: Four semesters (two years)

Purpose: The curriculum in Criminal Justice is designed to improve the knowledge and skills of the practitioner in criminal justice and to prepare individuals for career service in this field.

Occupational Objectives: Police Officer, Investigator, Probation and Parole Worker, Security Officer, Juvenile Worker, Corrections Officer, Local, State, or Federal Enforcement Officer

Admission Requirements: A student eligible for admission to the college can normally be considered for admission to the Criminal Justice curriculum. Proficiency in high school English and mathematics is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

In addition to meeting the admission requirements established for the college, the applicant should consult with the program coordinator to see if he or she would meet the specialized requirements for the criminal justice agency with which he or she plans to seek employment. Any person who has been convicted of a felony or of any offense involving turpitude or violence is ineligible for admission to this program. Enrollment in certain ADJ courses may be restricted to persons who have been accepted into the program. Please consult a Student Services Counselor or the Program Coordinator for instructions on applying to the Program.

Program Requirements: Approximately one-half of the curriculum will include courses in Criminal Justice with the remaining courses in related areas, general education, and electives. Instruction will include both the theoretical concepts and practical applications needed for future success in criminal justice careers. Each student is advised to consult with his/her counselor and faculty advisor in planning a program and selecting electives. Upon completion of the four-semester program, the graduate will be awarded the Associate of Applied Science in Protective Services.

The student is required to complete a sequence of courses and learning experiences provided at the college. The Criminal Justice program faculty reserves the right to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable attendance, behavior, and adherence to the regulations governing student conduct as outlined in the student handbook.

Students must complete all Criminal Justice courses listed in the first year of the curriculum before being allowed to enter the second year Criminal Justice courses. Exceptions may be approved by the Division Chairman upon faculty recommendation.

A student must have a "C" or above in all Criminal Justice courses to remain in the program. A grade of "C" or above in any related requirements is a prerequisite for continuing in the Criminal Justice program. Exceptions may be approved by the Division Dean upon faculty recommendation.

Program Progression: Any student who earns a final grade lower than "C" in any Criminal Justice course or SOC 235 or 236 must repeat the course and earn a final grade of "C" or better before taking the next course or courses in the sequence.

A student must obtain permission from the Criminal Justice faculty to continue in the Criminal Justice program under the following conditions:

1. repeating a course with a grade below "C,"
2. withdrawal from a Criminal Justice course,
3. cumulative GPA below 2.0.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment entry. Students who wish to transfer to four-year institutions should acquaint themselves with the requirements of the college or university to which transfer is contemplated. Such students should consult with their faculty advisor at Virginia Highlands Community College in planning their programs.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
SDV 101	Orientation to College Success	1	0	1
ADJ 100	Survey of Criminal Justice	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ENG 111	College Composition I	3	0	3
SOC 266	Race and Ethnicity	3	0	3
EEE	Social Science Elective	3	0	3
	Total	**16**	**0**	**16**
Second Semester (Spring)				
ADJ 140	Introduction to Corrections	3	0	3
ADJ 130	Criminal Law	3	0	3
ADJ 236	Principles of Investigation	3	0	3
ENG 112	College Composition II	3	0	3
MTH 155	[1]Statistical Reasoning	3	0	3
EEE	Social Science Elective	3	0	3
	Total	**18**	**0**	**18**
Third Semester (Fall)				
ADJ 133	Ethics and the Criminal Justice Professional	3	0	3
ADJ 171	Forensic Science I	3	3	4
ADJ 237	[2]Advanced Criminal Investigation	3	0	3
SOC 235	Juvenile Delinquency	3	0	3
EEE	Related Elective	3	0	3
	Total	**15**	**3**	**16**
Fourth Semester (Spring)				
ADJ 111	Law Enforcement Organization & Administration I	3	0	3
ADJ 227	Constitutional Law for Justice Personnel	3	0	3
ADJ 229	Community Policing in Modern Society	3	0	3
SOC 236	Criminology	3	0	3
EEE	Humanities Elective	3	0	3
ADJ 138	[3]Defensive Tactics	2	0	2
	Total	**17**	**0**	**17**
Total Minimum Credits for the AAS Degree				**67**

[1]MTH 155 or Higher is required. Students planning to transfer to a four-year program should check to see the required math of the transfer institution.
[2]Prerequisite: ADJ 236 or division approval
[3]Includes CPR/First Aid Certification

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Foundations of Criminal Justice

Career Studies Certificate

Program Coordinator: Robin Widener • rwidener@vhcc.edu • 276-739-2408
Length: One to Two Semesters

Purpose: The curriculum in the Foundations of Criminal Justice Career Studies Certificate is designed to improve the knowledge and skills of the practitioner in the foundations of criminal justice, focusing on general knowledge and communication skills. This level is to prepare individuals for career service or advancement in the field.

Occupational Objectives: The curriculum will provide skills for the advancement and/or employment in the following occupations: law enforcement officer, investigator, probation and parole officer, security officer, juvenile services worker, officer, local, state, and federal enforcement officers.

Program notes: In addition to meeting the admission requirements established for the college, students in the Criminal Justice Program will need to meet the specialized requirements for the criminal justice agency with which he or she plans to seek employment. This includes the absence of any felony convictions or misdemeanor convictions involving moral turpitude or violence. ADJ students are required to earn a "C" or higher grade in the ADJ classes and in SOC 235 and SOC 236. If a student earns below a "C" in those classes, he or she must repeat the course and earn a final grade of "C" or better.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
ENG 111	English Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
ADJ 100	Survey of Criminal Justice	3	0	3
ADJ 130	Criminal Law	3	0	3
ADJ 133	Ethics & the Criminal justice Professional	3	0	3
SOC 236	Criminology	3	0	3
	Total	**19**	**0**	**19**
Total Credits for Career Studies Certificate				**19**

Law Enforcement

Career Studies Certificate

Program Coordinator: Robin Widener • rwidener@vhcc.edu • 276-739-2408
Length: Two Semesters

Purpose: The curriculum in the Criminal Justice Career Studies Certificate is designed to improve the knowledge and skills of the practitioner in either the field of corrections or law enforcement. This program focuses more intensely on the aspect of each field and allows the student to obtain certifications in CPR and Mental Health First Aid. This Career Studies Certificate is designed to prepare individuals for career service or advancement in the either the field of corrections or law enforcement.

Occupational Objectives: The curriculum will provide skills for the advancement and/or employment in the following occupations: law enforcement officer, investigator, probation and parole officer, security officer, juvenile services worker, corrections officer, local, state, and federal enforcement officers.

Students must complete the Foundations of Criminal Justice Career Studies Certificate prior to enrollment in the Law Enforcement Career Studies Certificate unless the Program Coordinator grants approval

Program notes: In addition to meeting the admission requirements established for the college, students in the Criminal Justice Program will need to meet the specialized requirements for the criminal justice agency with which he or she plans to seek employment. This includes the absence of any felony convictions or misdemeanor convictions involving moral turpitude or violence. ADJ students are required to earn a "C" or higher grade in the ADJ classes and in SOC 235 and SOC 236. If a student earns below a "C" in those classes, he or she must repeat the course and earn a final grade of "C" or better.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ADJ 118	Crisis Intervention	3	0	3
ADJ 171	Forensic Science I	3	3	4
ADJ 236	Principles of Investigation	3	0	3
	Total	**9**	**3**	**10**
Second Semester (Spring)				
ADJ 237	Advanced Criminal Investigation[1]	3	0	3
ADJ 138	Defensive Tactics[2]	2	0	2
HLT 121	Introduction to Drug Use and Abuse	3	0	3
	Total	**8**	**0**	**8**
Total Credits for Career Studies Certificate				**18**

Footnotes:
[1]Prerequisite: ADJ 236 or division approval
[2]Includes CPR/First Aid Certification

Corrections

Career Studies Certificate

Program Coordinator: Robin Widener • rwidener@vhcc.edu • 276-739-2408
Length: Two Semesters

Purpose: The curriculum in the Corrections Career Studies Certificate is designed to improve the knowledge and skills of the practitioner in either the field of corrections or law enforcement. This program focuses more intensely on the aspect of each field and allows the student to obtain certifications in CPR and Mental Health First Aid. This Career Studies Certificate is designed to prepare individuals for career service or advancement in the either the field of corrections or law enforcement.

Occupational Objectives: The curriculum will provide skills for the advancement and/or employment in the following occupations: law enforcement officer, investigator, probation and parole officer, security officer, juvenile services worker, corrections officer, local, state, and federal enforcement officers.

Students must complete the Foundations of Criminal Justice Career Studies Certificate prior to enrollment in the Corrections Career Studies Certificate unless the Program Coordinator grants approval

Program notes: In addition to meeting the admission requirements established for the college, students in the Criminal Justice Program will need to meet the specialized requirements for the criminal justice agency with which he or she plans to seek employment. This includes the absence of any felony convictions or misdemeanor convictions involving moral turpitude or violence. ADJ students are required to earn a "C" or higher grade in the ADJ classes and in SOC 235 and SOC 236. If a student earns below a "C" in those classes, he or she must repeat the course and earn a final grade of "C" or better.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ADJ 118	Crisis Intervention	3	0	3
SOC 235	Juvenile Delinquency	3	0	3
ADJ 140	Introduction to Corrections	3	0	3
	Total	**9**	**0**	**9**
Second Semester (Spring)				
ADJ 246 or ADJ 248	Corrections Counseling or Probation, Parole & Treatment	3	0	3
ADJ 138	Defensive Tactics[1]	2	0	2
HLT 121	Introduction to Drug Use and Abuse	3	0	3
	Total	**8**	**0**	**8**
Total Credits for Career Studies Certificate				**17**

Footnote:
[1]Includes CPR/First Aid Certification

Human Services

Associate of Applied Science Degree

Program Coordinator: Winona Fleenor • wfleenor@vhcc.edu • 276-739-2493

Length: Four semesters (two years)

Purpose: The curriculum is designed to provide students with a broad foundation in preparation for work in a variety of social service fields. With the increasing demands upon human services agencies for the delivery of specialized services, there is a growing need for trained workers and paraprofessionals with essential skills. Persons seeking their first employment in human services and those presently in such occupations seeking to upgrade their skills may benefit from this curriculum.

Occupational Objectives: Child Care Worker, Rehabilitation Technician, Social Services Aide, Corrections Assistant, Teacher's Aide, Counseling Aide, Adult/Nursing Home Worker

Admission Requirements: A student eligible for admission to the college can normally be considered for admission to the Human Services Associate Degree curriculum. Proficiency in high school English and mathematics is required.

Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Criminal background or DSS record check may prevent you from participating in a Coordinated Internship, Experiential Learning project, or from obtaining employment in this field.

Program Requirements: The Human Services curriculum consists of courses in psychology, sociology, public services and human services. In addition to these core courses, other courses in general education and related areas are included. Instruction will include both a specialized as well as a general education approach. Upon completion of the four-semester program, the student is awarded the Associate of Applied Science in Human Services.

Notes on Transfer: Associate of Applied Science Degree programs are designed primarily to provide occupational competence for employment. Upon the student's request, courses may be modified to provide possible transfer acceptability by four-year colleges and universities.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
HMS 100	Introduction to Human Services	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
PSY 120	Human Relations	3	0	3
PSY 200	Principles of Psychology	3	0	3
	Total	**16**	**0**	**16**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
PBS 265	Interviewing	3	0	3
PLS 135	United States Government and Politics	3	0	3
PSY 235	Child Psychology	3	0	3
SOC 200	Principles of Sociology	3	0	3
MTH 155	Statistical Reasoning	3	0	3
	Total	**18**	**0**	**18**
Third Semester (Fall)				
PSY 236	Adolescent Psychology	3	0	3
SOC 215 or HMS 230	Sociology of the Family or Ethics in Human Services[1]	3	0	3
ECO 201 or 202	Principles of Macroeconomics or Principles of Microeconomics	3	0	3
EEE	Degree Related Elective[2]	3	0	3
PBS 266	Group Leadership	3	0	3
	Total	**15**	**0**	**15**
Fourth Semester (Spring)				
PSY 237	Adult Psychology	3	0	3
HMS 227	Change Agent	3	0	3
SOC 268 or HMS 250	Social Problems or Principles of Case Management[1]	3	0	3
EEE	Humanities Elective	3	0	3
CST 100	Principles of Public Speaking	3	0	3
	Total	**15**	**0**	**15**
Total Minimum Credits for the AAS Degree				**64**

[1]HMS option recommended for students seeking employment in Human Services or transfer in Social work

[2]Recommended degree related elective is HMS 290. Other options include HMS 122, 145, 251, 252, 258, 270, 230, 260 or PSY 215. Other options include HIS 121, HIS 122.

Students are urged to follow the recommended pathway for this degree when choosing electives.

Additional approved humanities and social science electives are listed at http://www.vhcc.edu/GenEdCore.

Human Services Advocate

Certificate

Program Coordinator: Winona Fleenor • wfleenor@vhcc.edu • 276-739-2493

Length: Two semesters (one year)

Purpose: The certificate program in Human Services Advocate is designed to prepare persons for entry into careers which emphasize human relations skills, typically performed in a person-to-person relationship.

Occupational Objectives: Students who complete the program may enter the labor market in jobs which lead to a variety of positions, such as:

Therapeutic Assistant
Social Services Liaison
Case Management Aide
Client Advocate
Social Services Para-professional
Child Care Assistant

Admission Requirements: A student eligible for admission to the college can normally be considered for admission to the Human Services Advocate curriculum. Proficiency in high school English and mathematics is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Criminal background or DSS record check may prevent you from participating in a Coordinated Internship, Experiential Learning project, or from obtaining employment in this field.

Program Requirements: Approximately three-fourths of the courses will be a core curriculum which is basic for all human services, i.e., general education, occupational-technical, and human relations skills. The remaining courses, along with the coordinated internship, are designed to give the student specialized training for the particular career area which he/she has chosen. Upon completion of the two-semester program, the student will be awarded a Certificate in Human Services Advocate.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
ENG 111	College Composition I	3	0	3
SDV 101	Orientation to College Success	1	0	1
SOC 200	Principles of Sociology[1]	3	0	3
ITE 119 or ITE 152	Information Literacy or Introduction to Digital and Information Literacy and Computer Applications	3	0	3
HMS 100	Intro. to Human Services	3	0	3
PSY 120	Human Relations	3	0	3
	Total	**16**	**0**	**16**
Second Semester (Spring)				
ENG 112	College Composition II	3	0	3
MTH 155	Statistical Reasoning	3	0	3
PBS 265	Interviewing[2]	3	0	3
HLT 110	Concepts of Personal and Community Health	3	0	3
EEE or HMS 290	Degree Related Elective or Coordinated Internship[3]	3	0	3
	Total	**15**	**0**	**15**
Total Minimum Credits for Certificate				**31**

Footnotes:

[1]Students may substitute PSY 200.

[2]Students may substitute PBS 266 Group Leadership for this course.

[3]Students may take any HMS course to meet this requirement or participate in a Coordinated Internship. HMS 290 may be taken after satisfactory completion of the first semester with Faculty Curriculum Advisor approval.

American Sign Language

Career Studies Certificate

Program Coordinator: Barbara Manuel • bmanuel@vhcc.edu • 276-739-2432

Length: Variable for part-time Continuing Education students. All of the courses in this Career Studies Certificate program will not be offered in a single semester. Students should note the pre-requisites for ASL 102, ASL 201, and ASL 202 and meet with an advisor to plan accordingly.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
ASL 101	American Sign Language I	4	0	4
ASL 102	American Sign Language II[1]	4	0	4
ASL 125	History & Culture of the Deaf Community I	3	0	3
ASL 201	American Sign Language III[2]	3	0	3
ASL 202	American Sign Language IV[3]	3	0	3
INT 130	Interpreting: An Introduction to the Profession	3	0	3
	Total	**20**	**0**	**20**

[1] Pre-requisite for ASL 102 is ASL 101

[2]Pre-requisite for ASL 201 is ASL 102

[3]Pre-requisite for ASL 202 is ASL 201

This program introduces American Sign Language (ASL) and provides basic skills for working with the Deaf or Hard-of Hearing.

Early Childhood Education

Career Studies Certificate

Program Coordinator: Winona Fleenor • wfleenor@vhcc.edu • 276-739-2493

Length: One semester

Purpose: This curriculum is an introduction to the field, designed to provide entry-level competencies documented by Virginia's Competencies for Early Childhood Professionals. These competencies include health, safety and nutrition, understanding child growth and development, appropriate child observation and assessment, partnering with families and community, learning environment, effective interactions, program management, teacher qualifications and professional development curriculum.

Program Objectives: Employment opportunities include positions in childcare centers, Head Start and Early Head Start classrooms, family day care homes, preschool programs, centers for children with special needs, residential childcare facilities and industry associated centers.

Admission Requirements: Applicants must meet the requirements for admission to credit-level coursework established by the college.

The following is required in order to be eligible for placement in CHD 165:

- Submission to and no findings for The State of Virginia Criminal History & Sex Offenders Records Check (SP-167) and the Virginia Child Abuse and Neglect Central Registry.
- Students must also sign and complete the Sworn Statement or Affirmation for Child Day Programs.
- Documentation of a negative TB screening.

Each student is responsible for any fees or costs associated with background checks. Students are responsible for transportation to and from field sites used for laboratory experiences. Inability to complete the above or contrary results will disqualify the student from completing the course and the program.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
CHD 120	Introduction to Early Childhood Education	3	0	3
CHD 145	Creative Activities for Children	3	0	3
CHD 205	Guiding the Behavior of Children	3	0	3
EDU 235	Health Safety and Nutritional Education	3	0	3
SDV 101	Orientation to College Success	1	0	1
CHD 165	Observation and Participation in Early Childhood Setting	2	2	3
Total Credits for Career Studies Certificate		**15**	**2**	**16**

Advanced Early Childhood Education

Career Studies Certificate

Program Coordinator: Winona Fleenor • wfleenor@vhcc.edu • 276-739-2493

Length: One semester

Purpose: This curriculum is designed to build on entry-level skills as demonstrated in the Early Childhood Career Studies Certificate and as documented by the Virginia's for Early Childhood Professionals. These competencies include child health, safety and nutrition, understanding child growth and development, appropriate child observation and assessment, partnering with families and community, learning environment, effective interactions, program management, teacher qualifications and professional development curriculum.

Program Objectives: Employment opportunities include positions in childcare centers, Head Start and Early Head Start classrooms, family day care homes, preschool programs, centers for children with special needs, residential childcare facilities and industry associated centers.

Admission Requirements: Students must complete the Early Childhood Education Career Studies Certificate prior to enrollment in the Advanced Early Childhood Education Career Studies Certificate unless the Program Coordinator grants approval. Applicants must meet the requirements for admission to credit-level coursework established by the college.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Spring)				
CHD 210	Introduction to Exceptional Children	3	0	3
CHD 216	Early Childhood Programs, School, and Social Change	3	0	3
EDU 200	Introduction to teaching as a Profession	3	0	3
CHD 166	Infants and Toddlers Programs	3	0	3
CHD 118	Language Arts for Children	2	2	3
CHD 146	Math, Science and Social Studies for Children	2	2	3
Total Credits for Career Studies Certificate		**16**	**4**	**18**

The AAS degree in Technical Studies is an available option for students who wish to further their studies following the completion of the Early Childhood and Advanced Early Childhood Education programs.

Child Development

Career Studies Certificate

Program Coordinator: Winona Fleenor • wfleenor@vhcc.edu • 276-739-2493

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
CHD 120	Introduction to Early Childhood Education	3	0	3
CHD 145	Creative Activities for Children	2	2	3
CHD 205	Guiding the Behavior of Children	3	0	3
EDU 235	Health Safety and Nutritional Education	2	2	3
PSY 235	Child Psychology	3	0	3
Total Credits for Career Studies Certificate		**13**	**4**	**15**

All courses are approved by the Virginia Child Care Provider Scholarship Program and applicable to the Child Development Associate (CDA) credential of the National Association for the Education of Young Children.

Substance Abuse Counselor-Assistant

Career Studies Certificate

Program Coordinator: Winona Fleenor • wfleenor@vhcc.edu • 276-739-2493

Length: Two semesters (one year)

Purpose: This career studies certificate program in Substance Abuse Counselor-Assistant is designed to meet the educational requirements needed to secure the Virginia Certified Substance Abuse Counselor Assistant (CSAC-A) credential. In order to complete the credential, students must complete specific didactic training, supervised experiential training, and must also take and pass the Virginia State Constructed CSAC-A exam. This certificate program meets the didactic training requirements.

Occupational Objectives: Students who complete the program may enter the labor market in jobs which lead to a variety of positions, such as:

- Substance Abuse Counselor- Assistant
- Social Services Liaison
- Case Management Aide
- Client Advocate
- Social Services Para-professional

Admission Requirements: A student eligible for admission to the college can normally be considered for admission to the Substance Abuse Counselor-Assistant curriculum. Proficiency in high school English and mathematics is required.

Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

Criminal background or DSS record check may prevent you from participating in a Coordinated Internship, Experiential Learning project, or from obtaining employment in this field.

Additional information for those who wish to apply for the Certified Substance Abuse Counselor-Assistant: According to the Virginia Board of Counseling Handbook for CSAC-A applicants, if you have a criminal conviction, The Board requires that you submit a certified copy of all conviction orders (obtained from the courthouse of record); evidence that all court ordered requirements were met (i.e., letter from the probation officer if on supervised probation, paid fines and restitution, etc.); a letter from the applicant explaining the factual circumstances leading to the criminal offense(s); and letters from employers concerning work performance (specifically from Counseling-related employers, if possible).

Program Requirements: All of the courses are designed to provide training in this specialized field of human services in such areas as: substance abuse counseling, safety and ethics, human behavior, crisis intervention and professionalism. Upon completion of the two-semester program, the student will be awarded a Career Studies Certificate in Substance Abuse Counseling Assistant.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
First Semester (Fall)				
HMS 141	Group Dynamics I	3	0	3
HMS 258	Case Management and Substance Abuse	3	0	3
HMS 251	Substance Abuse I	3	0	3
HMS 145	Effects of Psychoactive Drugs	3	0	3
	Total	**12**	**0**	**12**
Second Semester (Spring)				
HMS 270	Treatment Systems	3	0	3
HMS 252	Substance Abuse II[1]	3	0	3
HMS 260	Substance Abuse Counseling	3	0	3
HMS 198	Seminar and Project	1	0	1
HMS 230	Ethics in Human Services	3	0	3
	Total	**13**	**0**	**13**
Total Credits for Career Studies Certificate				**25**

Footnote:

[1]Prerequisite: HMS 251

Curriculum & Program Requirements

Workforce Development & Continuing Education

Change Your Future in Weeks, not Years!

- Short-term training programs awarding credentials for in-demand jobs
- Virginia's WCG initiative provides reduced tuition for Virginia residents
- Additional financial assistance (FANTIC) is available for those who qualify based on household income
- Over 24,000 credentials and certificates have been awarded across Virginia through FastForward

Certified Billing & Coding Specialist
Thursday – 6:00 PM – 9:00 PM
TBA
Course fee: $2895.00
FastForward Price: $965.00 | Financial Assistance Price: $96.50

Commercial Driver's License Program
Monday – Thursday, 7:00 AM – 5:30 PM (4 weeks)
Start Dates- TBA
Saturday – Sunday, 7:00 AM – 5:30 PM (8 weeks)
Start Dates- TBA
Course Fee: $4,500.00
FastForward Price: $1500.00 | Financial Assistance Price: $150.00

Nurse Aide
Mon. & Tues., 6:00 PM – 9:30 PM| 3 Sat. & 3 Sun. 8:30 AM – 5:30 PM
Course fee: $1545.00
FastForward Price: $515.00 | Financial Assistance Price: $51.50

Phlebotomy Technician Program
Tuesday, 1:30 PM-4:30 PM
TBA
Course fee: $2,199.00
FastForward Price: $733.00 | Financial Assistance Price: $73.30

Photovoltaic-Entry Level (NABCEP)
TBA
Course fee: $1,425.00
FastForward Price: $475.00 | Financial Assistance Price: $47.50

Remote Airman Training
Mon., Tue., Wed. - 6:00 PM – 9:00 PM
TBA
Course Fee: $366.00
FastForward Price: $122.00 | Financial Assistance Price: $12.20

Six Sigma Green Belt
Tuesday – 8:00 AM – 12:00 PM
TBA
Course fee: $2,400.00
FastForward Price: $800.00 | Financial Assistance Price: $80.00

Six Sigma Yellow Belt
Thursday – 8:00 AM – 12:00 PM
TBA
Course fee: $1,200.00
FastForward Price: $400.00 | Financial Assistance Price: $40.00

For more information, to register, or for financial assistance questions visit www.vhcc.edu/workforce or call (276)739-2430.

Virginia Highlands COMMUNITY COLLEGE
WORKFORCE DEVELOPMENT & CONTINUING EDUCATION

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Updated February 2022

Course Descriptions

Description of Courses

All courses in degree programs are offered on a regular basis. Some courses listed in this section are not required in degree programs and are not offered on a regular basis. Students should check with the Counselors concerning all courses in their degree programs.

Course Numbers

Courses numbered 01-09 are generally courses for developmental studies. The credits earned in these courses are not applicable toward associate degree programs; however, upon approval of the Vice-President of Instruction and Student Services, some developmental courses may provide credit applicable to basic occupational certificate programs. Students may reregister for these courses in subsequent semesters as necessary until the course objectives are completed.

Courses numbered 10-99 are generally courses for certificate programs. The credits earned in these courses are applicable toward certificate programs but are not applicable toward an associate degree.

Courses numbered 100-199 are generally freshmen courses applicable toward associate degree and/or certificate programs.

Courses numbered 200-299 are generally sophomore courses applicable toward associate degree and/or certificate programs.

Course Credits

The credit for each course is indicated after the title in the course description. One credit is equivalent to one collegiate semester hour credit.

Course Hours

Each semester hour of credit given for a course is based on approximately one academic hour (50 minutes) of formalized, structured instructional time in a particular course for fifteen weeks. This may consist of lectures, out-of-class study, laboratory and shop study, or combinations thereof as follows:

1. One hour of lecture (including lecture, seminar, discussion or other similar experiences) per week for 15 weeks plus an examination period = 1 collegiate semester-hour credit.
2. Two or three hours, depending on the academic discipline, of laboratory (including laboratory, shop, clinical training, supervised work experience, coordinated internship, or other similar experiences) per week for 15 weeks plus an examination period (1 hour) = 1 collegiate semester-hour credit.
3. One to five credits with variable hours for the general usage courses: Coordinated Internship, Cooperative Education, Seminar and Project, and Supervised Study (see SDV section).

The number of lecture hours in class each week (including lecture, seminar and discussion hours) and/or the number of laboratory hours in class each week (including laboratory, shop, supervised practice, and cooperative work experiences) are indicated for each course in the course description. The number of lecture and laboratory hours in class each week are also called "contact" hours because they represent time spent under direct supervision of a faculty member. In addition to the lecture and laboratory hours in class each week, as listed in the course description, each student also must spend some time on out-of-class assignments under his/her own direction. Usually each credit per course requires an average of three hours of in-class and out-of-class study each week.

Course Prerequisites

If any prerequisites are required before enrolling in a course, these prerequisites will be identified in the course description. Courses in special sequences (usually identified by the numerals I-II-III) require that prior courses or their equivalent be completed before enrolling in the advanced courses in the sequence. When corequisites are required for a course, usually the corequisites must be taken at the same time. The prerequisites or their equivalent must be completed satisfactorily before enrolling in a course unless special permission is obtained from the chairperson of the appropriate instructional division and the instructor.

General Usage Courses

Note: The following "General Usage Courses" apply to multiple curricula and all prefix sections. The titles and descriptions are generally applicable for such use. However, colleges may elect to substitute different, but essentially equivalent, titles (e.g. Field Experiences in lieu of Coordinated Internship) to satisfy the preferences of respective professional fields or disciplines. Similarly, the course description may be reconstructed for adaptation to appropriate context or to a more specialized applicability (e.g. health agencies/facilities or hospitals in lieu of business, industrial and service firms).

General usage courses may be repeated for credit and may include lecture, laboratory, out-of-class study, or a combination thereof.

A "Topics in" course is intended to cover topics of an evolving nature or of short-term importance in the discipline. The course shall be approved by the academic vice-president or designee for a period up to two years. The vice-president may approve an extension of another two-year period, after which the course must be approved under the appropriate discipline according to VCCS processes for adding new courses to the Master Course File.

A "Studies in" course is intended as an experimental course to test its viability as a permanent offering. Each offering of the course must be approved by the academic vice-president or designee. An experimental course may be offered twice, after which the course must be approved under the appropriate discipline according to VCCS processes for adding new courses to the Master Course File.

Coordinated Practice In: (Course Prefix) 90, 190, 290 (1-5 credits.)
Includes supervised practice in selected health agencies coordinated by the College. Credit/Practice ratio maximum 1:5 hours. May be repeated for credit. Variable hours per week.

Studies In: (Course Prefix) 93, 193, 293 (1-5 credits.)
Covers new content not covered in existing courses in the discipline. Allows instructor to explore content and instructional methods to assess the course's viability as a permanent offering. Variable hours per week.

Topics In: (Course Prefix) 95, 195, 295 (1-5 credits.)
Provides an opportunity to explore topic areas of an evolving nature or of short-term importance in the discipline. May be used also for special honors courses. May be repeated for credit. Variable hours per week.

On Site Training In: (Course Prefix) 96, 196, 296 (1-5 credits)
Offers opportunities for career orientation and training without pay in selected businesses and industry. Supervised and coordinated by the College. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours per week.

Cooperative Education In: (Course Prefix) 97, 197, 297 (1-5 credits.)
Provides on-the-job training for pay in approved business, industrial and service firms. Applies to all occupational-technical curricula at the discretion of the College. Credit/work Ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours per week.

Seminar and Project In: (Course Prefix) 98, 198, 298 (1-5 credits)
Requires completion of a project or research report related to the student's occupational objective and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours per week.

Supervised Study In: (Course Prefix) 99, 199, 299 (1-5 credits)
Assigns problems for independent study incorporating previous instruction and supervised by the instructor. May be repeated for credit. Variable hours per week.

Accounting

ACC 197 Co-op (2-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.1-5 credits

ACC 211 Principles of Accounting I (4 credits)
A laboratory corequisite (ACC 213) may be required
Introduces accounting principles with respect to financial reporting. Demonstrates how decision makers use accounting information for reporting purposes. Focuses on the preparation of accounting information and its use in the operation of organizations, as well as methods of analysis and interpretation of accounting information. Lecture 4 hours per week. 4 credits

ACC 212 Principles of Accounting II (4 credits)
Prerequisite: ACC 211
A laboratory corequisite (ACC 214) may be required
Introduces accounting principles with respect to cost and managerial accounting. Focuses on the application of accounting information with respect to product costing, as well as its use within the organization to provide direction and to judge performance. Lecture 4 hours per week. 4 credits

ACC 215 Computerized Accounting (4 credits)
Prerequisite or corequisite: ACC 211 or equivalent
Introduces the computer in solving accounting problems. Focuses on operation of computers. Presents the accounting cycle and financial statement preparation in a computerized system and other applications for financial and managerial accounting. Lecture 3-4 hours per week. 3-4 credits.

ACC 221 Intermediate Accounting I (4 credits)
Prerequisite: ACC 212 or equivalent
Covers accounting principles and theory, including a review of the accounting cycle and accounting for current assets, current liabilities and investments. Introduces various accounting approaches and demonstrates the effect of these approaches on the financial statement users. Lecture 3-4 hours per week. 3-4 credits.

ACC 222 Intermediate Accounting II (4 credits)
Prerequisite: ACC 221 or equivalent
Continues accounting principles and theory with emphasis on accounting for fixed assets, intangibles, corporate capital structure, long-term liabilities, and investments. Lecture 3-4 hours per week. 3-4 credits.

ACC 231 Cost Accounting I (3 credits)
Prerequisite: ACC 212 or equivalent
Studies cost accounting methods and reporting as applied to job order, process, and standard cost accounting systems. Includes cost control and other topics. Lecture 3-4 hours per week. 3-4 credits.

ACC 261 Principles of Federal Taxation I (3 credits)
Presents the study of federal taxation as it relates to individuals and related entities. Includes tax planning, compliance, and reporting. Lecture 3 hours per week. 3 credits.

ACC 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

ACC 297 Co-op (2-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-6 credits

Administrative Support Technology

AST 101 Keyboarding I (2-4 credits)
A laboratory corequisite (AST 103) may be required.
Teaches the alpha/numeric keyboard with emphasis on correct techniques, speed, and accuracy. Teaches formatting of basic personal and business correspondence, reports and tabulation. A laboratory corequisite (AST 103) may be required. Lecture 2-4 hours per week.

AST 102 Keyboarding II (3-4 credits)
Prerequisite: AST 101
A laboratory corequisite (AST 104) may be required.
Develops keyboarding and document production skills with emphasis on preparation of specialized business documents. Continues skill-building for speed and accuracy. A laboratory corequisite (AST 104) may be required. Lecture 2-4 hours per week.

AST 107 - Editing/Proofreading Skills (3 credits)
Develops skills essential to creating and editing business documents. Covers grammar, spelling, diction, punctuation, capitalization, and other usage problems. Lecture 3 hours per week.

AST 114 Keyboarding for Information Processing (1-2 credits)
A laboratory corequisite (AST 115) may be required.
Teaches the alphabetic and numeric keys: develops correct techniques and competency in the use of computer keyboards. May include basic correspondence and report formats. A laboratory corequisite (AST 115) may be required. Lecture 1-2 hours per week.

AST 136 Office Record Keeping (3 credits)
Introduces types of record keeping duties performed in the office, such as financial, tax, payroll, and inventory. Utilizes specialized software where applicable. Lecture 3 hours per week.

AST 137 Records Management (3 credits)
Teaches filing and records management procedures for hard copy, electronic, and micrographic systems. Identifies equipment, supplies, and solutions to records management problems. Lecture 3 hours per week.

AST 141 Word Processing (Specify Software) (2-4 credits)
Prerequisite: AST 101 or equivalent
A laboratory corequisite (AST 144) may be required
Teaches creating and editing documents, including line and page layouts, columns, fonts, search/replace, cut/paste, spell/thesaurus, and advanced editing and formatting features of word processing software. Lecture 2-4 hours per week.

AST 154 Voice Recognition Applications (1-2 credits)
Teaches the computer user to use the voice as an input device to compose documents and to give commands directly to the computer. Lecture 1-2 hours per week.

AST 171 Introduction to Call Center Services (3 credits)
Introduces concepts and skills needed to be an effective customer service representative for a telephone service operation. Covers call center theory and technology, interpersonal communication skills, customer relations attitudes, telecommunications techniques, and professional procedures to handle a variety of customer service sales requests. Lecture 3 hours per week.

AST 176 Medical Office/Unit Management (3 credits)
Develops administrative and support skills for a medical setting including effective communications, ethical and legal issues, research techniques, and insurance claims processing. Lecture 3 hours per week.

AST 197 Co-op (1-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

AST 205 Business Communications (3 credits)
Teaches techniques of oral and written communications. Emphasizes writing and presenting business-related materials. Lecture 3 hours per week.

AST 206 Professional Development (3 credits)
Develops professional awareness in handling business and social situations. Emphasizes goal setting, critical thinking, decision-making, and employment skills. Lecture 3 hours per week.

AST 230 Introduction to Office Technology (3 credits)
A laboratory corequisite (AST 231) may be required
Introduces principles, methods, and techniques involved in office technology. Emphasizes the use of microcomputer equipment and software. Lecture 3 hours per week.

AST 232 Microcomputer Office Applications (2-4 credits)
Prerequisite: AST 101 or equivalent
A laboratory corequisite (AST 233) may be required.
Teaches production of business documents using word processing, databases, and spreadsheets. Emphasizes document production to meet business and industry standard. A laboratory corequisite (AST 233) may be required. Lecture 2-4 hours per week.

AST 236 Specialized Software Applications (Specify Software) (2-4 credits)
Prerequisite: AST 101 or equivalent & AST 141. Additional recommended prerequisite- AST 238. *
A laboratory corequisite (AST 237) may be required.
Teaches specialized integrated software application on the microcomputer. Emphasizes document production to meet business and industry standards. A laboratory corequisite (AST 237) may be required. Lecture 2-4 hours per week.

AST 238 - Word Processing Advanced Operations (2-4 credits)
Prerequisite- AST 141.
A laboratory corequisite (AST 239) may be required.
Teaches advanced word processing features including working with merge files, macros, and graphics; develops competence in the production of complex documents. A laboratory corequisite (AST 239) may be required. Lecture 2-4 hours per week.

AST 240 Machine Transcription (2-4 credits)
Prerequisite: AST 101
A laboratory corequisite (AST 241) may be required.
Corequisite AST 102 or equivalent.
Develops proficiency in the use of transcribing equipment to produce business documents. Emphasizes listening techniques, business English, and proper formatting. Includes production rates and mailable copy requirements. A laboratory corequisite (AST 241) may be required. Lecture 2-4 hours per week.

AST 243 Office Administration I (3 credits)
Prerequisite: AST 101 (or equivalent) & AST 141. Additional recommended prerequisites- AST 147, AST 238, and AST 232.
Develops an understanding of the administrative support role and the skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes the development of critical-thinking, problem-solving, and job performance skills in a business office environment. Lecture 3 hours per week.

AST 245 Medical Machine Transcription (2-4 credits)
Prerequisite: AST 102 or equivalent. A laboratory corequisite (AST 246) may be required.
Develops machine transcription skills, integrating operation of transcribing equipment with understanding of medical terminology. Emphasizes dictation techniques and accurate transcription of medical documents in prescribed formats. A laboratory corequisite (AST 246) may be required. Lecture 2-4 hours per week.

AST 271 Medical Office Procedures I (3 credits)
Prerequisite: AST 101
Corequisite: AST 102 or equivalent.
Covers medical office procedures, records management, preparation of medical reports, and other medical documents. Lecture 3 hours per week.

AST 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

AST 297 Co-op (1-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

Agriculture

AGR 141 Introduction to Animal Science and Technology (4 credits)
Introduces the science and technology involved in sustainable animal production and management practices. Includes beef, sheep, horses, dairy, swine, goats, and poultry, with emphasis on practical experiences in laboratory and farm settings.
Lecture 3 hours. Laboratory 2-3 hours. Total 5-6 hours per week.

AGR 142 Introduction to Plant Science and Technology (3 credits)
Introduces students to plant science, ecology, plant morphology, plant and soil relations and energy conversions. Includes surveying agricultural crops and their importance in the economy. Lecture 2 hours. Lab 2-3 hours. 4-5 hours per week.

AGR 143 Introduction to Agribusiness and Financial Management (3 credits)
Introduces agriculture's importance to society and ways to start a farm or agribusiness. Evaluates forms of business including cooperatives and create financial statements and reports necessary for routine accounting and tax preparation. Utilizes financial tools for decision making, budgets and time value of money. Explores retirement, transition planning, personal financial management, and capital acquisition techniques.
2 Lecture, 2-3 Lab, 4-6 Contact Hours. Local college option.

AGR 144 Agriculture Human Resource Management (3 credits)
Covers principles and management practices utilized to attract, retain and motivate agricultural employees. Emphasizes interviewing techniques, employer/employee relationships, motivation theory, legal issues, safety, and environmental concerns. Includes development of team building and interpersonal skills through activities and cases. Explores diversity and cultural differences at they apply to human resource compliance and performance issues. 3 Lecture, 0 Lab.

AGR 299 Supervised Study (1 credit)
Assigns problems for independent study incorporating previous instruction and supervised by the instructor.
May be repeated for credit. Variable hours.

Air Conditioning and Refrigeration

AIR 111 - 112 Air Conditioning and Refrigeration Controls I - II (2-3 credits)
Corequisite for AIR 111: AIR 171, AIR 121
Corequisite for AIR 112: AIR 172 , AIR 122
Presents electron theory, magnetism, Ohm's law, resistance, current flow, instruments for electrical measurement, A.C. motors, power distribution controls and their application. Lecture 1-2 hours, Laboratory 2-3 hours, Total 3-5 hours per week.

AIR 121 - Air Conditioning and Refrigeration I (3-4 credits)
Studies refrigeration theory, characteristics of refrigerants, temperature, and pressure, tools and equipment, soldering, brazing, refrigeration systems, system components, compressors, evaporators, metering devices. Presents charging and evaluation of systems and leak detection. Explores servicing the basic system. Explains use and care of oils and additives and troubleshooting of small commercial systems. Part I of II.
Lecture 2-3 hours. Laboratory 2-3 hours.

AIR 122 - Air Conditioning and Refrigeration II (3-4 credits)
Studies refrigeration theory, characteristics of refrigerants, temperature, and pressure, tools and equipment, soldering, brazing, refrigeration systems, system components, compressors, evaporators, metering devices. Presents charging and evaluation of systems and leak detection. Explores servicing the basic system. Explains use and care of oils and additives and troubleshooting of small commercial systems. Part II of II. Lecture 2-3 hours. Laboratory 2-3 hours.

AIR 134 Circuits and Controls I (3-4 credits)
Corequisite: AIR 176 or AIR 235
Presents circuit diagrams for air conditioning units, reading and drawing of circuit diagrams, types of electrical controls. Includes analysis of air conditioning circuits, components, analysis and characteristics of circuits and controls, testing and servicing. Introduces electricity for air conditioning which includes circuit elements, direct current circuits and motors, single and three-phase circuits and motors, power distribution systems, and protective devices. Studies the electron and its behavior in passive and active circuits and components. Demonstrates electronic components and circuits as applied to air conditioning system. Lecture 2-3 hours, Laboratory 2-6 hours, Total 4-9 hours per week.

AIR 154 Heating Systems I (3-4 credits)
Corequisite: AIR 231
Introduces types of fuels and their characteristics of combustion; types, components and characteristics of burners, and burner efficiency analyzers. Studies forced air heating systems including troubleshooting, preventive maintenance and servicing. Lecture 2-3 hours. Laboratory 2-6 hours. Total 4-8 hours per week.

AIR 159 Heating and Cooling Safety (1 credit)
Presents standard safety procedures used in the heating and cooling industry. Discusses proper handling of equipment refrigerants and electricity. Lecture 1 hour per week.

AIR 165 Air Conditioning Systems I (3-4 credits)
Introduces comfort survey, house construction, load calculations, types of distribution systems, and equipment selection. Introduces designing, layout, installing and adjusting of duct systems, job costs, and bidding of job. Lecture 2-3 hours, Laboratory 3-6 hours, Total 5-8 hours per week.

AIR 171-172 Refrigeration I - II (6-9 credits)
Corequisite for AIR 171: AIR 111, AIR 121
Corequisite for AIR 172: AIR 112, AIR 122
Introduces basic principles of refrigeration. Includes refrigeration systems, cycles, and use and care of refrigeration tools. Studies shop techniques including soldering, brazing, leak testing, tube testing, tube bending, flaring, and swaging. Analyzes mechanical (vapor compression) systems. Assembles and repairs them including evacuating, charging, testing, and electrical repairs. Introduces advanced troubleshooting and repairs for domestic, commercial and industrial units. Includes medium, low, and ultra-low temperature systems of the single and multiple unit types. Includes equipment selection, system balancing, and installation procedures. Lecture 4-6 hours. Laboratory 6-9 hours. Total 10-15 hours per week.

AIR 176 Air Conditioning (6-7 credits)
Corequisite: AIR 134
Presents residential and commercial air conditioning systems, including air conditioning principles, psychometrics and pressure balancing. Includes window units, residential central systems, small commercial (air- and water-cooled condensers) and automobile units. Lecture 4-5 hours. Laboratory 4-8 hours, Total 8-13 hours per week.

AIR 190 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

AIR 197 Co-op (2-5 credits)
Requires curriculum advisor approval.
Cooperative education in air conditioning and refrigeration. Designed to provide practical work experience for the air conditioning and refrigeration student. Minimum on-the-job training is 10 hours per week.

AIR 205 Hydronics and Zoning (3-4 credits)
Corequisites: AIR 231
Presents installation, servicing, troubleshooting, and repair of hydronic systems for heating and cooling. Includes hot water and chilled water systems using forced circulation as the transfer medium. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

AIR 231 Circuits and Controls IV (4-5 credits)
Corequisites: AIR 154
Applies controls and control circuits to air conditioning and refrigeration, including components, pilot devices and controls, and circuit diagrams. Lecture 3-4 hours. Laboratory 3 hours. Total 6-7 hours per week.

AIR 235 Heat Pumps (3-4 credits)
Corequisites: AIR 134
Studies theory and operation of reverse cycle refrigeration including supplementary heat as applied to heat pump systems, including service, installation and maintenance. Lecture 2-3 hours, Laboratory 2-3 hours, Total 4-6 hours per week.

AIR 276 - Refrigerant Usage EPA Certification (1-2 credits)
Prepares HVAC technicians for a refrigerant certification test mandated by the Environmental Protection Agency (EPA). Reviews refrigerant recovery, recycle, and reclamation procedures for service work associated with air conditioning and refrigeration. Examines environmental impact including ozone depletion resulting from refrigeration utilization. Lecture 1-2 hours. 1-2 credits.
Students should have previous training and/or working knowledge of vapor-compression, common service equipment and procedures in HVAC/R.

AIR 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

AIR 297 Co-op (2-5 credits)
Requires curriculum advisor approval.
Cooperative education in air conditioning, refrigeration, and heating. Designed to provide practical work experience for the air conditioning, refrigeration and heating student. Minimum on-the-job training is 10 hours per week.

American Sign Language

ASL 101 - 102 American Sign Language I - II (3- 4 credits/3- 4 credits)
Prerequisite for ASL 102: ASL 101 or by placement test.
Introduces the fundamentals of American Sign Language (ASL) used by the Deaf Community, including basic vocabulary, syntax, fingerspelling, and grammatical non-manual signals. Focuses on communicative competence. Develops gestural skills as a foundation for ASL enhancement. Introduces cultural knowledge and increases understanding of the Deaf Community. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

ASL 125 History & Culture of the Deaf Community (3 credits)
Presents an overview of various aspects of Deaf Culture, including educational and legal issues. Lecture 3 hours per week.

ASL 201 - 202 American Sign Language III - IV (3- 4 credits/3- 4 credits)
Prerequisite for ASL 201: ASL 102 or by placement test
Prerequisite for ASL 202: ASL 201 or by placement test
Develops vocabulary, conversational competence, and grammatical knowledge with a total immersion approach. Introduces increasingly complex grammatical aspects including those unique to ASL. Discusses culture and literature. Contact with the Deaf Community is encouraged to enhance linguistic and cultural knowledge. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week.

Arts

ART 101 – History of Art: Prehistoric to Gothic (3 credits)
Surveys the history and interpretation of architecture, painting and sculpture from the prehistoric era through the Gothic. **This is a Passport Transfer course**. Lecture 3 hours. Total 3 hours per week.

ART 102 - History of Art: Renaissance to Modern (3 credits)
Surveys the history and interpretation of architecture, painting and sculpture from the Renaissance through the modern era. **This is a Passport Transfer course**. Lecture 3 hours. Total 3 hours per week.

ART 121 Drawing I (3-4 credits)
Develops basic drawing skills and understanding of visual language through studio instruction/lecture. Introduces concepts such as proportion, space, perspective, tone and composition as applied to still life, landscape and the figure. Uses drawing media such as pencil, charcoal, ink wash and color media. Includes field trips and gallery assignments as appropriate. Part I of II. Lecture 1-2 hours. Studio instruction 4 hours. Total 5-6 hours per week.

ART 125 Introduction to Painting (3 credits)
Introduces study of color, composition and painting techniques. Places emphasis on experimentation and enjoyment of oil and /or acrylic paints and the fundamentals of tools and materials. Lecture 2 hours. Studio instruction 3 hours. Total 5 hours per week.

ART 131 Two-Dimensional Design (3 credits)
Introduces the elements and principles of design as applied to two-dimensional studio projects. Introduces two-dimensional media, techniques, compositional strategies, and color concepts and interactions. Supports conceptual development through introduction to historical and contemporary practices and critical analysis. May include field trips as required. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

ART 132 Three-Dimensional Design (3 credits)
Introduces the elements and principles of design as applied to three-dimensional studio projects. Introduces three-dimensional media, techniques, compositional strategies, and color concepts and interactions. Supports conceptual development through introduction to historical and contemporary practices and critical analysis. May include field trips as required. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

Biology

BIO 101 General Biology (4 credits)
Focuses on biological processes with a chemical foundation, including macromolecules, cellular structure, metabolism, and genetics in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. Emphasizes the process of science, interdisciplinary approach, and relevance of biology to society. Part I of a two-course sequence. Assignments require college-level reading fluency, coherent written communication, and basic mathematical skills. **This is a Passport Transfer course**. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BIO 102 General Biology II
Prerequisite: BIO 101 or Departmental Permission
Focuses on biological processes with a chemical foundation, including macromolecules, cellular structure, metabolism, and genetics in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. Emphasizes the process of science, interdisciplinary approach, and relevance of biology to society. Part II of a two-course sequence. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BIO 106 - Life Science
Surveys the basic concepts of life science. Engages in the scientific process by developing hypotheses, gathering data, and analyzing results. Explores topics within the context of the societal implications of science. Intended for students not majoring in science. Assignments require college-level reading fluency, coherent written communication, and basic mathematical skills.
Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.
4 credits

BIO 141 Human Anatomy and Physiology I (4 credits)
Corequisite: Demonstration of NAS 2 concepts of Chemical Concepts, Cytology, and Inheritance through NAS 2 completion; or assessment; or module completion; or equivalent.
Presents the study of anatomy & physiology including anatomical terminology, homeostasis, histology, integumentary system, skeletal system, muscular system, and nervous system. Part I of II. Assignments require college-level reading fluency, coherent written communication, and basic mathematical skills. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BIO 142 Humana Anatomy and Physiology II (4 credits)
Prerequisite: Completion of BIO 141 with a grade of C or better.
Continues study of anatomy and physiology including endocrine system, blood and cardiovascular system, lymphatic system and immunity, respiratory system, urinary system, fluid, electrolyte, and acid-base balance, digestive system and nutrient metabolism, reproductive system, and prenatal development. Part II of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BIO 145 Basic Human Anatomy and Physiology (4 credits)
Surveys human anatomy and physiology. Covers basic chemical concepts, cellular physiology, anatomy, and physiology of human organ systems. Assignments require college-level reading fluency, coherent written communication, and basic mathematical skills. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BIO 150 Microbiology for Health Sciences (4 credits)
Prerequisites: BIO 101 or BIO 141
Focuses on the general characteristics, cellular structure, and metabolism of microorganisms. Emphasizes microbial relationships with individual and community health. Includes impact of microbes on human health and disease, microbial pathogenicity, identifying and managing infectious diseases and controlling microbial growth, healthcare associated infections and epidemiology. Studies aseptic culturing techniques with hands-on experience in safe microbiology practices. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BIO 151-152 Human Gross Anatomy I – II (1 credit)
Prerequisite: BIO 141; Placement into EDE 11 or higher
Introduces students to human anatomy through dissection of a cadaver. Human Gross Anatomy I includes dissection of back, chest and abdominal muscles, spinal cord structures and upper and lower limb structures. Human Gross Anatomy II includes dissection of thoracic, abdomino-pelvic and cranial cavities. Laboratory 3 hours per week.

BIO 295 General Microbiology (4 credits)
Prerequisites: ENG 111, BIO 101, BIO 102, and CHM 111
Corequisite: CHM 112
Explores the structure and function of microorganisms and their relationship to the environment and humans. Emphasizes the various groups of microorganisms, their growth and metabolism, roles in the functioning of ecosystems, genetics, their roles in human health, the use of microbes in industrial applications and biotechnology and methods of microbial control. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

BIO 215 Plant Life of Virginia (3 credits)
Focuses on identification and ecological relationships of the native plants of Virginia. Emphasizes shrubs, vines, weeds, wildflowers, ferns, and mushrooms. Lecture 2 hours. Recitation and laboratory 3 hours. Total 5 hours per week.

BIO 256 General Genetics (4 credits)
Prerequisite: BIO 101-102 or equivalent
Explore the principles of genetics ranging from classical Mendelian inheritance to the most recent advances in the biochemical nature and function of the gene. Includes experimental design and statistical analysis. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

BIO 278 Coastal Ecology (3 credits)
Prerequisite: Placement into ENG 111
Investigates beach, saltmarsh, and estuarine ecosystems including the effects of chemical, geological, and physical factors upon the distribution of organisms. Discusses the effects of pollution and human manipulation of the coastline. Includes observation and identification of coastal plants and animals, and analysis of the dynamics of coastal community structure and function in a field-based setting. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

BIO 299 Supervised Study (1 credit).
Assigns problems for independent study incorporating previous instruction and supervised by the instructor.
May be repeated for credit. Variable hours.

Building

BLD 140 Principles of Plumbing Trade I (3 credits)
Studies the plumbing trade, the structure of the plumbing trade, apprenticeship standards, job safety, tools of the trade, the approved installation of plumbing materials, types of sanitary drainage pipe and piping layout of sanitary piping. Lecture 3 hours per week.

Business Management and Administration

BUS 100 Introduction to Business (3 credits)
Presents a broad introduction to the functioning of business enterprise within the U.S. economic framework. Introduces economic systems, essential elements of business organization, production, human resource management, marketing, finance, and risk management. Develops business vocabulary. Lecture 3 hours per week.

BUS 111 Principles of Supervision I (3-4 credits)
Teaches the fundamentals of supervision, including the primary responsibilities of the supervisor. Introduces factors relating to the work of supervisor and subordinates. Covers aspects of leadership, job management, work improvement, training and orientation, performance evaluation, and effective employee/ supervisor relationships. Lecture 3-4 hours per week.

BUS 112 Principles of Supervision II (3-4 credits)
Prerequisite: BUS 111
Develops skills in carrying out the responsibilities of a supervisor including interviewing, evaluating and disciplining, and problem-solving techniques. Lecture 3-4 hours per week.

BUS 116 Entrepreneurship (3 credits)
Presents the various steps considered necessary when going into business. Includes areas such as product-service analysis, market research evaluation, setting up books, ways to finance startup, operations of the business, development of business plans, buyouts versus starting from scratch, and franchising. Uses problems and cases to demonstrate implementation of these techniques. Lecture 3 hours per week.

BUS 117 Human Relations and Leadership Development (3 credits)
Covers interpersonal relations in hierarchical structures. Examines the dynamics of teamwork, motivation, handling change and conflict and how to achieve positive results through others. Lecture 3 hours per week.

BUS 165 Small Business Management (3 credits)
Identifies management concerns unique to small businesses. Introduces the requirements necessary to initiate a small business, and identifies the elements comprising a business plan. Presents information establishing financial and administrative controls, developing a marketing strategy, managing business operations, and the legal and government relationships specific to small businesses. Lecture 3 hours per week.

BUS 195 Topics in (discipline) (1-5 credits)
Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours.

BUS 197 Co-op (1-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

BUS 200 Principles of Management (3 credits)
Teaches management and the management functions of planning, organizing, leading, and controlling. Focuses on application of management principles to realistic situations managers encounter as they attempt to achieve organizational objectives. Lecture 3 hours per week.

BUS 201 - Organizational Behavior (3 credits)
Presents a behaviorally oriented course combining the functions of management with the psychology of leading and managing people. Focuses on the effective use of human resources through understanding human motivation and behavior patterns, conflict management and resolution, group functioning and process, the psychology of decision-making, and the importance of recognizing and managing change. Lecture 3 hours per week.

BUS 205 Human Resource Management (3 credits)
Introduces employment, selection, and placement of personnel, forecasting, job analysis, job descriptions, training methods and programs, employee evaluation systems, compensation, benefits, and labor relations. Lecture 3 hours per week.

BUS 225 Applied Business Statistics (3 credits)
Prerequisite: MTH 132 or division approval
Introduces statistics as a tool in decision making. Emphasizes ability to collect, present, and analyze data. Employs measures of central tendency and dispersion, statistical inference, index number, and time series analysis. Lecture 3 hours per week.

BUS 241 Business Law I (3 credits)
Develops a basic understanding of the US business legal environment. Introduces property and contract law, agency and partnership liability, and government regulatory law. Students will be able to apply these legal principles to landlord/tenant disputes, consumer rights issues, employment relationships, and other business transactions. Lecture 3 hours per week.

BUS 242 Business Law II (3 credits)
Prerequisite: BUS 241 or division approval
Focuses on business organization and dissolution, bankruptcy and Uniform Commercial Code. Introduces international law and the emerging fields of E-Commerce and Internet Law. Lecture 3 hours per week.

BUS 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

BUS 295 NX Level for Entrepreneurs (1-5 credits)
Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours.

BUS 297 Co-op (1-6 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

Chemistry

CHM 05 Developmental Chemistry for Health Sciences (1-5 credits)
Prerequisite: MDE 10
Introduces basic principles of inorganic, organic, and biological chemistry. Emphasizes applications to the health sciences.

CHM 101 - Introductory Chemistry (4 credits)
Prerequisite: Competency level MDE 54 (MTE 1-5).
Explores the experimental and theoretical concepts of general chemistry while emphasizing scientific reasoning, critical and analytical thinking. Designed for the non-science major. **This is a Passport Transfer course.** Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

CHM 111 General Chemistry I (4 credits)
Prerequisites: MDE 61 and EDE 11 Eligible
Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. Students must earn a grade of C or higher in the lecture portion of the course to earn an overall grade of C or higher. Part I of II. **This is a Passport Transfer course**. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

CHM 112 General Chemistry II (4 credits)
Prerequisite: CHM 111 with a grade of C or higher
Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. Students must earn a grade of C or higher in the lecture portion of the course to earn an overall grade of C or higher. Part II of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

CHM 241 Organic Chemistry I (3 credits)
Prerequisites: CHM 112 with a grade of C or higher
Introduces fundamental chemistry of carbon compounds, including structures, physical properties, syntheses, and typical reactions. Emphasizes reaction mechanisms. Part I of II
Lecture 3 hours. Total 3 hours per week.

CHM 242 Organic Chemistry II (3 credits)
Prerequisite: CHM 241 with grade of C or higher
Introduces fundamental chemistry of carbon compounds, including structures, physical properties, syntheses, and typical reactions. Emphasizes reaction mechanisms. Part II of II. Lecture 3 hours. Total 3 hours per week.

CHM 243 Organic Chemistry Laboratory I (1 credit)
Is taken concurrently with CHM 241 and CHM 242. Part I of II. Laboratory 3 hours per week.

CHM 244 Organic Chemistry Lab II (1 credit)
Is taken concurrently with CHM 241 and CHM 242. Part II of II. Laboratory 3 hours per week.

CHM 245 Organic Chemistry I Laboratory (2 credits)
Prerequisite: CHM 112 with a grade of C or better
Corequisite: CHM 241
Introduces various methods and procedures used in present day organic laboratories. Covers the general techniques, organic synthesis, and the use of common spectroscopic instrumentation; synthesizing a variety of compounds; and analyzing the products through physical properties and spectroscopy. Part I of II. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

CHM 246 Organic Chemistry II Laboratory (2 credits)
Prerequisite: CHM 245
Corequisite: CHM 242
Introduces various methods and procedures used in present day organic laboratories. Covers the general techniques, organic synthesis, and the use of common spectroscopic instrumentation; synthesizing a variety of compounds; and analyzing the products through physical properties and spectroscopy. Part I of II. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

CHM 299 Supervised Study (1 credit).
Assigns problems for independent study incorporating previous instruction and supervised by the instructor.
May be repeated for credit. Variable hours.

Childhood Development

CHD 118 Language Arts for Young Children (3 credits)
Presents techniques and methods for encouraging the development of language and perceptual skills in young children. Stresses improvement of vocabulary, speech and methods to stimulate discussion. Surveys children's literature, examines elements of quality storytelling and story reading, and stresses the use of audiovisual materials. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 119 - Introduction to Reading Methods (3 credits)
Prerequisite: CHD 118
Focuses on promoting language and literacy skills as the foundation for emergent reading. Emphasizes phonetic awareness and alphabetic principles, print awareness and concepts, comprehension and early reading and writing. Addresses strategies for intervention and support for exceptional children and English Language Learners. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 120 Introduction to Early Childhood Education (3 credits)
Introduces early childhood development through activities and experiences in nursery, pre-kindergarten, kindergarten, and primary programs. Investigates classroom organization and procedures and use of classroom time and materials, approaches to education for young children, professionalism, and curricular procedures. Lecture 3 hours per week.

CHD 145 Teaching Art, Music, and Movement to Children (3 credits)
Provides experiences in developing the content, methods, and materials for directing children in art, music, and movement activities. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 146 - Math, Science, and Social Studies for Children (3 credits)
Provides experiences in content, methods, and materials for the development of math, science, and social studies skills in children. Emphasis will be on developing strategies for using various resources to facilitate children's construction of knowledge. Addresses strategies for intervention and support for children with special needs and English Language Learners. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 165 - Observation and Participation in Early Childhood/Primary Settings (3 credits)
Focuses on observation as the primary method for gathering information about children in early childhood settings. Emphasizes development of skills in the implementation of a range of observation techniques. Includes 40 hours of field placement in early learning setting. Seminar 2 hours. Field placement 2 hours.

CHD 166 - Infant and Toddler Programs (3 credits)
Examines child growth and development from birth to 36 months. Focuses on development in the physical, cognitive, social, emotional, and language domains. Emphasizes the importance of the environment and relationships for healthy brain development during the child's first three years of life. Investigates regulatory standards for infant/toddler care giving. Lecture 3 hours per week.

CHD 205 Guiding the Behavior of Children (3 credits)
Explores positive ways to build self-esteem in children and help them develop self-control. Presents practical ideas for encouraging pro-social behavior in children and emphasizes basic skills and techniques in classroom management. Lecture 3 hours per week.

CHD 210 - Introduction to Exceptional Children (3 credits)
Reviews the history of and legal requirements for providing intervention and educational services for young children with special needs. Studies the characteristics of children with a diverse array of needs and developmental abilities. Explores concepts of early intervention, inclusion, guiding behavior and adapting environments to meet children's needs. Lecture 3 hours per week.

CHD 215 - Models of Early Childhood Education Programs (3 credits)
Studies and discusses the various models and theories of early childhood education programs including current trends and issues. Presents state licensing and staff requirements. Lecture 3 hours per week.

CHD 216 - Early Childhood Programs, School, and Social Change (3 credits)
Explores methods of developing positive, effective relations with families to enhance their developmental goals for children. Considers culture and other diverse needs, perspectives, and abilities of families and educators. Emphasizes advocacy and public policy awareness as an important role of early childhood educators. Describes risk factors and identifies community resources. Lecture 3 hours per week.

CHD 265 - Advanced Observation and Participation in Early Childhood/Primary Settings (3 credits)
Prerequisite: CHD 165
Focuses on implementation of activity planning and observation of children through participation in early childhood settings. Emphasizes responsive teaching practices and assessment of children's development. Reviews legal and ethical implications of working with children. Supports the student in creating a professional educational portfolio. Includes 40 hours of field placement in early learning setting. Seminar 2 hours. Field Placement 2 hours. Total 4 hours per week.

CHD 270 - Administration of Childcare Programs (3 credits)
Examines the skills needed for establishing and managing early childhood programs. Emphasizes professionalism and interpersonal skills, program planning, staff selection and development, creating policies, budgeting, and developing forms for recordkeeping. Lecture 3 hours per week.

CHD 298 - Seminar and Project (1-5 credits)
Corequisite: CHD 265
Requires completion of a project or research report related to the student's occupational objectives and a study of approaches to the selection and pursuit of career opportunities in the field.
May be repeated for credit. Variable hours.

Communication Studies and Theatre

CST 100 - Principles of Public Speaking (3 credits)
Applies theory and principles of public address with emphasis on preparation and delivery. Lecture 3 hour per week.

CST 130 Introduction to the Theatre (3 credits)
Surveys the principles of drama, the development of theatre production, and selected plays to acquaint the student with various types of theatrical presentations. Lecture 3 hours per week.

CST 131 - Acting I (3 credits)
Develops personal resources and explores performance skills through such activities as theatre games, role playing, improvisation, work on basic script units, and performance of scenes. Part I of II. Lecture 2 hours. Laboratory 3 hour. Total 5 hours per week.

CST 136 Theatre Workshop (1 credits)
Enables students to work in various activities of play production. The student participates in performance, set design, stage carpentry, sound, costuming, lighting, stage managing, props, promotion, or stage crew. May be repeated for credit. Variable hours per week.

CST 145 Stagecraft (3 credits)
Acquaints the student with fundamental methods, materials, and techniques of set construction for the stage. Lecture 2 hours. Laboratory 2 hour. Total 4 hours per week.

CST 147 - Costume Construction (3 credits)
Introduces students to the basic techniques, materials and methods of theatrical costume construction. Covers hand sewing, machine sewing, familiarity with different types of materials and their uses, the use of patterns, shop safety, distressing techniques and wardrobe duties. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CST 151 Film Appreciation I (3 credits)
Provides students with a critical understanding of film through the discussion and viewing of motion pictures with emphasis upon the study of film history and the forms and functions of film. Students will develop skills to analyze the shared social, cultural and historical influences of films and their contexts. Part I of II. Lecture 3 hours per week.

Computer Science

CSC 221 - Introduction to Problem Solving and Programming (3 credits)
Introduces problem solving and implementation of solutions using a high-level programming language in a structured programming environment. Includes concepts and practice of structured programming, problem-solving, top-down design of algorithms, a high-level programming language syntax, control structures, arrays, and an introduction into object-oriented programming. First course in a three-course sequence (CSC 221, CSC 222, CSC 223). The assignments in this course require mathematical problem-solving skills, algebraic modeling and functions, and use of variables. Lecture 3 hours. Total 3 hours per week.

CSC 222 - Object-Oriented Programming (4 credits)
Prerequisite: CSC 221 or equivalent, or departmental consent.
Introduces the concepts and techniques of object-oriented programming to students with a background in procedural programming and problem solving. Uses a high-level computer language to illustrate and implement the topics. Second course in a three-course sequence (CSC 221, CSC 222, CSC 223). Lecture 4 hours. Total 4 hours per week.

CSC 223 - Data Structures and Analysis of Algorithms (4 credits)
Prerequisite: CSC 222 or departmental consent. Corequisite: CSC 208 or equivalent.
Explores and contrasts data structures, algorithms for manipulating data structures, and their use and appropriateness in writing efficient real-world programming applications. Investigates implementations of different data structures for efficient searching, sorting, and other transformer operations. Third course in a three-course sequence (CSC 221, CSC 222, CSC 223). Lecture 4 hours. Total 4 hours per week.

Criminal Justice

ADJ 100 Survey of Criminal Justice (3 credits)
Presents an overview of the United States Criminal Justice System; introduces the major system components – Law Enforcement, Judiciary, and Corrections. Lecture 3 hours per week.

ADJ 107 Survey of Criminology (3 credits)
Surveys the volume and scope of crime; considers a variety of theories developed to explain the causation of crime and criminality.
Lecture 3 hours per week.

ADJ 111 - 112 Law Enforcement Organization & Administration I - II (3 credits/3 credits)
Prerequisite for ADJ 112: Division approval or ADJ 111
Teaches the principles of organization and administration of law enforcement agencies. Studies the management of line operations, staff and auxiliary services, investigative and juvenile units. Introduces the concept of data processing; examines policies, procedures, rules, and regulations pertaining to crime prevention. Surveys concepts of protection of life and property, detection of offenses, and apprehension of offenders. Lecture 3 hours per week.

ADJ 115 Patrol Procedures (3 credits)
Describes, instructs and evaluates street-level procedures commonly employed by patrol officers in everyday law enforcement operations. Lecture 3 hours per week.

ADJ 118 - Crisis Intervention and Critical Issues (3 credits)
Addresses basic problems involved in crisis intervention and current critical issues in law enforcement and the administration of justice; emphasizes practical approaches to discover and implement solutions. Lecture 3 hours per week.

ADJ 130 Introduction to Criminal Law (3 credits)
Surveys the general principles of American criminal law, the elements of major crimes, and the basic steps of prosecution procedure. Lecture 3 hours per week.

ADJ 133 - Ethics and the Criminal Justice Professional (3 credits)
Examines ethical dilemmas pertaining to the criminal justice system, including those in policing, courts and corrections. Focuses on some of the specific ethical choices that must be made by the criminal justice professional. Lecture 3 hours per week.

ADJ 140 Introduction to Corrections (3 credits)
Focuses on societal responses to the offender. Traces the evolution of practices based on philosophies of retribution, deterrence, and rehabilitation. Reviews contemporary correctional activities and their relationships to other aspects of the criminal justice system. Lecture 3 hours per week.

ADJ 138 Defensive Tactics (2 credits)
Surveys and demonstrates the various types of non-lethal force tools and tactics for use by criminal justice personnel in self-defense, arrest, search, restraint and transport of those in custody. Lecture 2 hours per week.

ADJ 160 Police Response to Critical Incidents (3 credits)
Provides a basic introduction to incident command and emerging trends. Addresses bomb threats; hostage/barricade situations; attacks on institutions such as schools and hospitals; criminal hazmat; terrorist, militia/paramilitary, and extended crime scene evidence collection scenarios; and other long term or large scale events. Lecture 3 hours per week.

ADJ 162 Introduction to Sex Crimes (3 credits)
Provides a basic introduction to sex crimes. Covers relevant law, investigative techniques, cybersex crimes and criminals, application of criminal investigative analysis, and future trends. Lecture 3 hours per week.

ADJ 164 Case Studies in Murder/Violent Crime (3 credits)
Introduces the student to the investigation of murder and other violent crimes by means of classic case studies and, to the extent feasible, local case files. Includes methodology, strategy and tactics, analysis, relevant law, and future trends. Covers evidentiary techniques and technologies with a primary focus on how critical thinking is applied to serious violent crime. Lecture 3 hours per week.

ADJ 166 Fish and Game Regulations (3 credits)
Surveys state and federal laws regulating inland fishing, water fowl and game animals. Lecture 3 hours per week.

ADJ 171 - 172 Forensic Science I - II (4 credits/4 credits)
Prerequisite for ADJ 172: ADJ 171 and ADJ 236
These courses are designed primarily for second-year students in Police Science. Others may enroll with the permission of the instructor. Introduces student to crime scene technology, procedures for sketching, diagramming, and using casting materials. Surveys the concepts of forensic chemistry, fingerprint classification/identification and latent techniques, drug identification, hair and fiber evidence, death investigation techniques, thin-layer chromatographic methods, and arson materials examination. Lecture 3 hours, Laboratory 3 hours, Total 6 hours per week.

ADJ 227 Constitutional Law for Justice Personnel (3 credits)
Prerequisites: ADJ 111 and 130
Surveys the basic guarantees of liberty described in the U.S. Constitution and the historical development of these restrictions on government power, primarily through U.S. Supreme Court decisions. Reviews rights of free speech, press, assembly, as well as criminal procedure guarantees (to counsel, jury trial, habeas corpus, etc.) as they apply to the activities of those in the criminal justice system. Lecture 3 hours per week.

ADJ 236 Principles of Criminal Investigation (3 credits)
Limited to students who have completed all first-year Police Science courses or who have received departmental permission. Surveys the fundamentals of criminal investigation procedures and techniques. Examines crime scene search, collecting, handling and preserving of evidence. Lecture 3 hours per week.

ADJ 237 Advanced Criminal Investigation (3 credits)
Prerequisite: ADJ 236 or division approval
Introduces specialized tools and scientific aids used in criminal investigation. Applies investigative techniques to specific situations and preparation of trial evidence. Lecture 3 hours per week.

ADJ 246 Correctional Counseling (3 credits)
Presents concepts and principles of interviewing and counseling as applied in the correctional setting. Lecture 3 hours per week.

ADJ 248 Probation, Parole and Treatment (3 credits)
Surveys the philosophy, history, organization, personnel and functioning of traditional and innovative probation and parole programs; considers major treatment models for clients. Lecture 3 hours per week.

ADJ 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

ADJ 297 Co-op (2-5 credits)
Requires curriculum advisor approval.
Cooperative education in police science. Designed to provide practical work experience for the police science student. Minimum on-the-job training is 10 hours per week.

Culinary Arts

HRI 106 Principles of Culinary Arts I (3 credits)
Introduces the fundamental principles of food preparation and basic culinary procedures. Stresses the use of proper culinary procedures combined with food science, proper sanitation, standards of quality for food items that are made, and proper use and care of kitchen equipment. Part I of II. Lecture 2-3 hours. Laboratory 1-3 hours. Total 3-5 hours per week.

HRI 107 Principles of Culinary Arts II (3 credits)
Introduces the fundamental principles of food preparation and basic culinary procedures. Stresses the use of proper culinary procedures combined with food science, proper sanitation, standards of quality for food items that are made, and proper use and care of kitchen equipment. Part II of II. Lecture 2-3 hours. Laboratory 1-3 hours. Total 3-5 hours per week.

HRI 128 Principles of Baking (3 credits)
Instructs the student in the preparation of breads, pastries, baked desserts, candies, frozen confections, and sugar work. Applies scientific principles and techniques of baking. Promotes the knowledge/skills required to prepare baked items, pastries and confections. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

HRI 158 Sanitation and Safety (3 credits)
Covers the moral and legal responsibilities of management to insure a sanitary and safe environment in a food service operation. Emphasizes the causes and prevention of foodborne illnesses in conformity with federal, state and local guidelines. Focuses on OSHA standards in assuring safe working conditions. Lecture 3 hours per week.

Diesel Mechanic

DSL 111 Introduction to Diesel Engine (2 credits)
Studies the modern diesel engine, including its fuel, cooling, induction, and exhaust systems. Covers construction, fabrication, maintenance, tune-up, and minor repair and adjustment. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

DSL 121 Diesel Engines I (5-6 credits)
Studies the basic principles involved in the construction and operation of diesel engines. Examines fuel, air, cooling, and control system of various designs. Emphasizes engine overhaul and repair, including gauging proper measuring instruments and tools for these tasks. Part I of II. Lecture 2-3 hours. Laboratory 6 hours. Total 8-9 hours per week.

DSL 122 Diesel Engines II (5-6 credits)
Studies the basic principles involved in the construction and operation of diesel engines. Examines fuel, air, cooling, and control system of various designs. Emphasizes engine overhaul and repair, including gauging proper measuring instruments and tools for these tasks. Part II of II. Lecture 2-3 hours. Laboratory 6 hours. Total 8-9 hours per week.

DSL 143 Diesel Truck Electrical Systems (4 credits)
Studies the theory and operation of various truck and tractor electrical systems. Covers preheating, starting, generating, and lighting systems. Uses modern test equipment for measurement, adjustment, and troubleshooting. Lecture 2 hours per week. Laboratory 4 hours. Total 6 hours per week.

DSL 152 Diesel Power Trains, Chassis, and Suspension (4 credits)
Studies the chassis, suspension, steering and brake systems found on medium and heavy-duty diesel trucks. Covers construction features, operating principles and service procedures for such power train components as clutches, multi-speed transmissions, propeller shafts, and rear axles. Teaches operations of modern equipment to correct and adjust abnormalities. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

DSL 160 Air Brake Systems (3 credits)
Studies the basic operational theory of pneumatic and air brake systems as used in heavy-duty and public transportation vehicles. Covers various air control valves, test system components, and advanced air system schematics. Teaches proper service and preventative maintenance of systems. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

DSL 176 Transportation Air Conditioning (2 credits)
Studies fundamentals of transportation air conditioning. Includes repair, service, and troubleshooting of the refrigeration systems used in road vehicles and heavy equipment. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

Drafting

DRF 160 Machine Blueprint Reading (3 credits)
Introduces interpreting of various blueprints and working drawings. Applies basic principles and techniques such as visualization of an object, orthographic projection, technical sketching and drafting terminology. Requires outside preparation. Lecture 3 hours per week.

DRF 161 Blueprint Reading I (2 credits)
Teaches the application of basic principles, visualization, orthographic projection, detail of drafting shop process and terminology, assembly drawings and exploded views. Considers dimensioning, changes and corrections, classes of fits, tolerance and allowances, sections and convention in blueprint reading. Lecture 1 hour, Laboratory 3 hours, Total 4 hours per week.

DRF 202 Computer Aided Drafting and Design II (3-4 credits)
Teaches production drawings and advanced operations in computer aided drafting. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

Economics

ECO 150 Economic Essentials: Theory and Application (3 credits)
Presents a broad overview of microeconomic and macroeconomic theory with application to current economic situations. Introduces concepts, policies, and theories in addition to models of domestic and global economies. Lecture 3 hours. Total 3 hours per week.

ECO 201 Principles of Macroeconomics (3 credits)
Presents the fundamental macroeconomic concepts, theories, and issues including the study of scarcity and opportunity cost, supply and demand, national economic growth, inflation, recession, unemployment, fiscal and monetary policies, and international trade. Develops an appreciation of how these economic concepts apply to consumer, business, and government decisions, and their effect on the overall economy. **This is a Passport Transfer course**. Lecture 3 hour. Total 3 hours per week**.**

ECO 202 Principles of Microeconomics (3 credits)
Presents the fundamental microeconomic concepts, theories, and issues including the study of scarcity and opportunity cost, supply and demand, elasticities, marginal revenues and costs, profits, production and distribution. Develops an appreciation of how these economic concepts apply to consumer and business decisions, and their effect on the individual. Lecture 3 hours. Total 3 hours per week.

Education

EDU 200 Introduction to Teaching as a Profession (3 credits)
Prerequisite: Successful completion of 24 credits of transfer courses or division approval
Provides an orientation to the teaching profession in Virginia, including historical perspectives, current issues, and future trends in education on the national and state levels. Emphasizes information about teacher licensure examinations, steps to certification, teacher preparation and induction programs, and attention to critical shortage areas in Virginia. Includes supervised field placement (recommended: 40 clock hours) in a K-12 school. Prerequisite: Successful completion of 24 credits of transfer courses. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EDU 235 Health, Safety and Nutrition Education (3 credits)
Focuses on the physical needs of children and explores strategies to meet these needs. Emphasizes positive health routines, hygiene, nutrition, feeding and clothing habits, childhood diseases, and safety. Places emphasis on the development of food habits and concerns in food and nutrition. Describes symptoms and reporting procedures for child abuse. Lecture 3 hours per week.

Electrical Technology

ELE 111 - 112 Home Electric Power I - II (3 credits/3 credits)
Teaches fundamentals of residential power distribution, circuits, enclosures, protective devices, and transformers. Studies various charts and tables of the National Electrical Code. Lecture 2 hours, Laboratory 3 hours, Total 5 hours per week.

ELE 115 Basic Electricity (3 credits)
Covers basic circuits and theory of fundamental concepts of electricity. Presents a practical approach to discussion of components and devices. Lecture 3 hours per week.

ELE 131 National Electrical Code I (3-4 credits)
Provides comprehensive study of the purpose and interpretations of the National Electric Code as well as familiarization and implementation of various charts, code rulings and wiring methods including state and local regulations. Part I of II. Lecture 3-4 hours per week.

ELE 132 National Electrical Code II (3-4 credits)
Provides comprehensive study of the purpose and interpretations of the National Electric Code as well as familiarization and implementation of various charts, code rulings and wiring methods including state and local regulations. Part II of II. Lecture 3-4 hours per week.

ELE 133 Practical Electricity I (3credits)
Corequisite: MDE 10 or equivalent
Teaches the fundamentals of electricity, terminology, symbols, and diagrams. Includes the principles essential to the understanding of general practices, safety and the practical aspects of residential and non-residential wiring and electrical installation, including fundamentals of motors and controls. Part I of II. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ELE 134 Practical Electricity II (3 credits)
Corequisite: MDE 10 or equivalent
Teaches the fundamentals of electricity, terminology, symbols, and diagrams. Includes the principles essential to the understanding of general practices, safety and the practical aspects of residential and non-residential wiring and electrical installation, including fundamentals of motors and controls. Part II of II. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ELE 138 National Electrical Code (2 credits)
Teaches purpose and interpretation of the National Electrical Code as well as familiarization with various charts, code rulings, and wiring methods. Lecture 2 hours.

ELE 141 DC and AC Machines I (4-5 credits)
Prerequisite: ELE 133/134
Teaches construction, theory of operation, connections, and applications of direct current motors, generators; single and polyphase alternating current alternators, synchronous and induction motors. Lecture 3 hours, Laboratory 3-9 hours, Total 6-12 hours per week.

ELE 149 Wiring Methods in Industry I (3-4 credits)
The fundamentals of industrial power distribution, circuits, switches, enclosures, panels, fuses, circuit breakers, transformers, and wiring methods, using various charts and tables of the National Electrical Code. Lecture 2-3 hours, Laboratory 3 hours, Total 5-6 hours per week.

ELE 156 Electrical Control Systems (3 credits)
Includes troubleshooting and servicing electrical controls, electric motors, motor controls, motor starters, relays, overloads, instruments and control circuits. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ELE 157 Electricity Fundamentals (6-7 credits)
Teaches the theories and laws of the flow of electricity, magnetism, inductance, capacitance, and the fundamentals of direct and alternating currents. Provides practical application by the use of test and measuring equipment, circuitry, and electrical apparatus. Lecture 3 hours, Laboratory 6-8 hours, Total 9-11 hours per week.

ELE 169 DC and AC Controls (4-6 credits)
Study of symbols, terminology, connections, applications and troubleshooting of direct and alternating current electrical/electronic circuits and controls used in industry. Lecture 2-3 hours, Laboratory 6-7 hours. Total 8-10 hours per week.

ELE 175 Industrial Solid State Devices and Circuits (2-3 credits)
The theory, symbols, properties, and applications of solid-state devices in industry. Lecture 1-2 hours, Laboratory 3 hours, Total 4-5 hours per week.

ELE 176 Introduction to Alternative Energy Including Hybrid Systems (2-3 credits)
Introduces Alternative Energy with an emphasis on solar photovoltaic systems, small wind turbines technology, the theory of PV technology, PV applications, solar energy terminology, system components, site analysis, PV system integration and PV system connections and small wind turbine technology site analysis. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week.

ELE 177 Photovoltaic Energy Systems (4 credits)
Teaches techniques for conduct site surveys, installing system components, installing inverters and performing system sizing and system maintenance. Introduces different battery configurations, and charge controllers. Introduces safety, system design and layout, National Electric Code, Component Selection, wiring and installation techniques. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ELE 197 Co-op (2-5 credits)
Requires curriculum advisor approval.
Cooperative education in electricity. Designed to provide practical work experience for the electricity student. Minimum on-the-job training is 10 hours per week.

ELE 225 Electrical Control Systems (4 credits)
Studies components, equipment and circuits that are used to control the operation of electrical machines. Explains the physical and operating characteristics of various electromagnetic, static, and programmable control devices. Investigates control schemes used to accomplish specific control objectives. Prerequisite: ELE 217 or equivalent. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ELE 233 Programmable Logic Controller Systems I (3-4 credits)
Teaches operating and programming of programmable logic controllers. Covers analog and digital interfacing and communication schemes as they apply to system. Prerequisite: ETR 156 and ETR 211 or equivalent. Part I of II. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ELE 234 Programmable Logic Controller Systems II (3-4 credits)
Teaches operating and programming of programmable logic controllers. Covers analog and digital interfacing and communication schemes as they apply to system. Prerequisite: ETR 156 and ETR 211 or equivalent. Part II of II. Lecture 2-3 hours. Laboratory 3 hours. Total 5-6 hours per week.

ELE 239 Programmable Controllers (2-3 credits)
Prerequisite: ELE 157 or equivalent
Deals with installation, programming, interfacing, and concepts of troubleshooting programmable controllers. Lecture 2 hours, Laboratory 2 hours. Total 4 hours per week.

ELE 245 - Industrial Wiring (3 credits)
Teaches the practical applications of industrial and commercial wiring. Includes the principles essential to the understanding of conduit applications and other raceway installations. Includes conduit sizing, cutting, bending, and threading. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ELE 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

ELE 297 Co-op (2-5 credits)
Requires curriculum advisor approvals.
Cooperative education in electricity. Designed to provide practical work experience for the electricity or the Electrical/Electro student. Minimum on-the-job training is 10 hours per week.

Electronics Technology

ETR 168 Digital Circuit Fundamentals (2-3 credits)
Covers the fundamentals of digital logic and the study of digital circuits and their applications. Lecture 2-3 hours per week.

ETR 218 Industrial Electronics Circuits (4 credits)
Introduces the principles of industrial measurements and control: electrical, electronic, mechanical, thermal, and optical measuring and records, and actuators, electronic instrumentation control devices and circuits. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 237 Industrial Electronics I (3-4 credits)
Studies linear integrated circuits for industrial applications, motors, industrial control devices, power control circuits, transducers, industrial process control, and sequential process control. Part I of II.
Lecture 2-3 hours. Laboratory 2-4 hours. Total 4-5 hours per week.

Emergency Medical Technology

EMS 100 CPR for Healthcare Providers (1 credit)
Provides instruction in Cardiopulmonary Resuscitation that meets current Emergency Cardiac Care (ECC) guidelines for Cardiopulmonary Resuscitation education for Healthcare Providers. Equivalent to HLT 105. Lecture 1 hours per week.

EMS 101 EMS First Responder (3 credits)
Provides education in the provision of emergency medical care for persons such as Police, non-EMS Fire personnel, industrial personnel and the general public who are likely to be the first medically trained personnel on the scene of an injury or illness. Meets current Virginia Office of Emergency Medical Services curriculum for First Responder. Equivalent to HLT 119. Lecture 3 hour per week.

EMS 102 EMS First Responder Refresher (1 credit)
Provides 18 clock hours of instruction to meet Virginia Office of EMS requirements for recertification at the First Responder Level.
Lecture 1 hour per week.

EMS 111 Emergency Medical Technician (7credits)
Prerequisite: EMS 100/equivalent Corequisite: EMS 120
Prepares student for certification as a Virginia and National Registry EMT. Focuses on all aspects of pre-hospital basic life support as defined by the Virginia Office of Emergency Medical Services curriculum for Emergency Medicine Technician. 5 lecture hours; 4 lab hours; 9 hours per week.

EMS 112 Emergency Medical Technician-Basic I (3 credits)
Prepares student for certification as a Virginia and/or National Registry EMT-Basic. Focuses on all aspects of pre-hospital basic life support as defined by the Virginia office of Emergency Medical Services curriculum for Emergency Medicine Technician Basic. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EMS 113 Emergency Medical Technician-Basic II (3credits)
Continues preparation of student for certification as a Virginia and/or National Registry EMT-Basic. Includes all aspects of pre-hospital basic life support as defined by the Virginia Office of Emergency Medical Services curriculum for Emergency Medicine Technician Basic. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EMS 115 Emergency Medical Technician - Basic Refresher (2 credits)
Provides 36 clock hours of instruction to meet Virginia Office of EMS requirements for recertification at the EMT-Basic level.
Lecture 2 hours per week.

EMS 120 Emergency Medical Technician - Basic Clinical (1 credit)
Observes in a program approved clinical/field setting. Includes topics for both EMS 111 and EMS 113, dependent upon the program in which the student is participating and is a corequisite to both EMS 111 and EMS 113. Lab 2 hours; 2 hours per week.

EMS 121 Preparatory Foundations (2 credits)
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS
Introduces fundamental concepts established by the National Emergency Medical Service Education Standards (NEMSES) for Advanced EMT and Paramedic curricula. Includes EMS systems, introduction to research, workforce safety and wellness, EMS system communications, introduction to public health, legal and ethical issues. Lecture 2 hours. Total 2 hours per week.

EMS 123 EMS Clinical Preparation (1 credit)
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS
Introduces the student to local clinical agencies and prepares the student for clinical activities above the level of EMT. Includes prerequisites required by clinical affiliates, therapeutic communication, primary assessment, history taking, secondary assessment, reassessment, monitoring devices and documentation. Laboratory 2 hours. Total 2 hours per week.

EMS 125 Basic Pharmacology (1 credit)
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS Corequisite: EMS 126
Prepares students to demonstrate competency concerning basic principles of pharmacology, drug dosage calculations and medication administration. Introduces medications listed in the Advanced EMT (AEMT) scope of practice. Lecture 1 hour. Total 1 hour per week.

EMS 126 Basic Pharmacology Lab (1 credit)
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS Corequisite: EMS 125
Focuses on the safe administration of medications in the emergency setting. Includes drug dose calculation and covers multiple routes of administration including oral, intramuscular, subcutaneous, intravenous, and intraosseous and other methods within the scope of practice for the emergency care provider. Laboratory 2 hours. Total 2 hours per week.

EMS 127 Airway, Shock and Resuscitation (1 credit)
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS Corequisite: EMS 128
Introduces concepts associated with pre-hospital emergency care of the individual experiencing airway difficulty or in need of resuscitation or shock management. Lecture 1 hour. Total 1 hour per week.

EMS 128 Airway, Shock and Resuscitation Lab (1 credit)
Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS Corequisite: EMS 127
Focuses on specific skills related to airway, resuscitation and shock management. Laboratory 2 hours. Total 2 hours per week.

EMS 135 Emergency Medical Care (2 credits)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128 Corequisite: EMS 136
Prepares the student to assess and manage patients with common medical emergencies. Lecture 2 hours. Total 2 hours per week.

EMS 136 Emergency Medical Care Lab (1 credit)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128 Corequisite: EMS 135
Focuses on specific skills related to the assessment and management of common medical emergencies. Laboratory 2 hours. Total 2 hours per week.

EMS 137 Trauma Care (1 credit)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128 Corequisite: EMS 138
Prepares the student to assess and manage injured patients, developing his/her problem-solving ability in the treatment of trauma involving various body systems. Lecture 1 hour. Total 1 hour per week.

EMS 138 Trauma Care Lab (1 credit)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128 Corequisite: EMS 137
Focuses on the skills required for the assessment and management of patients with traumatic injury. Laboratory 2 hours. Total 2 hours per week.

EMS 139 Special Populations (1 credit)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128 Corequisite: EMS 140
Focuses on the pre-hospital assessment and management of patients in a specific population including pediatrics, geriatrics, obstetrics/gynecology (OB/GYN), bariatric, abuse, sexual assault and special needs. Lecture 1 hour. Total 1 hour per week.

EMS 140 Special Populations Lab (1 credit)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128 Corequisite: EMS 139
Develops skills related to the assessment and management of patients in a specific population including pediatrics, geriatrics, obstetrics/gynecology (OB/GYN), bariatric, abuse, sexual assault and special needs. Laboratory 2 hour. Total 2 hours per week.

EMS 141 Cardiovascular Care (2 credits)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128 Corequisite: EMS 142
Focuses on assessment and management of cardiac-related emergencies. Covers basic dysrhythmia recognition and relates it to overall cardiac patient care. Lecture 2 hours. Total 2 hours per week.

EMS 142 Cardiovascular Care Lab (1 credit)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128 Corequisite EMS 141
Focuses on skills involved in the assessment and management of cardiac-related Laboratory 2 hours. Total 2 hour per week.

EMS 151 Introduction to Advanced Life Support (4 credits)
Prerequisites: Current State or National Registry EMT-B and CPR Corequisite: EMS 170 Clinical and Field Internship
Prepares the student for Virginia Enhanced certification eligibility and begins the sequence for National Registry Intermediate and/or Paramedic certification. Includes the theory and application of the following: foundations, human systems, pharmacology, overview of shock, venous access, airway management, patient assessment, respiratory emergencies, allergic reaction, and assessment based management. Conforms at a minimum to the Virginia Office of Emergency Medical Services curriculum. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EMS 152 Advanced EMT Completion (2 credits)
Prerequisite: Current EMT Certification and EMS 151. Corequisite: EMS 151
Continues the Virginia Office of Emergency Medical Services Advanced, Intermediate and/or Paramedic curricula. Includes patient assessment, differential diagnosis and management of multiple complaints. Includes, but are not limited to conditions relating to diabetic, neurological, abdominal pain, environmental, behavioral, gynecology, and toxicological disease conditions. Also includes Advanced EMT level cardiac, trauma and special population topics. Lecture 1 hour. Lab 2 hours. Total 3 hours per week.

EMS 153 Basic ECG Recognition (2 credits)
Focuses on the interpretation of basic electrocardiograms (ECG) and their significance. Includes an overview of anatomy and physiology of the cardiovascular system including structure, function and electrical conduction in the heart. Covers advanced concepts that build on the knowledge and skills of basic dysrhythmia determination and introduction to 12 lead ECG. Lecture 2 hours per week.

EMS 154 ALS Cardiac Care (2 credits)
Pre/Corequisite: EMS 153
Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Includes Advanced Life Support (ALS) airway management, electrical therapy, pharmacology, drug and fluid administration with emphasis on patient assessment, differential diagnosis and management of cardiovascular emergencies. It will incorporate the current American Heart Association (AHA) - ACLS guidelines and curriculum including stroke management. Lecture 1 hour. Lab 2 hours. Total 3 hours per week.

EMS 155 ALS - Medical Care (4credits)
Prerequisites: EMS 151, 153
Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Includes ALS pharmacology, drug and fluid administration with emphasis on patient assessment, differential diagnosis and management of multiple medical complaints. Includes, but are not limited to conditions relating to cardiac, diabetic, neurological, non-traumatic abdominal pain, environmental, behavioral, gynecology, and toxicological disease conditions. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EMS 157 ALS - Trauma Care (3 credits)
Prerequisites: Current EMT-B certification, EMS 151 and EMS 153
Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Utilizes techniques which will allow the student to utilize the assessment findings to formulate a field impression and implement the treatment plan for the trauma patient. Laboratory 2 hours. Total 4 hours per week.

EMS 159 ALS - Special Populations (3credits)
Prerequisites: EMS 151 and EMS 153; Pre or Corequisites: EMS 155
Continues the Virginia office of Emergency Medical Services Intermediate and/or Paramedic curricula. Focuses on the assessment and management of specialty patients including obstetrical, pediatric, and neonates. 2 lecture hours; 2 lab hours; 4 Hours per week.

EMS 163 Pre-hospital Trauma Life Support (PHTLS) (1 credit)
Prerequisites: Current certification/licensure as an EMS provider or other allied healthcare provider: EMS 111 or equivalent
Prepares for certification as a Pre-hospital Trauma Life Support provider as defined by the American College of Surgeons. Lecture 1 hour per week.

EMS 164 Advanced Medical Life Support (AMLS) (1 credit)
Covers current topics of care for adult patients suffering extensive medical conditions and emergencies, and offers certification as an Advanced Medical Life Support (AMLS) as defined by the National Association of Emergency Medical Technicians (NAEMT). Lecture 1 hour. Total 1 hour per week.

EMS 165 Advanced Cardiac Life Support (ACLS) (1 credit)
Prerequisites: EMS 100, 153 or equivalent
Prepares for certification as an Advanced Cardiac Life provider. Follows course as defined by the American Heart Association. Lecture 1 hour per week.

EMS 167 Neonatal Resuscitation Program (NRP) (1 credit)
Prerequisite: Current certification/licensure as an advanced EMS provider or other allied healthcare provider.
Provides the student information in current topics in the care of newborn patients to current AAP/American Heart Association- Neonatal Resuscitation Program guidelines. Lecture 1 hour per week.

EMS 168 Emergency Pediatric Care (PEPP) (1 credit)
Prerequisite: EMS 100 or equivalent
Prepares the student for certification as a pre-hospital pediatric care provider as defined by the American Academy of Pediatrics. Covers primary assessment and emergency care of infants and children. Lecture 1 hour per week.

EMS 169 Pediatric Advanced Life Support (PALS) (1 credit)
Prerequisites: EMS 100, 153, or equivalent
Prepares the student for certification as a pediatric advanced life support provider as defined by the American Heart Association. Covers primary assessment and emergency care of infants and children. Lecture 1 hour per week.

EMS 170 ALS Internship I (1-2 credits)
Prerequisites: EMS 151
Begins the first in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma centers and various advanced life support units. Laboratory 3-6 hours per week.

EMS 172 ALS Clinical Internship II (1-2credits)
Corequisite: EMS 151
Continues with the second in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers. Laboratory 3-6 hours per week.

EMS 173 ALS Field Internship II (1 credit)
Corequisite: EMS 151
Continues with the second in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. Laboratory 3 hours per week.

EMS 175 Paramedic Clinical Experience I (1 credit)
Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128
Introduces students to live patient assessment and management in the clinical setting. Begins a continuum of learning involving live patients that leads to entry-level competence at the paramedic level. Laboratory 3 hours. Total 3 hours per week.

EMS 193 Studies In RN to Paramedic (4 credits)
Prerequisite: RN Licensure, EMT Basic Certification
Begins preparation for Virginia and National Registry Paramedic certification for registered nurses. Covers new content not covered in existing courses in the discipline. Allows instructor to explore content and instructional methods to assess the course's viability as a permanent offering. Variable hours per week.

EMS 201 EMS Professional Development (3 credits)
Prerequisite: EMT/B Certification
The purpose of this course is to prepare the EMS student to use community resources to facilitate personal and community wellness and fulfills the wellness and resource objectives of the Virginia Office of Emergency Medical Services Intermediate curriculum. Lecture 3 hours. Total 3 hours per week.

EMS 202 Paramedic Pharmacology (2 credits)
Prerequisites: EMS 125, EMS 126, EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142
Focuses on advanced pharmacological interventions, medications and their effects. Lecture 2 hours. Total 2 hours per week.

EMS 203 Advanced Patient Care (2 credits)
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142 Corequisite: EMS 204
Focuses on the comprehensive assessment and management of patients in out-of-hospital and inter-facility scenarios. Content is centered on problem-solving through integration of didactic, psychomotor and affective curricula. Lecture 2 hours. Total 2 hours per week.

EMS 204 Advanced Patient Care Lab (2 credits)
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142 Corequisite: EMS 203
Focuses on the comprehensive assessment and management of out-of-hospital and inter-facility patients using scenario-based learning. Laboratory 4 hours. Total 4 hours per week.

EMS 205 Advanced Pathophysiology (4 credits)
Prerequisite: EMT/B Certification
Focuses on the pathological processes of disease with emphasis on the anatomical and physiological alterations of the human body by systems. Includes diagnosis and management appropriate to the advanced health care provider in and out of the hospital environment. Lecture 4 hours. Total 4 hours per week.

EMS 206 Pathophysiology for the Health Professions (3 credits)
Prerequisites: BIO 145 or BIO 141-142 combination
Focuses on the pathological processes of disease with emphasis on the anatomical and physiological alterations of the human body systems. Includes diagnosis and management appropriate to the advanced health care provider in and out of the hospital environment.
Lecture 3 hours. Total 3 hours per week.

EMS 207 Advanced Patient Assessment (3 credits)
Focuses on the principles of normal and abnormal physical exam. Emphasizes the analysis and interpretation of physiological data to assist in patient assessment and management. Applies principles during the assessment and management of trauma, medical, and specialty patients in laboratory environment. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EMS 209 Advanced Pharmacology (4 credits)
Focuses on the principles of pharmacokinetics, pharmacodynamics and drug administration. Includes drug legislation, techniques of medication administration, and principles of math calculations. Emphasizes drugs used to manage respiratory, cardiac, neurological, gastrointestinal, fluid and electrolyte and endocrine disorders and includes classification, mechanism of action, indications, contraindications, precautions, and patient education. Incorporates principles related to substance abuse and hazardous materials. Applies principles during the assessment and management of trauma, medical, and specialty patients in a laboratory environment. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EMS 210 EMS Operations (1 credit)
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142
Focuses on matters related to Emergency Medical Services (EMS) operations, incident and scene safety and awareness, triage, multiple and mass casualty incident operations and medical incident management (command and control of EMS incidents). Laboratory 2 hours. Total 2 hours per week.

EMS 211 Operations (2 credits)
Prepares the student in the theory and application of the following: medical incident command, rescue awareness and operations, hazardous materials incidents, and crime scene awareness. (Conforms to the current Virginia Office of Emergency Medical Services curriculum for EMT-Paramedics.) Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

EMS 212 Leadership and Professional Development (1 credit)
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142
Focuses on the development of leadership within the field of Emergency Medical Services (EMS), topics include civic engagement, personal wellness, resource management, ethical considerations in leadership and research. Lecture 1 hour. Total 1 hour per week.

EMS 213 ALS Skills Development (1-2 credits)
Utilizes reinforcement and remediation of additional advanced life support skills, as needed. Laboratory 2-4 hours per week.

EMS 215 Registry Review (1 credit)
Reviews material covered in the intermediate/paramedic program. Prepares the student for National Registry testing. Lecture 1 hour per week.

EMS 216 Paramedic Review (1 credit)
Provides the student with intensive review for the practical and written portions of the National Registry Paramedic exam. May be repeated once, for credit. Laboratory 2 hours. Total 2 hours per week.

EMS 240 ALS Internship II (1 credit)
Continues clinical and/or field experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes, but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma Centers and various advanced life support units. Laboratory 3 hours per week.

EMS 242 ALS Clinical Internship III (1-2 credits)
Continues with the third in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in-and-out of hospitals. Includes, but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma Centers and various advanced life support units. Laboratory 3-6 hours per week.

EMS 243 ALS Field Internship III (1-2 credits)
Continues with the third in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. Laboratory 3-6 hours per week.

EMS 244 ALS Clinical Internship IV (1-2 credits)
The fourth in a series of clinical experiences providing direct patient contact in appropriate patient care facilities in-and-out of hospitals. Includes, but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers. May be repeated as necessary. Laboratory 3-6 hours per week.**EMS 245 ALS Field Internship IV (1-2 credits)**
Continues with the fourth in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. May be repeated as necessary. Laboratory 3-6 hours per week.

EMS 247 Paramedic Clinical Experience II (1 credit)
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142, EMS 175
Continues the student experience with live patient assessment and management in the clinical setting. It is the second step in a continuum of learning involving live patients that leads to entry-level competence at the paramedic level. Laboratory 3 hours. Total 3 hours per week.

EMS 248 Paramedic Comprehensive Field Experience (2 credits)
Prerequisites: EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142, EMS 175
Expands the student experience with live patient assessment and management into the field setting. It is the third step in a continuum of learning involving live patients that leads to entry-level competence at the paramedic level.
Laboratory 6 hours. Total 6 hours per week.

EMS 249 Paramedic Capstone Internship (2 credits)
Prerequisites: EMS 202, EMS 203, EMS 204, EMS 206, EMS 247, EMS 248
Provides summative evaluation of the Paramedic student in the cognitive, psychomotor, and affective domains. Laboratory 6 hours. Total 6 hours per week.

EMS 251 ALS Required Topics (3 credits)
Reviews material covered in the ALS programs. Covers all category 1 content required for Advanced Life Support recertification. Lecture 3 hours per week.

EMS 253 ALS Refresher (4 credits)
Reviews material covered in the ALS programs. Meets all required criteria for recertification eligibility. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EMS 255 Concepts in Critical Care (5 credits)
Prepares the paramedic or RN to become a critical care specialist, capable of managing the care of a critical care patient both in a hospital setting or during a high risk inter - facility transfer. Includes advanced concepts that build on the knowledge and skills of the paramedic and/or nursing curricula, as well as topics needed to trouble shoot complex monitoring devices and equipment. Includes anatomy and physiology based clinical assessment, advanced airway management to include mechanical ventilators, diagnostics data interpretation, bedside hemodynamic monitoring, 12 lead EKG interpretation and hemodialysis care. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

EMS 290 Coordinated Internship in RN to P Clinical I (2 credits)
Prerequisite: EMT Basic Certification
Provides supervised direct patient contact in appropriate hospital care facilities and EMS agencies. Includes patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma Centers and advanced life support units. Laboratory 3 hours.

EMS 293 Studies In RN to Paramedic II (3 credits)
Prerequisite: RN Licensure, EMT Basic Certification
Continues student preparation for Virginia and National Registry Paramedic certification for registered nurses. Includes the theory and application of the National Paramedic Curriculum. Lecture 2 hours, Laboratory 2 hours, Total 4 hours per week.

EMS 295 Topics In RN to Paramedic II (2 credits)
Prerequisite: EMT Basic Certification
Provides supervised direct patient contact in appropriate hospital care facilities and EMS agencies. Includes patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma Centers and advanced life support units. Clinical 3 hours.

Energy Technology

ENE 100 Conventional and Alternate Energy Applications (4 credits)
Provides an overview of hydroelectric, coal, and nuclear energy production methods and renewable solar, geothermal, wind, and fuel cell technology. A complete system breakdown of conventional power production methods, efficiency, and sustainability when compared with solar. Lecture 3 hours. Laboratory 3 ours. Total 6 hours per week. Prerequisite: ELE 176 or instructor approval.

ENE 197 Cooperative Education (1-5 credits)
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

ENE 200 Power Monitoring (4 credits)
Prerequisites: ELE 157 and MDE 10 or equivalents.

Covers the equipment, connections, and use of monitoring power production necessary for offsite and onsite use. Includes study of computer applications used for monitoring including real time storage and historical storage of data. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ENE 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

ENE 297 Cooperative Education (1-5 credits)
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

Engineering

EGR 121 Foundations of Engineering (2 credits)
Prerequisites: ENG 111 eligible; MTH 162 or MTH 167, or equivalent; or departmental approval.
Introduces the engineering profession and its impact on society and the environment, including engineering problem solving, the engineering design process, and professional practices. Covers fundamental engineering calculations, descriptive statistics, basic spreadsheet and mathematical scripting language applications, professional ethics, teamwork, and communication. Lecture 2 hours. Total 2 hour per week.

EGR 122 Engineering Design (3 credits)
Prerequisite: EGR 121 or departmental permission.
Applies engineering methods to a semester-long team design project with an emphasis on engineering software involving 2D and 3D computer aided design; data modeling and analysis; and iterative programming solutions. Covers design drawings and dimensioning; spreadsheet software usage; mathematical scripting language; and professional practices. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EGR 125 - Introduction to Computer Programming for Engineers (4 credits)
Prerequisites: MTH 162 or MTH 167 or equivalent; Corequisites: EGR 121
Introduces problem solving and implementation of computer software solutions using a high-level programming language in a structured environment. Includes concepts and practice of algorithm design, language syntax, control structures, arrays, and introduction to object-oriented programming. Covers engineering applications, such as mathematical modeling, file input and output, and basic numerical methods. The assignments in this course require mathematical problem-solving skills, algebraic modeling, and functions, and use of variables. Lecture 4 hours. Total 4 hours per week.

EGR 127 Introduction to Computer Programming (3 credits).
Introduces programming in a higher-level language such as FORTRAN, BASIC or PASCAL, or C++ on the microcomputer. Uses the operating system, packaged software and peripheral devices. Emphasizes engineering program problem solving.
Lecture 1-2 hours. Laboratory 1-2 hours. Total 2-4 hours per week.

EGR 140 Engineering Mechanics—Statics (3 credits)
Prerequisites: MTH 263, Corequisites: MTH 264
Introduces mechanics of vector forces and space, scalar mass and time, including S.I. and U.S. customary units. Teaches equilibrium, free-body diagrams, moments, couples, distributed forces, centroids, moments of inertia analysis of two-force and multi-force members. Lecture 3 hours per week.

EGR 206 Engineering Economics (2-3 credits).
Presents economic analysis of engineering alternatives. Studies economic and cost concepts, calculation of economic equivalence, comparison of alternatives, replacement economy, economic optimization in design and operation, depreciation, and after-tax analysis.
Lecture 2-3 hours per week.

EGR 245 Engineering Mechanics - Dynamics (3 credits)
Prerequisites: EGR 140
Presents approach to kinematics of particles in linear and curvilinear motion. Includes kinematics of rigid bodies in plane motion. Teaches Newton's second law, work-energy and power, impulse and momentum, and problem-solving using computers. Lecture 3 hours per week.

EGR 246 Mechanics of Materials (3 credits)
Prerequisite: EGR 140
Teaches concepts of stress, strain, deformation, internal equilibrium, and basic properties of engineering materials. Analyses axial loads, torsion, bending, shear and combines loading. Studies stress transformation and principle stresses, column analysis and energy principles. Lecture 3 hours per week.

EGR 299 Supervised Study (1-5 credits)
Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours.

English Direct Enrollment

EDE English Composition Preparation (3 credits)
Provides academic skills and support for introductory composition. Students will identify and apply academic skills including critical reading, writing, thinking, and research. Upon successful completion of EDE 10, instructors recommend enrollment in EDE 11/ENG 111 or ENG 111 or ENG 115/ENG 131. Lecture 3 hours. Total 3 hours per week.

EDE 11 English Composition Readiness (3 credits)
Corequisite: ENG 111
Provides academic support for successful completion of ENG 111. Students will identify and apply academic skills including critical reading, writing, thinking, and introductory research. Lecture 3 hours. Total 3 hours per week.

English

ENG 111 College Composition I (3 credits)
See Table E for Placement
Introduces and prepares students to the critical processes and fundamentals of writing in academic and professional contexts. Teaches the use of print and digital technologies to promote inquiry. Requires the production of a variety of academic texts, totaling at least 4500 words (15 pages typed) of polished writing. This course requires proficiency in using word processing and learning management software. **This is a Passport Transfer course**. Lecture 3 hours per week.

ENG 112 College Composition II (3 credits)
Prerequisite: ENG 111
Continues to develop college writing with increased emphasis on critical essays, argumentation, and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. Prerequisite: Students must successfully complete ENG 111 or its equivalent, and must be able to use word processing software. Lecture 3 hours per week.

ENG 113 Technical-Professional Writing (3 credits)
Prerequisite: ENG 111
Develops ability in technical writing through extensive practice in composing technical reports and technical documents. Guides students in achieving voice, tone, style, and content in formatting, editing, and graphics. Introduces students to technical discourse through selected readings. Provides instruction and practice in basic principles of oral communication/presentation. Lecture 3 hours per week.

ENG 115 Technical Writing (3 credits)
See Table E for Placement
Develops ability in technical writing through extensive practice in composing technical reports and other documents. Guides students in achieving voice, tone, style, and content in formatting, editing, and graphics. Introduces students to technical discourse through selected reading. Lecture 3 hours per week. Not intended to transfer.

ENG 210 Advanced Composition (3 credits)
Helps students refine skills in writing non-fiction prose. Guides development of individual voice and style. Introduces procedures for publication. Prerequisite ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 211 Creative Writing I (3 credits)
Introduces the student to the fundamentals of writing imaginatively. Students write in forms to be selected from poetry, fiction, drama, and essays. Prerequisite ENG 112 or divisional approval. Part I of II. Lecture 3 hours per week.

ENG 245 British Literature (3 credits)
Prerequisite(s): ENG 112, ENG 113, or departmental approval.
Examines British literary traditions and texts from diverse time periods, genres, and authors. Develops critical thinking and interpretive skills through close reading, discussion, and analysis of literary texts in their historical, cultural, social, and/or literary contexts. Lecture 3 hours per week.

ENG 246 American Literature (3 credits)
Prerequisite: ENG 112, ENG 113, or departmental approval.
Examines American literary traditions and texts from diverse time periods, genres, and authors. Analyzes literary works within their historical, cultural, social, and/or literary contexts. Emphasizes skills of close reading. Develops critical thinking and interpretive skills through discussion, interpretation, and analysis of these texts. Lecture 3 hours per week.

Environmental Science

ENV 100 Basic Environmental Science (3 credits)
Presents and discusses basic scientific, health-related, ethical, economic, social and political aspects of environmental activities, policies/decisions. Emphasizes the multidisciplinary nature of environmental problems and their potential solutions. Lecture 3 hours per week.

ENV 220 Environmental Problems (3 credits).
Studies the relationship of man to his environment; ecological principles, population dynamics, topics of current importance including air, water, and noise pollution; poisoning and toxicity, radiation, conservation and management of natural resources. Lecture 3 hours per week.

Financial Services

FIN 107 Personal Finance (3 credits)
Presents a framework of personal money management concepts, including establishing values and goals, determining sources of income, managing income, preparing a budget, developing consumer buying ability, using credit, understanding savings and insurance, providing for adequate retirement, and estate planning.
Lecture 3 hours per week.

FIN 110 Principles of Banking (3 credits)
Presents nearly every aspect of banking, providing a comprehensive introduction to the diversified services and operations of the banking industry. Focuses on new trends gaining attention in banking circles. Recommended for all banking students. (AIB Approved). Lecture 3 hours per week.

FIN 125 Law and Banking: Principles (3 credits)
Presents a banker's guide to law and legal issues with special emphasis on the Uniform Commercial Code. Includes summaries of law pertaining to contracts, real estate, and bankruptcy. Highlights legal implications of consumer lending, sources and applications of banking law, torts, and crimes, real and personal property, and a complete glossary of legal terminology related to banking. (AIB Approved). Lecture 3 hours per week.

FIN 215 Financial Management (3 credits)
Introduces basic financial management topics including statement analysis, working capital, capital budgeting, and long-term financing. Focuses on Net Present Value and Internal Rate of Return techniques, lease vs. buy analysis, and Cost of Capital computations. Uses problems and cases to enhance skills in financial planning and decision making. Lecture 3 hours per week.

FIN 256 Marketing for Bankers (3 credits)
Focuses on understanding the basic concepts necessary to successfully market bank products and services. Develops an understanding of the functions of public relations, advertising, sales promotion, selling, and distribution. Highlights customer motivation and buying behavior, the marketing management process and marketing and the wholesale side of banking. (AIB Approved). Lecture 3 hours per week.

Geography

GEO 210 People and the Land: Intro to Cultural Geography (3 credits)
Focuses on the relationship between culture and geography. Presents a survey of modern demographics, landscape modification, material and nonmaterial culture, language, race and ethnicity, religion, politics and economic activities. Introduces the student to types and uses of maps. Lecture 3 hours a week.

Geology

GOL 105 Physical Geology (4 credits)
Introduces the science of physical geology through a comprehensive systems-based examination of Earth's structure, composition, rocks and minerals, landforms, geomorphology, and agents responsible for shaping and modifying its environments. Explores the origin and evolution of Earth's topographic and bathymetric features, geologic phenomena, and geologic hazards, resulting from plate tectonics. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

GOL 106 Historical Geology (4 credits)
Traces the evolution of the earth and life through time. Presents scientific theories of the origin of the earth and life and interprets rock and fossil record. Lecture 3 hours, Laboratory 3 hours, Total 6 hours per week.

GOL 299 Supervised Study (1 credit).
Assigns problems for independent study incorporating previous instruction and supervised by the instructor.
May be repeated for credit. Variable hours.

Health

HLT 100 First Aid and Cardiopulmonary Resuscitation (2-3 credits)
Focuses on the principles and techniques of safety, first aid, and cardiopulmonary resuscitation. Lecture 2-3 hours per week.

HLT 105 Cardiopulmonary Resuscitation (1 credit)
Provides training in coordinated mouth-to-mouth artificial ventilation and chest compression, choking, life-threatening emergencies and sudden illness. Lecture 1 hour per week. **HLT 106 First Aid and Safety (2 credits)**
Focuses on the principles and techniques of safety and first aid. Lecture 2 hours per week.

HLT 110 Concepts of Personal and Community Health (3 credits)
Studies the concepts related to the maintenance of health, safety and the prevention of illness at the personal and community level. Lecture 3 hours per week.

HLT 119 First Responder (3 credits)
Provides knowledge and proficiency in basic life support and in actions necessary to minimize patient discomfort and prevention of further complications. Meets requirements for Virginia Certification as a first responder. This course is dually listed under EMT, as 105. It is also listed under the health prefix to allow EMT's business and industry personnel to enroll in a health class to apply toward degree or certificate HLT requirements. Total 3 hours per week.

HLT 121 Introduction to Drug Use and Abuse (3 credits)
Explores the use an abuse of drugs in contemporary society with emphasis upon sociological, physiological, and psychological effects of drugs. Lecture 3 hours per week.

HLT 140 Orientation to Health Professions (1-2 credits)
Explores the interrelated roles and functions of various members of the health team. Lecture 1-2 hours. Total 1- 2 hours per week.

HLT 143 - 144 Medical Terminology I - II (3 credits/3credits)
Provides an understanding of medical abbreviations and terms. Includes the study of prefixes, suffixes, word stems and technical terms with emphasis on proper spelling, pronunciation and usage. Emphasizes more complex skills and techniques in understanding medical terminology. Lecture 3 hours per week.

HLT 195/295 Topics in Health (1-5 credits)
Provides an opportunity to explore topic areas of an evolving nature or of short-term importance in the discipline. Variable hours per week.

HLT 206 Exercise Science (3 credits)
Surveys scientific principles, methodologies, and research as applied to exercise and physical fitness. Emphasizes physiological responses and adaptions to exercise. Addresses basic elements of kinesiology, biomechanics, and motor learning. Presents an introduction to the physical fitness industry. Lecture 3 hours per week.

HLT 228 Principles of Public Health (3 credits)
Provides an overview of public health in America and globally with an emphasis on fundamental functions, essential services and health determinants. Explores the history, core areas and current trends within public health as well as how public health affects individuals and populations. Lecture 3 hours. Total 3 hours per week.

HLT 230 Principles of Nutrition and Human Development (3 credits)
Teaches the relationship between nutrition and human development. Emphasizes nutrients, balanced diet, weight control, and the nutritional needs of an individual. Lecture 3 hours per week. 3 credits

HLT 247 Health and Safety in Industry Settings (2 credits)
Presents an introduction to occupational health and its application in the workplace. Special emphasis is placed upon communication of health and safety principles to employees. Provides an overview of regulations that apply to health, safety and the environment in the workplace. Lecture 2 hours per week.

HLT 261 Basic Pharmacy I (3 credits)
Explores the basics of general pharmacy, reading prescriptions, symbols, packages, pharmacy calculations. Teaches measuring compounds of drugs, dosage forms, drug laws, and drug classifications.
Lecture 3 hours per week.

HLT 262 Basic Pharmacy II (3 credits)
Explores the basics of general pharmacy, reading prescriptions, symbols, packages, pharmacy calculations. Teaches measuring compounds of drugs, dosage forms, drug laws, and drug classifications. Part II of II.
Lecture 3 hours per week.

Health Care Technology

HCT 101 Health Care Technician I (3- 4 credits)
Teaches basic care skills with emphasis on physical, social, emotional, and spiritual needs of patients. Covers procedures, communications and interpersonal relations; observation, charting and reporting; care planning, safety and infection control; anatomy and physiology, nutrition and patient feeding; ethics, death and dying. Prepares multi-skilled health care workers to care for patients of various ages with special emphasis on geriatric nursing, home health, long and short term care facilities. Lecture 3-4 hours per week.

HCT 102 Health Care Technician II (3- 4 credits)
Prerequisite: HCT 101
Applies theory through laboratory experience for health care technicians to word in home health, long and short term facilities. Lecture 1-2 hours. Laboratory 2-6 hours. Total 4- 8 hours per week.

Health Information Management

HIM 113 Medical Terminology and Disease Processes I (3 credits)
Includes the study of prefixes, suffixes, stem words, and technical terms; puts emphasis on the causes and treatment of selected disease processes. Part I of II. Lecture 3 hours per week.

HIM 163 Anatomy and Physiology for Administrative Health Professionals (3 credits)
Prerequisite: Medical Terminology or HLT 143 or HIM 113.
Introduces the structure and function of the systems of the human body as applied by administrative health professionals. Lecture 3 hours per week.

HIM 253 Health Records Coding (3-5 credits)
Examines the development of coding classification systems. Introduces ICD-9-CM coding classification system, its format and conventions. Stresses basic coding steps and guidelines according to body systems. Provides actual coding exercises in relation to each system covered. Lecture 3-4 hours per week..

HIM 254 Advanced Coding and Reimbursement (3-4 credits)
Stresses advanced coding skills through practical exercises using actual medical records. Introduces CPT-4 coding system and guidelines for out-patient/ambulatory surgery coding. Introduces prospective payment system and its integration with ICD-CM-9 coding. Lecture 3-4 hours per week.

History

HIS 101 Western Civilization Pre-1600 CE (3 credits)
Examines the development of western civilization from ancient times to 1600 CE. Lecture 3 hours per week.

HIS 102 Western Civilization Post-1600 CE (3 credits)
Examines the development of western civilization from 1600 CE to present. Lecture 3 hours per week.

HIS 111 World Civilizations Pre-1500 CE (3 credits)
Surveys the history of Asia, Africa, the Americas, and Europe from antiquity to approximately 1500. **This is a Passport Transfer course**. Lecture 3 hours per week.

HIS 112 World Civilizations Post-1500 CE (3 credits)
Surveys the history of Asia, Africa, Europe, and the Americas from approximately 1500 CE through the present. **This is a Passport Transfer course**. Lecture 3 hours per week.

HIS 121 United States History to 1877 (3 credits)
Introduces the history of the United States from its origins to 1877. Includes the European exploration, development of the American colonies and their institutions, the Revolution, major political, social and economic developments, geographical expansion, the Civil War, and Reconstruction. **This is a Passport Transfer course**. Lecture 3 hours per week.

HIS 122 United States History Since 1865 (3 credits)
Introduces the history of the United States from 1865 to present. Includes major political, social and economic developments since 1865, overseas expansion, the two world wars, the Cold War and the post-Cold War era. **This is a Passport Transfer course**. Lecture 3 hours per week.

Horticulture

HRT 100 Introduction to Horticulture (3 credits) (Fall)
Introduces commercial horticulture industry with emphasis on career opportunities. Examines equipment, facilities, and physical arrangements of production, wholesale and retail establishments. Surveys individual areas within horticulture industry. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 115 Plant Propagation (3 credits) (Fall)
Teaches principles and practices of plant propagation. Examines commercial and home practices. Provides experience in techniques using seed-spores, cuttings, grafting, budding, layering and division. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 121 - Greenhouse Crop Production I
Covers commercial practices related to production of floriculture crops. Considers production requirements, environmental control and management, and cultural techniques.
Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.
3 credits

HRT 126 Home Landscaping (3 credits).
Studies current approaches to improving home landscapes. Emphasizes planning, proper implementation, and landscape maintenance. Lecture 3 hours per week.

HRT 134 Four Season Food Production (3 credits) (Spring)
Familiarizes students with organic small-scale food production through lecture and demonstration. Includes seed saving, cover crops, and gardening planning. Lecture 3 hours per week.

HRT 197 Co-op (3 credits)
Requires curriculum advisor approval.
Cooperative education in ornamental horticulture. Designed to provide practical work experience for the horticulture student. Minimum on-the-job training is 225 work hours over the course of a semester.

HRT 126 Home Landscaping (3 credits)
Studies current approaches to improving home landscapes. Emphasizes planning, proper implementation, and landscape maintenance. Lecture 3 hours per week.

HRT 205 Soils (3 credits) (Spring)
Teaches theoretical and practical aspects of soils and other growing media. Examines media components, chemical and physical properties, and soil organisms. Discusses management and conservation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 207 Plant Pest Management (3 credits) (Spring)
Teaches principles of plant pest management. Covers morphology and life cycles of insects and other small animal pests and plant pathogens. Lab stresses diagnosis, chemical and non-chemical control of specific pests, and pesticide safety. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 225 Nursery and Garden Center Management (3 credits)
Covers aspects of nursery management, including culture, plant handling, and facilities layout. Discusses aspects of garden center management, including planning and layout, purchasing, product selection, marketing, merchandising, and display. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 226 Greenhouse Management (3 credits) (Spring)
Discusses the theoretical and applied practices of managing a greenhouse facility. Emphasizes greenhouse construction and design, environmental control, energy conservation, and related topics. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 227 Professional Landscape Management (3 credits) (Spring)
Focuses on basic practices and techniques involving landscape management. Includes development of a year-round management calendar and preparation of bid and contract proposals. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 231 Planting Design I (3 credits)
Applies landscape theory and principles of drawing to the planning of residential and small scale commercial landscape designs.
Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 245 Woody Plants (3 credits)
Studies identification, culture, and uses of woody plants in landscaping. Includes deciduous and evergreen, native and cultivated shrubs, trees and vines. Teaches scientific and common names of plants. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 246 Herbaceous Plants (2-3 credits)
Studies identification, culture and uses of herbaceous plants in landscaping. Includes perennials, biennials, common bulbs and annuals. Teaches scientific and common names of plants. Lecture 1 – 2 hours. Laboratory 2 hours. Total 3-4 hours per week.

HRT 259 Arboriculture (3 credits)
Studies the techniques of tree care. Covers surgery, pruning, insect and disease recognition and control, fertilization, cabling, and lightning rod installation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 275 Landscape Construction and Maintenance (3 credits) (Fall)
Examines practical applications of commercial landscape construction techniques, and materials used. Covers construction, planting, and maintenance. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 295 - Topics In Hemp Cultivation (3 credits)
Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours. 1-5 credits

HRT 297 Cooperative Education (1-6 credits)
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

HRT 299 Supervised Study (1 credit)
Assigns problems for independent study incorporating previous instruction and supervised by the instructor.
May be repeated for credit. Variable hours.

Humanities

HUM 246 Creative Thinking (3 credits)
Examines, analyzes, and develops creative and critical thinking processes with individual and group applications to solve business, scientific, social, environmental, and other practical problems. The assignments in this course require college-level reading, analysis of scholarly studies, and coherent communication through properly cited and formatted written reports. Lecture 3 hours per week.

HUM 256 Comparative Mythology (3 credits)
Studies the cultural expressions of mythology. Considers selected mythologies representing diverse global culture, with emphasis on parallels and divergences in structure, purpose, and representation in literature and the arts. The assignments in this course require college-level reading, analysis of scholarly studies, and coherent communication through properly cited and formatted written reports. Lecture 3 hours per week.

HUM 259 The Greek and Roman Tradition (3 credits)
Explores the significance of Greek and Roman cultures on the individual and society, expressed prominently from the Classical Age in Athens to its survival during Roman times. Examines the key contributions that the Greeks and Romans have imparted upon storytelling, theater, philosophy, civics, political morphology, and the arts and the impact they have in the modern world. The assignments in this course require college-level reading, analysis of scholarly studies, and coherent communication through properly cited and formatted written reports. Lecture 3 hours per week.

HUM 260 Contemporary Humanities (3 credits)
Examines selected values and expressions of ideas of western and non-western cultures throughout the twentieth century and beyond, integrating the visual arts, literature, performing arts, religion, and philosophy within the context of history. The assignments in this course require college-level reading, analysis of scholarly studies, and coherent communication through properly cited and formatted written reports. Lecture 3 hours per week.

Human Services

HMS 100 Introduction to Human Services (3 credits)
Introduces human service agencies, roles and careers. Presents a historical perspective of the field as it relates to human services today. Additional topics include values clarification and needs of target population. Lecture 3 hours per week.

HMS 141 Group Dynamics I (3 credits)
Examines the stages of group development, group dynamics, the role of the leader in a group, and recognition of the various types of group processes. Discusses models of group dynamics that occur as a result of group membership dynamics. Lecture 3 hours per week.

HMS 145 Effects of Psychoactive Drugs (3 credits)
Provides information on the biochemical, physiological, and behavioral aspects of substance addiction and will review the symptoms of addiction. Emphasizes areas of chemical dependency, medical epidemiology, physiological threats of addiction, and methods of identifying multiple drug abusers. Lecture 3 hours per week.

HMS 227 The Helper as a Change Agent (3 credits)
Teaches the following skills for implementing alternative models of change and influence: action research, problem-solving, consultation, workshop development, and outreach and advocacy for diverse client populations. Lecture 3 hours per week.

HMS 230 Ethics in Human Services (3 credits)
Examines ethical concepts specific to human services organizations and careers. Considers self-determination, informed consent, confidentiality, boundaries, conflict of interest, dual relationships, as well as value clarification and the impact of culture. Lecture 3 hours. Total 3 hours per week.

HMS 250 - Principles of Case Management
Provides an overview of current case management theory and practice in the field of mental health. Lecture 3 hours per week.
3 credits

HMS 251 Substance Abuse I (3 credits)

Provides knowledge, skills, and insight for working in drug and alcohol abuse programs. Emphasizes personal growth and client growth measures in helping relationships. Stresses various methods of individual and group techniques for helping the substance abuser. Lecture 3 hours per week.

HMS 252 Substance Abuse II (3 credits)
Prerequisite HMS 251
Expands knowledge and skill in working with the substance abuser. Focuses on assisting substance abusers in individual and group settings and explores client treatment modalities. May provide opportunities for field experience in treatment centers. Lecture 3 hours per week.

HMS 260 Substance Abuse Counseling (3 credits)
Provides an understanding of the skills of guidance of clients and those associated with being an advocate. Examines the dynamics of the client/counselor relationship in developing treatment plans and empowerment skills. Lecture 3 hours per week.

HMS 270 Treatment Systems (3 credits)
Examines the services and facilities established for the purpose of treating addictions. Focuses on treatment therapy models and ethical standards related to addiction-disease theory. Lecture 3 hours per week.

HMS 290 Coordinated Internship (1-5 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

HMS 297 Cooperative Education (1-6 credits)
Supervises on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

Industrial Engineering Technology

IND 125 Installation and Preventive Maintenance (3 credits)
Studies practices in the installation of machinery, including mounting, grouting, leveling, and alignment. Examines methods of preventive maintenance including inspection, scheduled maintenance, controls, record keeping, repair parts stocking, and safety considerations. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

IND 137 Team Concepts & Problem Solving (3 credits)
Studies team concepts and problem solving techniques to assist project teams in improving quality and productivity. Provides knowledge of how to work as a team, plan and conduct good meetings, manage logistics and details, gather useful data, communicate the results and implement changes. Lecture 3 hours per week.

IND 235 Statistical Quality Control (3 credits)
Gives over view of the quality control function within industry. May include the organization, cost and techniques of quality control. Emphasizes essentials and applications of statistics in the quality control function. Lecture 2-3 hours, Laboratory 0-2 hours, Total 3-4 hours per week.

IND 243 Principles and Applications of Mechatronics (3 credits)
Prerequisite: Divisional Approval.
Introduces terminology and principles related to Mechatronic system design and application. Integrates concepts of electrical/electronic, mechanical and computer technologies in the development, setup, operation and troubleshooting of automated products and systems. Covers breakdown of various automated manufacturing operations with emphasis on system planning, development and troubleshooting processes. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

Information Technology Database Processing

ITD 110 Web Page Design I (3-4 credits)
Corequisite: ITE 119 or 152 or equivalent (introduction to the Internet) or division approval.
Stresses a working knowledge of web site designs, construction, and management using HTML or XHTML. Includes headings, lists, links, images, image maps, tables, forms, and frames. Lecture 3-4 hours per week.

ITD 132 Structured Query Language (3-4 credits)
Prerequisite: ITE 115 119 or 152 or division approval.
Incorporates a working introduction to commands, functions and operators used in SQL for extracting data from standard databases. Lecture 3-4 hours per week.

ITD 197 Cooperative Education (1-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

ITD 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

ITD 297 Cooperative Education in Web Design, Graphics and Database (1-5 credits)
Requires curriculum advisor and co-op advisor approvals.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

Information Technology Essentials

ITE 100 Introduction to Information Systems (3-4 credits)
Covers the fundamentals of computers and computing and topics which include impact of computers on society, ethical issues, and terminology. Provides discussion about available hardware and software as well as their application.
Lecture 3-4 hours per week.

ITE 105 Careers and Cyber Ethics (2 credits)
Career paths in Information Technology will be explored to help the student determine the appropriate degree plan. Career paths will include but not be limited to software development, computer science, database, networking, system administration and operations, end user support, web design, and management. The student will learn ethical concerns in business and information technology including the ACM Code of Ethics. Lecture 2 hours per week.

ITE 115 Introduction to Computer Applications and Concepts (3-4 credits)
Recommended prerequisite: keyboarding skills
Covers computer concepts and internet skills, and uses a software suite which includes word processing, spreadsheet, database, and presentation software to demonstrate skills. Recommended prerequisite keyboarding skills. Lecture 3-4 hours per week.

ITE 119 Information Literacy (3 credits)
Presents the information literacy core competencies focusing on the use of information technology skills. Skills and knowledge will be developed in database searching, computer applications, information security and privacy, and intellectual property issues. Lecture 3 hours per week.

ITE 140 Spreadsheet Software (3-4 credits)
Covers the use of spreadsheet software to create spreadsheets with formatted cells and cell ranges, control pages, multiple sheets, charts, and macros. Topics include type and edit text in a cell, enter data on multiple worksheets, work with formulas and functions, create charts, pivot tables, and styles, insert headers and footers, and filter data. Lecture 3-4 hours per week.

ITE 150 Desktop Database Software (3-4 credits)
Incorporates instruction in planning, defining, and using a database; performing queries; producing reports; working with multiple files; and concepts of database programming. Includes database concepts, principles of table design and table relationships, entering data, creating and using forms, using data from different sources, filtering, creating mailing labels. Lecture 3-4 hours per week.

ITE 152 Introduction to Digital and Information Literacy and Computer Applications (3 credits)
Develops understanding of digital literacy. Introduces basic computer concepts in hardware, software, cyber, cloud, database, and operating systems. Includes hands-on experience developing word processing, spreadsheet and presentation documents. Evaluates the reliability of sources. Covers creating a simple web page. Examines topics such as social, legal, and ethical issues. Lecture 3 hours per week.

ITE 170 Multimedia Software (3-4 credits)
Explores technical fundamentals of creating multimedia projects with related hardware and software. Students will learn to manage resources required for multimedia production and evaluation and techniques for selection of graphics and multimedia software.
Lecture 3-4 hours per week.

ITE 182 User Support/Help Desk Principles (3-4 credits)
Introduces a variety of tools and techniques that are used to provide user support in help desk operations. Includes help desk concepts, customer service skills, troubleshooting problems, writing for end users, help desk operations, and software, needs analysis, facilities management, and other related topics related to end user support. Lecture 3-4 hours per week.

ITE 195 Topics in (discipline) (1-5 credits)
Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours.

ITE 270 Advanced Multimedia Development (3 credits)
Refines multimedia skills, focusing on project development using digital media; video clips, still images, and audio (sounds, music, and narration). Prerequisite: ITE 170. Lecture 3 hours per week.

Information Technology Networking

ITN 106 Microcomputer Operating Systems (3-4 credits)
Teaches use of operating system utilities and multiple-level directory structures, creation of batch files, and configuration of microcomputer environments. May include a study of graphical user interfaces. Lecture 3-4 hours per week.

ITN 107 Personal Computer Hardware and Troubleshooting (3-4 credits)
Includes specially designed instruction to give a student a basic knowledge of hardware and software configurations. Includes the installation of various peripheral devices as well as basic system hardware components. Lecture 3-4 hours per week.

ITN 113 Active Directory (Windows Server 2008) (3-4 credits)
Emphasizes instruction in installation, configuration, and administration, monitoring, and troubleshooting of Active Directory (Specify Version) components, DNS, Group Policy objects, RIS, and security. Lecture 3-4 hours per week.

ITN 154 Introduction to Networks-– CISCO I (3-4 credits)
Provides instruction in the fundamentals of networking environments, the basics of router operations, and basic router configuration. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

ITN 155 Switching, Routing, and Wireless Essentials - CISCO II (3-4 credits)
Prerequisite: ITN 154
Provides the skills and knowledge to install, operate, and troubleshoot a small-to-medium sized branch office enterprise network, including configuring several switches and routers, configuring wireless devices, configuring VLANS, connecting to a WAN, and implementing network security. Lecture 2-3 hours. Laboratory 2 hours. Total 4-5 hours per week.

ITN 156 Enterprise Networking, Security, and Automation- - CISCO III (3-4 credits)
Prerequisite: ITN 155
Centers instruction in LAN segmentation using bridges, routers, and switches. Includes fast Ethernet, access lists, routing protocols, spanning tree protocol, virtual LANS and network management. Lecture 3-4 hours per week.

ITN 157 WAN Technologies - CISCO IV (3-4 credits)
Prerequisite: ITN 156
Concentrates on an introduction to Wide Area Networking (WANs). Includes WAN design, LAPB, Frame Relay, ISDN, HDLC, and PPP. Lecture 3-4 hours per week. 3-4 credits

ITN 197 Cooperative Education in Networking (1-5 credits)
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits.

ITN 260 Network Security Basics (3-4 credits)
Prerequisite or corequisite: ITN 154 Provides instruction in the basics of network security in depth. Includes security objectives, security architecture, security models and security layers; risk management, network security policy, and security training. Includes the five security keys, confidentiality integrity, availability, accountability and auditability. Lecture 3-4 hours per week.

ITN 261 Network Attacks, Computer Crime and Hacking (3-4 credits)
Encompasses in-depth exploration of various methods for attacking and defending a network. Explores network security concepts from the viewpoint hackers and their attack methodologies. Includes topics about hackers, attacks, Intrusion Detection Systems (IDS) malicious code, computer crime and industrial espionage. Lecture 3-4 hours per week.

ITN 262 Network Communication, Security and Authentication (3-4 credits)
Covers an in-depth exploration of various communication protocols with a concentration on TCP/IP. Explores communication protocols from the point of view of the hacker in order to highlight protocol weaknesses. Includes Internet architecture, routing, addressing, topology, fragmentation and protocol analysis, and the use of various utilities to explore TCP/IP. Lecture 3-4 hours per week.

ITN 266 Network Security Layers (3-4 credits)
Provides an in-depth exploration of various security layers needed to protect the network. Explores Network Security from the viewpoint of the environment in which the network operates and the necessity to secure that environment to lower the security risk to the network. Includes physical security, personnel security, operating system security, software security and database security. Lecture 3-4 hours per week.

ITN 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

ITN 297 Cooperative Education in Networking (1-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits.

Information Technology Programming

ITP 100 Software Design (3-4 credits)
Prerequisite: ITE 115, 119 or 152 and MTH 132 or division approval
Introduces principles and practices of software development. Includes instruction in critical thinking, problem solving skills, and essential programming logic in structured and object-oriented design using contemporary tools. Lecture 3-4 hours per week.

ITP 120 Java Programming I (3-4 credits)
Prerequisite: ITP 100 or division approval
Entails instruction in fundamentals of object-oriented programming using Java. Emphasizes program construction, algorithm development, coding, debugging, and documentation of console and graphical user interface applications. Lecture 3-4 hours per week.

ITP 140 Client Side Scripting (3-4 credits)
Provides instruction in fundamentals of Internet application design, development, and deployment using client side scripting language(s). Lecture 3-4 hours per week.

ITP 197 Cooperative Education in Programming (1-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

ITP 240 Server Side Programming (3-4 credits)
Centers around instruction in fundamentals of Internet application design, development, and deployment. Includes implementation of server component models, security, and database connectivity using server-side programming. Lecture 3-4 hours per week.

ITP 251 Systems Analysis and Design (3-4 credits)
Focuses on application of information technologies (IT) to system life cycle methodology, systems analysis, systems design, and system implementation practices. Covers methodologies related to identification of information requirements, feasibility in the areas of economic, technical and social requirements, and related issues are included in course content. Software applications may be used to enhance student skills. Lecture 3-4 hours per week.

ITP 258 Systems Development Project (3-4 credits)
Provides instruction in application of life cycle system development methodologies using a case study which incorporates feasibility study system analysis, system design, program specification, and implementation planning. Course project assignment(s) will have students perform as members of system development teams. Lecture 3-4 hours per week.

ITP 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

ITP 297 Cooperative Education in Programming (1-5 credits)
Requires curriculum advisor approval.
Supervises in on-the-job training for pay in approved business, industrial and service firms, coordinated by the college's cooperative education office. Is applicable to all occupational- technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

Instrumentation

INS 110 Principles of Instrumentation (3 credits)
Introduces various types of instruments and gauges used in the manufacturing processes. Examines basic principles of pneumatic, hydraulic, electronic and mechanically operated devices. Requires a report as an out-of-class activity. Lecture 2 hours. Laboratory 2 hours.

INS 232 - System Troubleshooting (2-3 credits)
Presents system troubleshooting theory and real troubleshooting applications. Uses a hands-on approach to provide troubleshooting experience in multiple areas such as programmable logic controllers (PLC), control automation systems and process control systems. Lecture 2-3 hours. Laboratory 3 hours.

Interpreter Education

INT 130 Interpreting: An Introduction to the Profession (3 credits)
Introduces basic principles and practices of interpreting, focusing on the history of the profession, logistics of interpreting situations, regulatory and legislative issues, resources, and the Code of Ethics. Describes the state quality assurance screening and national certification exam systems, including test procedures. Lecture 3 hours per week.

Legal Administration

LGL 110 Introduction to Law and the Legal Assistant (3 credits)
Introduces various areas of law in which a legal assistant may be employed. Includes study of the court system (Virginia and federal) as well as a brief overview of criminal law, torts, domestic relations, evidence, ethics, the role of the legal assistant, and other areas of interest. Lecture 3 hours per week.

LGL 127 Legal Research and Writing (3 credits)
Prerequisite: ENG 111 or division approval
Provides a basic understanding of legal research and the proper preparation of legal documents, including brief writing. Lecture 3 hours per week.

LGL 215 Torts (3 credits)
Studies fundamental principles of the law of torts. May include preparation and use of pleadings and other documents involved in the trial of a civil action. Emphasizes personal injury, products liability, and malpractice cases. Lecture 3 hours per week.

Machine Technology

MAC 111 Machine Trade Theory and Computation I (3 credits)
Covers shop theory and mathematics dealing with fractional and precision measuring tools. Includes layout, bandsaws, drill presses, the twist drill, thread cutting, taper turning, vertical and horizontal milling machines, lathe tool bit geometry, and engine lathe operations. Lecture 3 hours per week.

MAC 116 Machinist Handbook (2 credits)
Uses the machinist handbook as a ready reference book of tabular data, formulas, designs and processes relating to machine technology. Lecture 2 hours per week.

MAC 121 - 122 Numerical Control I - II (2-3 credits/2-3 credits)
Focuses on numerical control techniques in metal forming and machine processes. Includes theory and practice in lathe and milling machine computer numerical control program writing, setup and operation. Lecture 1-2 hours, Laboratory 2-3 hours, Total 3-5 hours per week.

MAC 123 Numerical Control III (2-3 credits)
Prerequisite: MAC 121, 122
Focuses on numerical control techniques in metal forming and machine processes. Includes theory and practice in lathe and milling machine computer numerical control program writing, setup and operation. Lecture 1-2 hours, Laboratory 2-3 hours, Total 3-5 hours per week.

MAC 126 Introductory CNC Programming (3 credits)
Introduces programming of computerized numerical control machines with hands-on programming and operation of CNC machines. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MAC 127 Advanced CNC Programming (3 credits)
Prerequisite: MAC 123
Provides in-depth study of programming computerized numerical control machines. Lecture 3 hours per week.

MAC 128 -CNC Programming (2 Credits)
Teaches programming of computerized numerical control machines. Focuses on CNC machining processes. Lecture 2 hours per week.

MAC 131 - 132 Machine Lab I - II (2 credits/2 credits)
Teaches fundamental machine shop operations, bench work, layout, measuring tools, and safety. Lecture 1 hour, Laboratory 3 hours, Total 4 hours per week.

MAC 134 CMM Operation and Programming (2 credits)
Focuses on inspection using a Coordinate Measuring Machine. Includes hands-on demonstration of CMM setup, initialization and operation. Covers the essential aspects of the software and CMM operation, using a sample part for hands-on practice. Lecture 1 hour. Lab 2 hours. Total 3 hours per week.

MAC 146 Metals/Heat Treatment (2 credits)
Provides approach to metals and their structure. Gives working knowledge of methods of treating ferrous and non-ferrous metals. Lecture 1 hour, Laboratory 3 hours, Total 4 hours per week.

MAC 150 Introduction to Computer Aided Manufacturing (3 credits)
Introduces computer aided manufacturing (CAM) with emphasis on programming of numerical control machinery. Teaches Program writing procedures using proper language and logic and a CAM programming system to produce numerical control code for machines. Teaches basic computer usage and code-to-machine transfer. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week.

MAC 151 Machine Tool Maintenance (2 credits)
Introduces tool design from a maintenance and repair standpoint. Emphasizes proper care, repair, and preventative maintenance of machine tools. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

MAC 161 Machine Shop Practices I (3 credits)
Introduces safety procedures, bench work, hand tools, precision measuring instruments, drill presses, cut-off saws, engine lathes, manual surface grinders, and milling machines. Part I of II. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

MAC 162 Machine Shop Practices II (3 credits)
Introduces safety procedures, bench work, hand tools, precision measuring instruments, drill presses, cut-off saws, engine lathes, manual surface grinders, and milling machines. Part II of II. Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week.

MAC 163 Machine Shop Practices III (3 credits)
Offers practice in the operation of the drill press, engine lathe, vertical milling machine, horizontal milling machine, and the surface grinder. Introduces practical heat treatment of directly hardenable steels commonly used in machine shops. Part I of II.
Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MAC 164 Machine Shop Practices IV (3 credits)
Offers practice in the operation of the drill press, engine lathe, vertical milling machine, horizontal milling machine, and the surface grinder. Introduces practical heat treatment of directly hardenable steels commonly used in machine shops. Part II of II. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MAC 206 Production Machining Techniques (6 credits)
Offers practice in advanced machine shop. Emphasizes mass production techniques and interchangeable parts manufacture. Covers setup and operation of tooling and fixtures to manufacture workpieces to specified tolerances. Lecture 4 hours. Laboratory 6 hours. Total 10 hours per week.

MAC 209 Standards, Measurements and Calculations (2-3 credits)
Presents typical mathematical and mechanical problems requiring the use of reference standards such as the Machinery's Handbook for solution. Presents use of the Coordinate Measuring Machine for solution. Lecture 2-3 hours per week.

MAC 241 - 242 Advanced Machinery Procedures I - II (3 credits)
Prerequisite: MAC 106, 107
Focuses on machining principles and calculations necessary for the precision required by the machinist. Emphasizes advanced lathe and mill work with concentration on fits, finishes, inspections and quality control. CNC Programming and operation, included conversational programming, may be emphasized. Teaches design and construction of specific projects to determine the student's operational knowledge of all equipment. Lecture 2 hours, Laboratory 3 hours, Total 5 hours per week.

MAC 250 Advanced Computer Aided Manufacturing (2-3 credits)
Prerequisite: MAC 121, 122, 150
Focuses on advanced computer aided manufacturing with emphasis on CAD-CAM interfacing, advanced 3-D, and advanced turning. Introduces quality control inspection using coordinate measuring systems, statistical process controls and digitizers. Teaches basic and advanced fabrication programming and flexible manufacturing systems.

MAC 295 Supervised Study (Computer Numerical Control Machining) (4 credits)
Introduction to the programming, set-up, and operation of various computer numerical control machines.

MAC 290 Coordinated Internship (3 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. 1-5 credits

MAC 297 Co-op (2-5 credits)
Requires curriculum advisor approval.
Cooperative education as a machinist. Designed to provide practical work experience for the machinist student. Minimum on-the-job training is 10 hours per week.

MAC 299 Supervised Study (Advanced Computer Numerical Control Machining) (4 credits)
Prerequisite: MAC 127
Advanced course in programming, setup, and operation of various computer numerical control machines.

Marketing

MKT 100 Principles of Marketing (3 credits)
Presents principles, methods, and problems involved in marketing to consumers and organizational buyers. Discusses problems and policies connected with distribution and sale of products, pricing, promotion, and buyer motivation. Examines variations of marketing research, legal, social, ethical, e-commerce, and international considerations in marketing. Lecture 3 hours per week.

MKT 216 Retail Organization and Management (3 credits)
Examines the organization of the retail establishment to accomplish its goals in an effective and efficient manner. Includes study of site location, internal layout, store operations, and security. Examines the retailing mix, the buying or procurement process, pricing, and selling. Studies retail advertising, promotion, and publicity as a coordinated effort to increase store traffic. Lecture 3 hours per week.

Mathematics Direct Enrollment

MDE 10 Mathematics Direct Enrollment (3 credits)
Covers topics in arithmetic through introduction to variables and equations. Lecture 3 hours. Total 3 hours per week.

MDE 54 Learning Support for Quantitative Reasoning (3 credits)
Corequisite: MTH 154
Provides support to ensure success for students co-enrolled in Quantitative Reasoning (MTH 154). Course will review foundational topics through direct instruction, guided practice, and individualized support. Lecture 3 hours. Total 3 hours per week.

MDE 55 Learning Support for Statistical Reasoning (3 credits)
Corequisite: MTH 155
Provides support to ensure success for students co-enrolled in Statistical Reasoning (MTH 155). Course will review foundational topics through direct instruction, guided practice, and individualized support. Lecture 3 credits. Total 3 hours per week.

MDE 60 Intermediate Algebra (3 credits)
Covers topics in algebra. Lecture 3 hours. Total 3 hours per week.

MDE 61 Learning Support for Pre-Calculus (3 credits)
Corequisite: MTH 161
Provides support to ensure success for students co-enrolled in Pre-Calculus (MTH 161). Course will review foundational topics through direct instruction, guided practice, and individualized support. Lecture 3 hours. Total 3 hours per week.

Mathematics

MTH 111 Basic Technical Mathematics (3 credits)
See Table M for Math Placement.
Provides a foundation in mathematics with emphasis in arithmetic, unit conversion, basic algebra, geometry and trigonometry. This course is intended for CTE programs.
Lecture 3 hours. Total 3 hours per week.

MTH 132 Business Mathematics (3 credits)
See Table M for Math Placement Provides instruction, review, and drill in percentage, cash and trade discounts, mark-up, payroll, sales, property and other taxes, simple and compound interest, bank discounts, loans, investments, and annuities. This course is intended for occupational/technical programs.
Lecture 3 hours. Total 3 hours per week.

MTH 154 Quantitative Reasoning (3 credits)
See Table M for Math Placement Presents topics in proportional reasoning, modeling, financial literacy and validity studies (logic and set theory). Focuses on the process of taking a real-world situation, identifying the mathematical foundation needed to address the problem, solving the problem and applying what is learned to the original situation. ***This is a Passport Transfer course.**
Lecture 3 hours. Total 3 hours per week.

MTH 155 Statistical Reasoning (3 credits)
See Table M for Math Placement Presents elementary statistical methods and concepts including visual data presentation, descriptive statistics, probability, estimation, hypothesis testing, correlation and linear regression. Emphasis is placed on the development of statistical thinking, simulation, and the use of statistical software. ***This is a Passport Transfer course.**
Lecture 3 hours, Total 3 hours per week.

MTH 161 Precalculus I (3 credits)
See Table M for Math Placement Presents topics in power, polynomial, rational, exponential, and logarithmic functions, and systems of equations and inequalities. Credit will not be awarded for both MTH 161: Precalculus I and MTH 167: Precalculus with Trigonometry or equivalent. ***This is a Passport Transfer course.** Lecture 3 hours. Total 3 hours per week.

MTH 162 Precalculus II (3 credits)
Prerequisites: Placement or completion of MTH 161: Precalculus I or equivalent with a grade of C or better.
Presents trigonometry, trigonometric applications including Law of Sines and Cosines and an introduction to conics. Credit will not be awarded for both MTH 162: Precalculus II and MTH 167: Precalculus with Trigonometry or equivalent. ***This is a Passport Transfer course.**
Lecture 3 hours. Total 3 hours per week.

MTH 245 Statistics I (3 credits)
Prerequisite: Completion of MTH 154 or MTH 161 or equivalent with a grade of C or better.
Presents an overview of statistics, including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, correlation, and linear regression. Credit will not be awarded for both MTH 155: Statistical Reasoning and MTH 245: Statistics I or equivalent. **This is a Passport Transfer course.** Lecture 3 hours. Total 3 hours per week.

MTH 246 Statistics II
Prerequisite: Completion of MTH 245: Statistics I or equivalent with a grade of C or better.
Lecture 3 hours. Total 3 hours per week.

MTH 261 - Applied Calculus I (3 credits)
Prerequisite: Completion of MTH 161 or equivalent with a grade of C or better.
Introduces limits, continuity, differentiation and integration of algebraic, exponential and logarithmic functions, and techniques of integration with an emphasis on applications in business, social sciences and life sciences. ***This is a Passport Transfer course.** Lecture 3 hours. Total 3 hours per week.

MTH 262 Applied Calculus II (3 credits)
Prerequisite: Completion of MTH 261 or equivalent with a grade of C or better.
Covers techniques of integration, an introduction to differential equations and multivariable calculus, with an emphasis throughout on applications in business, social sciences and life sciences. Lecture 3 hours. Total 3 hours per week.

MTH 263 - Calculus I (4 credits)
Prerequisite: Completion of MTH 167 or MTH 161/162 or equivalent with a grade of C or better.
Presents concepts of limits, derivatives, differentiation of various types of functions and use of differentiation rules, application of differentiation, antiderivatives, integrals and applications of integration. ***This is a Passport Transfer course.** Lecture 4 hours. Total 4 hours per week.

MTH 264 - Calculus II (4 credits)
Prerequisite: Completion of MTH 263 or equivalent with a grade of C or better.
Continues the study of calculus of algebraic and transcendental functions including rectangular, polar, and parametric graphing, indefinite and definite integrals, methods of integration, and power series along with applications. Features instruction for mathematical, physical and engineering science programs. **This is a Passport Transfer course**. Lecture 4 hours. Total 4 hours per week.

MTH 265 Calculus III (4 credits)
Prerequisite: Completion of MTH 264: Calculus II or equivalent with a grade of C or better.
Focuses on extending the concepts of function, limit, continuity, derivative, integral and vector from the plane to the three dimensional space. Covers topics including vector functions, multivariate functions, partial derivatives, multiple integrals and an introduction to vector calculus. Features instruction for mathematical, physical and engineering science programs. Lecture 4 hours. Total 4 hours per week.

MTH 266 Linear Algebra (3 credits)
Prerequisite: Completion of MTH 263 or equivalent with a grade of B or better or MTH 264 or equivalent with a grade of C or better.
Covers matrices, vector spaces, determinants, solutions of systems of linear equations, basis and dimension, eigenvalues, and eigenvectors. Features instruction for mathematical, physical and engineering science programs. Lecture 3 hours. Total 3 hours per week.

MTH 267 Differential Equations (3 credits)
Prerequisite: Completion of MTH 264 or equivalent with a grade of C or better.
Introduces ordinary differential equations. Includes first order differential equations, second and higher order ordinary differential equations with applications and numerical methods. Lecture 3 hours. Total 3 hours per week.

MTH 288 - Discrete Mathematics (3 credits)
Prerequisites: Completion of MTH 263, Calculus I with a grade of C or better or equivalent.
Presents topics in sets, counting, graphs, logic, proofs, functions, relations, mathematical induction, Boolean Algebra, and recurrence relations. Lecture 3 credits. Total 3 credits per week.

MTH 299 Supervised Study (1 credit) Assigns problems for independent study incorporating previous instruction and supervised by the instructor. May be repeated for credit. Variable hours.

Mechanical Engineering Technology

MEC 101 - 102 Introduction to Engineering Technology I - II (2 credits)
Introduces engineering technology. Provides historical background. Covers such topics as professional ethics; problem solving techniques involving forces, structures, materials, fluids, energy, and electricity and U.S. customary and S.I. units, and unit conversions. Lecture 2 hours per week.

MEC 112 Processes of Industry (3 credits)
Analyzes the processes of manufacturing products from materials for industry/engineering. Includes machining, casting, forming, molding, hot/cold working, chipless machining, and welding. Addresses quality assurance and inspection procedures. Lecture 3 hours per week.

MEC 126 Computer Programming for Technologist (2-3 credits)
Introduces computer software programming. Covers programming for the microcomputer using high level languages such as BASIC, FORTRAN, C. PASCAL. Teaches computer solutions of mathematical problems in applications such as circuit analysis and static equilibrium. Lecture 1-2 hours, Laboratory 0-2 hours, Total 2-4 hours per week.

MEC 140 Introduction to Mechatronics (3 credits)
Presents foundational concepts in mechatronics including analog and digital electronics, sensors, actuators, microprocessors, and microprocessor interfacing to electromechanical systems. Surveys components and measurement equipment used in the design, installation, and repair of mechatronic equipment and circuits. Prerequisite: divisional approval. Lecture 2 hours. Laboratory 2 hours.

MEC 161 Basic Fluid Mechanics-Hydraulics/Pneumatics (3-4 credits)
Introduces theory, operation and maintenance of hydraulic/pneumatics devices and systems. Emphasizes the properties of fluids, fluid flow, fluid statics, and the application of Bernouli's equation. Lecture 2-3 hours, Laboratory 2-3 hours, Total 4-6 hours per week.

MEC 205 Piping and Auxiliary Systems (3 credits)
Studies threaded pipe, welded pipe, isometric pipe sketching and layout, gaskets, packing, industrial hoses and tubing, basic steam system operations, automatic and manual valves, and positive displacement pumps. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

Medical Assisting

MDA 100 Introduction to Medical Assisting (1-2 credits)
Introduces the student to the medical practice environment. Stresses the responsibilities of the humanistic approach in the rendering of health care. Lecture 1-2 hours per week.

MDA 101 Medical Assistant Science I (4-5 credits)
Provides an in-depth study of medical terminology, anatomy and physiology, and pathology for the medical assistant. Focuses on clinical application and decision-making in the health environment. Lecture 4-5 hours. Laboratory 2 hours. Total 6-7 hours per week.

MDA 102 Medical Assistant Science II (2 credits)
Prepares students to perform patient care procedures including but not limited to respiratory care procedures, basic nursing arts, equipment maintenance, and patient teaching. Lecture 1 hours. Laboratory 3 hours. Total 4 hours per week.

MDA 104 Medical Assistant Science IV (3 credits)
Prepares students to perform diagnostic tests and assist with physical examinations including ECG administration, basic pulmonary function, testing, catheterization and assisting with minor surgery including sterilization. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MDA 107 Pharmacology for Medical Assistants (2 credits)
Focuses on the administration of medications by the Medical Assistant. Introduces general principles of drug action, pharmacology of the major drug classifications, and drug effects. Lecture 2 hours per week.

MDA 196 On-Site Training (1-5 credits)
Specializes in career orientation and training program without pay in selected businesses and industry, supervised and coordinated by the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

MDA 203 Medical Office Procedures (3 credits)
Instructs the student in the practice of the management of medical offices in areas such as receptionist duties, telephone techniques, appointment scheduling, verbal and written communications, medical and non-medical record management. Explains library and editorial duties, inventory, care of equipment and supplies, security, office maintenance, management responsibilities, placement, and professional ethics and professionalism. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MDA 209 Medical Office Insurance (2 credits)
Focuses on various medical insurance policies with in-depth study of health insurance and managed care including capitation versus few for service in the HMO area. Discusses managed care companies in this area and their requirements. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

Medical Laboratory

MDL 105 Phlebotomy (3-4 credits)
Introduces basic medical terminology, anatomy, physiology, components of health care delivery and clinical laboratory structure. Teaches techniques of specimen collection, specimen handling, and patient interactions. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

Music

MUS 121 Music in Society (3 credits)
Explores the language of music through an introduction to basic elements, forms and styles across time. Acquaints students with composers' lives and influential creative individualities, discovering representative works and milestones in western society. Develops techniques for listening analytically and critically. Reviews historical development and significance of art music within the context of evolving societal structures. Lecture 3 hours. Total 3 hours per week.

MUS 131 Class Voice I (2 credits)
Introduces the many aspects of singing from the physical act through the aesthetic experience. The course is designed for the beginning singer who desires vocal improvement, and for the voice major as an addition to and extension of skills and knowledge necessary for artistic development. Introduces appropriate repertoire. Part I of II. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

MUS 132 Class Voice II (2 credits)
Introduces the many aspects of singing from the physical act through the aesthetic experience. The course is designed for the beginning singer who desires vocal improvement, and for the voice major as an addition to and extension of skills and knowledge necessary for artistic development. Introduces appropriate repertoire. Part II of II. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

MUS 141 Class Piano I (2 credits)
Offers the beginning piano student activities in learning musical notation, in accomplishing sight reading skills, and in mastering techniques of keyboard playing. Presents appropriate literature. Open to all students and may be used to fulfill applied minor instrument requirement for music major. Part I of II. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

MUS 150 Old Time String Band (3 credits)
Introduces the student to the history and performance of traditional old-time string band music of the central Appalachian region with topics on musicians, instrumentation, regional influences, and tunes. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

MUS 163 Guitar Theory and Practice I (3 credits)
Studies the fundamentals of sound production, music theory, and harmony as they apply to guitar. Builds proficiency in both the techniques of playing the guitar and in the application of music fundamentals to these techniques. Presents different types of guitars and related instruments. Emphasizes music as entertainment and as a communication skill. Part I of II. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MUS 164 Guitar Theory and Practice II (3 credits)
Studies the fundamentals of sound production, music theory, and harmony as they apply to guitar. Builds proficiency in both the techniques of playing the guitar and in the application of music fundamentals to these techniques. Presents different types of guitars and related instruments. Emphasizes music as entertainment and as a communication skill. Part II of II. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MUS 221 - History of Music I (3 credits)
Presents the chronology of musical styles from antiquity to the present time. Relates the historical development of music to parallel movements in art, drama, and literature. Develops techniques for listening analytically and critically to music. Part I of II. Lecture 3 hours per week.

MUS 222 - History of Music II (3 credits)
Presents the chronology of musical styles from antiquity to the present time. Relates the historical development of music to parallel movements in art, drama, and literature. Develops techniques for listening analytically and critically to music. Part II of II. Lecture 3 hours per week.

MUS 231 Advanced Class Voice I (2 credits)
Continues MUS 131-132. Continues the expansion of appropriate vocal repertoire. Part I of II. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

MUS 232 Advanced Class Voice II (2 credits)
Continues MUS131-132.Continues the expansion of appropriate vocal repertoire. Part II of II. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

MUS 295 Topics In (1-5 credits)
Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours. 1-5 credits.

Natural Science

NAS 131 Astronomy I (4 credits)
Studies the major and minor bodies of the solar system, stars and nebulae of the milky way, and extragalactic objects. Examines life and death of stars, origin of the universe, history of astronomy, and instruments and techniques of observation. Part I of II. Lecture 3 hours per week. Recitation and laboratory 3 hours per week. Total 6 hours per week.

NAS 132 Astronomy II (4 credits)
Studies the major and minor bodies of the solar system, stars and nebulae of the milky way, and extragalactic objects. Examines life and death of stars, origin of the universe, history of astronomy, and instruments and techniques of observation. Part II of II. Lecture 3 hours per week. Recitation and laboratory 3 hours per week. Total 6 hours per week.

Nursing

NSG 100 Introduction to Nursing Concepts (4 credits)
Prerequisites: Acceptance to the Nursing Program, BIO 141, ENG 111, ITE 119, PSY 230, SDV 101
Introduces concepts of nursing practice and conceptual learning. Focuses on basic nursing concepts with an emphasis on safe nursing practice and the development of the nursing process. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

NSG 106 Competencies for Nursing Practice (2 credits)
Prerequisites: Acceptance to the Nursing Program, BIO 141, ENG 111, ITE 119, MDE 10 or equivalent, 1 -5, PSY 230, SDV 101
Focuses on the application of concepts through clinical skill development. Emphasizes the use of clinical judgment in skill acquisition. Includes principles of safety, evidence-based practice, informatics and math computational skills. Prepares students to demonstrate competency in specific skills and drug dosage calculation including the integration of skills in the care of clients in simulated settings. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Lecture 0-1 hour. Laboratory 3-6 hours. Total 4-6 hours per week.

NSG 115 Healthcare Concepts for Transition (4-5 credits)
Prerequisites: BIO 141, BIO 142, ENG 111, PSY 230, SDV 101, Acceptance to the Transition Program
Co-requisite: NSG 200
Focuses on role transition from Licensed Practical Nurse to Registered professional nurse. Incorporates concepts of nursing practice and conceptual learning to promote health and wellness across the lifespan. Uses the nursing process to explore care delivery for selected diverse populations with common and predictable illness. Emphasizes the use of clinical judgement in skill acquisition. Lecture 3 hours. Laboratory 3-6 hours. Total 6-9 hours per week.

NSG 130 Professional Nursing Concepts (1 credit)
Prerequisites: Acceptance to the Nursing Program, BIO 141, ENG 111, ITE 119, PSY 230, SDV 101
Introduces the role of the professional nurse and fundamental concepts in professional development. Focuses on professional identity, legal/ethical issues and contemporary trends in professional nursing. Lecture 1 hour. Total 1 hour per week.

NSG 152 Health Care Participant (3 credits)
Prerequisite(s): BIO 142, NSG 100, NSG 106, NSG 130, NSG 200
Focuses on the health and wellness of diverse individuals, families, and the community throughout the lifespan. Covers concepts that focus on client attributes and preferences regarding healthcare. Emphasizes population-focused care. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or cooperating agencies, and/or simulated environments. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

NSG 170 Health/Illness Concepts (6 credits)
Prerequisite(s): BIO 142, NSG 100, NSG 106, NSG 130, NSG 200
Focuses on the nursing care of individuals and/or families throughout the lifespan with an emphasis on health and illness concepts. Includes concepts of nursing care for the antepartum client and clients with common and predictable illnesses. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Lecture 4 hours, Laboratory 6 hours. Total 10 hours per week.

NSG 200 Health Promotion and Assessment (3 credits)
Prerequisite(s): Acceptance to Nursing Program, BIO 141, ENG 111, ITE 119, PSY 230, SDV 101
Introduces assessment and health promotion for the individual and family. Includes assessment of infants, children, adults, geriatric clients and pregnant females. Emphasizes health history and the acquisition of physical assessment skills with underlying concepts of development, communication, and health promotion. Prepares students to demonstrate competency in the assessment of clients across the lifespan. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

NSG 210 Health Care Concepts I (5 credits)
Prerequisite(s): BIO 150, NSG 152, NSG 170
Focuses on care of clients across the lifespan in multiple settings including concepts related to physiological health alterations and reproduction. Emphasizes the nursing process in the development of clinical judgment for clients with multiple needs. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Part I of II. Lecture 3 hours, Laboratory 6 hours. Total 9 hours per week.

NSG 211 Health Care Concepts II (5 credits)
Prerequisite(s): BIO 150, NSG 152, NSG 170
Focuses on care of clients across the lifespan in multiple settings including concepts related to psychological and physiological health alterations. Emphasizes the nursing process in the development of clinical judgment for clients with multiple needs. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments. Part II of II. Lecture 3 hours. Laboratory 6 hours. Total 9 hours per week.

NSG 230 Advanced Professional Nursing Concepts (2 credits)
Prerequisite(s): NSG 210, NSG 211
Develops the role of the professional nurse in the healthcare environment in preparation for practice as a registered nurse. Introduces leadership and management concepts and focuses on the integration of professional behaviors in a variety of healthcare settings. Lecture 2 hours. Total 2 hours per week.

NSG 252 Complex Health Care Concepts (4 credits)
Prerequisite(s): NSG 210, NSG 211
Focuses on nursing care of diverse individuals and families integrating complex health concepts. Emphasizes clinical judgment, patient-centered care and collaboration. Lecture 4 hours. Total 4 hours per week.

NSG 270 Nursing Capstone (4 credits)
Prerequisite(s): NSG 210, NSG 211
Provides students with the opportunity to comprehensively apply and integrate learned concepts from previous nursing courses into a capstone experience. Emphasizes the mastery of patient- centered care, safety, nursing judgment, professional behaviors, informatics, quality improvement, and collaboration in the achievement of optimal outcomes of care. Provides supervised learning experiences in faculty and/or preceptor-guided college nursing laboratories, clinical/community settings, and/or simulated environments. Laboratory 12 hours. Total 12 hours per week.

Philosophy

PHI 100 Introduction to Philosophy (3 credits)
Presents an introduction to philosophical problems and perspectives with emphasis on the systematic questioning of basic assumptions about meaning, knowledge, reality, and values. Lecture 3 hours per week.

PHI 260 Studies in Eastern Thinking (3 credits)
Introduces an in-depth study of the East through a variety of approaches which include music, literature, drama and cinema. Places special emphasis on Chinese and Japanese philosophy and religion, especially Buddhism. Lecture 3 hours per week.

Physical Education and Recreation

PED 109 Yoga (1-2 credits)
Focuses on the forms of yoga training emphasizing flexibility. Lecture 0-1 hours. Laboratory 2-4 hours. Total 2-4 hours per week.

PED 117 Fitness Walking (1 credit)
Teaches content and skills needed to design, implement, and evaluate an individualized program of walking, based upon fitness level. Laboratory 2 hours per week.

PED 129 Self-Defense (1-2 credits)
Examines history, techniques, and movements associated with self-defense. Introduces the skills and methods of self-defense emphasizing mental and physical discipline. Lecture 1-2 hours, Laboratory 0-2 hours, Total 1-3 hours per week.

PED 130 Motorcycle Rider Safety - Beginner (2 credits)
Studies principles and basic skills of motorcycle riding with an emphasis on safety. Includes street strategies, protective gear, selection and care/maintenance of motorcycles, and supervised classroom and riding practice. Motorcycles provided. Lecture 1 hour, Laboratory 2 hours.

PED 135-136 Bowling I - II (1-2 credits)
Teaches basic bowling skills and techniques, scoring, rules, etiquette, and terminology. Variable hours per week.

PED 137-138 Martial Arts (1-2 credits)
Emphasizes forms, styles, and techniques of body control, physical and mental disciplines, and physical fitness. Presents a brief history of development of martial arts theory and practice. Lecture 1-2 hours, Laboratory 1-2 hours, Total 1-3 hours per week.

PED 147 Hiking (1-2 credits)
Introduces physical and mental benefits of walking or hiking as a form of physical exercise. Skills developed include how to plan for a hike, what to take, and how to select a trial relative to individual abilities. Provides hiking opportunities to explore local regions. Develops awareness of safety, weather, and ecological considerations. Laboratory 2-4 hours per week.

PED 170 Tai Chi I (1-2 Credits)
Develops an understanding of the Theories and practices of Tai Chi. Explores the energy of exercise that will tone muscles, improve circulation and increase flexibility and balance. Discusses history and philosophy of exercise and relaxation techniques for stress reduction. Lecture 0-1 hours. Laboratory 2-4 hours. Total 2-4 hours per week.

Physics

PHY 121 Principles of Physics I (4 credits).
Covers fundamental principles of physics. Includes mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics from modern physics. Prerequisites 2 units of high school algebra and one unit of high school geometry or equivalent. Part I of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PHY 122 Principles of Physics II (4 credits).
Covers fundamental principles of physics. Includes mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics from modern physics. Prerequisites 2 units of high school algebra and one unit of high school geometry or equivalent. Part II of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PHY 201-202 General College Physics I – II (4 credits/4 credits)
Prerequisite: MTH 163 or division approval.
Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics in modern physics. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PHY 231 - General University Physics I-II (5 credits)
Prerequisite: MTH 263
Teaches principles of classical physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, and optics, with extended coverage of selected topics. Includes recitation as part of the lecture. Part I of II. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

PHY 232 - General University Physics I-II (5 credits)
Prerequisites: MTH 264 and PHY 231
Teaches principles of classical physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, and optics, with extended coverage of selected topics. Includes recitation as part of the lecture. Part II of II. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

PHY 241 - University Physics I (4 credits)
Prerequisites: MTH 263 or divisional approval.
Teaches principles of classical and modern physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, relativity, and nuclear physics. Part I of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PHY 242 - University Physics II (4 credits)
Prerequisites: PHY 241 and MTH 264 or divisional approval.
Teaches principles of classical and modern physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, relativity, and nuclear physics. Part II of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PHY 299 Supervised Study (1 credit)
Assigns problems for independent study incorporating previous instruction and supervised by the instructor.
May be repeated for credit. Variable hours.

Political Science

PLS 135 U.S. Government and Politics (3 credits)
Teaches the political structure, processes, institutions, and policymaking of the US national government. Focuses on the three branches of government, their interrelationships, and how they shape policy. Addresses federalism; civil liberties and civil rights; political socialization and participation; public opinion, the media; interest groups; political parties; elections; and policymaking. The assignments in the course require college-level reading fluency and coherent communication through written reports. **This is a Passport Transfer course**. Lecture 3 hours. Total 3 hours per week.

PLS 136 State and Local Government and Politics (3 credits)
Teaches structure, powers, and functions of state and local government in the United States as related to federalism; constitutionalism; elections; powers of legislative, executive, and judicial powers of state and local government; state-local-federal relations; fiscal matters; metropolitan issues; and policy issues, like health, education, criminal justice and welfare. The assignments in the course require college-level reading fluency and coherent communication through written reports. Lecture 3 hours. Total 3 hours per week.

PLS 241 - International Relations I (3 credits).
Teaches geographic, demographic, economic, ideological, and other factors conditioning the policies of countries and discusses conflicts and their adjustment. Lecture 3 hours per week.

PLS 250 - Introduction to Conflict Resolution (3 credits).
Teaches basic concepts and methods of conflict resolution, which includes the factors that lead to conflict, and how conflicts can be prevented or brought to an end through peaceful means. Focuses on national and international conflict resolution. Lecture 3 hours per week.

Practical Nursing

PNE 145 Trends in Practical Nursing (1 credit)
Studies the role of the Licensed Practical Nurse. Covers legal aspects, organizations, and opportunities in practical nursing. Assists students in preparation for employment. Lecture 1 hour per week.

PNE 155 Body Structure and Function (3-4 credits)
Studies the structure and function of the body.
Lecture 3-4 hours per week.

PNE 161 Nursing in Health Changes I (6-7 credits)
Focuses on nursing situations and procedures necessary to assist individuals in meeting special needs related to human functions.
Lecture 2-4 hours. Laboratory 6-15 hours. Total 10-17 hours per week.

PNE 162 Nursing in Health Changes II (10-11 credits)
Continues the focus on nursing situations and procedures necessary to assist individuals in meeting special needs related to human functions.
Lecture 4-6 hours. Laboratory 12-21 hours. Total 18-25 hours per week.

PNE 163 Nursing in Health Changes III (8-9 credits)
Continues the focus on nursing situations and procedures necessary to assist individuals in meeting special needs related to human functions.
Lecture 4-5 hours. Laboratory 9-15 hours. Total 14-19 hours per week.

PNE 173 Pharmacology for Practical Nurses (1-2 credits)
Studies history, classification, sources, effects, uses and legalities of drugs. Teaches problem solving skills used in medication administrations. Emphasizes major drug classes and specific agents within each class.
Lecture 1-2 hours per week.

Psychology

PSY 120 Human Relations (3 credits)
Introduces the theory and practice of effective human relations. Increases understanding of self and others and interpersonal skills needed to be competent and cooperative communicator. Lecture 3 hours per week.

PSY 200 Principles of Psychology (3 credits)
Surveys the basic concepts of psychology. Covers the scientific study of behavior and mental processes, research methods, biological bases of behavior, sensation and perception, developmental psychology, learning, memory, thinking, intelligence, personality, social psychology, and psychological disorders and treatment. The assignments in the course require college-level reading fluency and coherent communication through written reports. **This is a Passport Transfer course**. Lecture 3 hours per week.

PSY 215 Abnormal Psychology (3 credits)
Prerequisite: PSY 200
Explores historical views and current perspectives of abnormal behavior. Emphasizes major diagnostic categories and criteria, individual and social factors of maladaptive behavior, and types of therapy. Includes methods of clinical assessment and research strategies. Lecture 3 hours per week.

PSY 230 Developmental Psychology (3 credits)
Studies the development of the individual from conception to death. Follows a life-span perspective on the development of the person's physical, cognitive, and psychosocial growth.
Lecture 3 hours per week. Please note: VHCC will continue using PSY 230 with no pre-requisites. However, students who intend to transfer to pursue a bachelor's degree/major in psychology are advised the PSY 200 must be taken before PSY 230.

PSY 235 Child Psychology (3 credits)
Studies development of the child from conception to adolescence. Investigates physical, intellectual, social and emotional factors involved in the child's growth. Lecture 3 hours per week.

PSY 236 Adolescent Psychology (3 credits)
Studies development of the adolescent. Investigates physical, intellectual, social, and emotional factors of the individual from late childhood to early adulthood. Lecture 3 hours per week.

PSY 237 Adult Psychology (3 credits)
Studies development of the adult personality. Investigates physical, intellectual, social, and emotional aspects of aging from early adulthood to death. Lecture 3 hours per week.

Public Service

PBS 265 Interviewing (3 credits)
Analyzes the principles and techniques of interviewing in various organizational settings. Examines reliability and validity of information gained through survey interviewing, employment and selection interviewing, performance appraisal and disciplinary interviewing as well as counseling interviewing. Lecture 3 hours per week.

PBS 266 Group Leadership (3 credits)
Focuses on the dynamics of individual behavior and group processes. Examines the role of group members' decision making, use of power, creativity and controversy, problem solving, and group public discussion. Lecture 3 hours per week.

Radiography

RAD 105 Introduction to Radiology, Protection and Patient Care (2-3 credits)
Prerequisite: Acceptance into the Radiography Program.
Presents brief history of radiologic profession, code of ethics, conduct for radiologic students, and basic fundamentals of radiation protection. Teaches the care and handling of the sick and injured patient in the radiology department. Introduces the use of contract media necessary in the investigation of the internal organs. Lecture 2-3 hours per week.

RAD 110 Imaging Equipment and Protections (3 credits)
Prerequisite: RAD 105 and RAD 245
Discusses the basic components of a radiographic unit, principles of x-ray production, principles of image receptors, automatic processing, film evaluation and concepts in radiation protection and radiobiology. Lecture 3 hours per week.

RAD 111 - 112 Radiologic Science I - II (4 credits/4 credits)
Prerequisites: RAD 105 and RAD 245
Teaches concepts of radiation, radiography physics, fundamentals of electromagnetic radiation, electricity and magnetism, and application of these principles to radiography. Focus on x-ray production, emission, and x-ray interaction with matter. Lecture 3 hours, Laboratory 3 hour, Total 6 hours per week.

RAD 115 Principles of Magnetic Resonance Imaging (2-3 credits)
Presents concepts of Magnetic Resonance Imaging and Physics. Teaches fundamentals of Magnetic Resonance and application of principles. Prerequisite: ARRT or eligible. Lecture 2-3 hours per week.

RAD 121 Radiographic Procedures I (4 credits)
Prerequisites: RAD 105 and RAD 245
Introduces procedures for positioning the patient's anatomical structures relative to x-ray beam and image receptor. Emphasizes procedures for routine examination of the chest, abdomen, extremities, and axial skeleton. Lecture 3 hours, Laboratory 3 hours, Total 6 hours per week.

RAD 136 Clinical Procedures in Magnetic Resonance Imaging (2-3 credits)
Develops technical skills in Magnetic Resonance procedures. Focuses on manipulation of equipment, patient care, and procedures. Clinical 10-15 hours per week.

RAD 190 Coordinated Internship (1-5 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

RAD 195 Topics in Pharmacology for Technologist (1-5 credits)
Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours.

RAD 196 On-Site Training Clinical Internship in Computed Tomography (1-5 credits)
Specializes in career orientation and training program without pay in selected businesses and industry, supervised and coordinated by the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

RAD 205 Radiation Protection and Radiobiology (3 credits)
Prerequisites: RAD 110, RAD 112 and RAD 121-221
Studies methods and devices used for protection from ionizing radiation. Teaches theories of biological effects, cell and organism sensitivity, and the somatic and genetic effects of ionizing radiation. Presents current radiation protection philosophy for protecting the patient and technologist. Lecture 3 hours per week.

RAD 215 Correlated Radiographic Theory (2 credits)
Prerequisites: RAD 110, RAD 112 and RAD 121-221
Presents intensive correlation of all major radiologic technology subject areas. Studies interrelationships of biology, physics, principles of exposure, radiologic procedures, patient care, and radiation protection. Lecture 2 hours per week.

RAD 221 Radiographic Procedures II (4 credits)
Prerequisites: RAD 110 and RAD 121
Continues procedures for positioning the patient's anatomical structures relative to x-ray beam and image receptor. Emphasizes procedures for routine examination of the skull, contrast studies of internal organs, and special procedures employed in the more complicated investigation of the human body. Lecture 3 hours, Laboratory 3 hours, Total 6 hours per week.

RAD 225 Specialized Patient Care Procedure (2 credits)
Prerequisites: RAD 110, RAD 112 and RAD 121-221
Focuses on specific nursing procedures associated with routine and emergency conditions encountered in the performance of radiographic examinations. Teaches medication preparation and administration principles. Lecture 2 hours per week.

RAD 233 Anatomy and Positioning of the Breast (1 credits)
Prerequisite: ARRT or eligible
Presents the risk factors for breast disease, anatomy and physiology of the breast and discusses the various pathologies identified through mammography. Includes routine and special projections of the breast. Lecture 1 hour per week.

RAD 234 Breast Imaging/Instrumentation (1 credits)
Prerequisite: ARRT or eligible
Discusses the dedicated radiography equipment necessary for breast imaging. Includes proper technical factors, radiation protection techniques, and proper accessory equipment. Lecture 1 hour per week.

RAD 235 Quality Assurance in Mammography (1 credits)
Prerequisite: ARRT or eligible
Discusses the components of quality assurance in mammography and the accreditation programs developed to ensure quality in breast imaging facilities. Lecture 1 hour per week.

RAD 240 Radiographic Pathology (3 credits)
Prerequisite: BIO 141-142 and RAD 121-221
Presents a survey of common medical and surgical disorders that affect radiographic image. Discusses conditions related to different systems of the human body. Studies the correlation of these conditions with radiographs. Lecture 3 hours per week.

RAD 242 Computed Tomography Procedures and Instrumentation (2 credits)
Prerequisite: AART or eligible
Focuses on the patient care, imaging procedure and physics and instrumentation related to computed tomography imaging. Lecture 2 hours per week.

RAD 245 Radiologic Specialties (1- 2 credits)
Prerequisite: Acceptance into the Radiography Program
Introduces the study of treatment of disease as it relates to various imaging modalities, computerized tomography, and magnetic resonance imaging. Introduces computers and other innovations in radiology. Emphasizes theory, principle of operation, and clinical application of these topics. Lecture 1-2 hours per week.

RAD 246 Special Procedures (1- 2 credits)
Prerequisites: BIO 141-142 and RAD 121-221
Studies special radiographic and surgical procedures and equipment employed in the more complicated investigation of internal conditions of the human body. Lecture 1-2 hours per week.

RAD 247 Cross-Sectional Anatomy (3 credits)
Prerequisites: ARRT or eligible, BIO 141-142 and RAD 121-221
Presents a specialized study of cross-sectional anatomy relevant to sectional imaging modalities such as computed tomography and magnetic resonance imaging. Lecture 3 hours per week.

RAD 255 Radiographic Equipment (3 credits)
Prerequisites: ARRT or eligible, BIO 141-142 and RAD 121-221
Studies principles and operation of general and specialized X-ray equipment. Lecture 3 hours per week.

RAD 256 Radiographic Film Evaluation (3 credits)
Prerequisites: BIO 141, 142, RAD 111, 112, 121, 221.
Presents a concentrated study and practical evaluation of radiographic quality and disease effects on radiographs. Focuses on technical factors, procedural factors, equipment malfunctions, and other difficulties associated with radiographs. Lecture 3 hours per week.

RAD 290 Coordinated Internship (1-5 credits)
Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

RAD 295 Topics in CT Registry Preparation (1-5 credits)
Provides an opportunity to explore topical areas of interest to or needed by students. May be used for special honors courses. May be repeated for credit. Variable hours.

RAD 298 Seminar and Project (1-5 credits)
Requires completion of a project or research report related to the student's occupational objectives and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours.

Real Estate

REA 100 Principles of Real Estate (4 credits)
Examines practical applications of real estate principles. Includes a study of Titles, estates, land descriptions, contracts, legal instruments, financing and management of real estate. Lecture 4 hours per week.

REA 216 Real Estate Appraisal (3 credits)
Explores fundamentals of real estate evaluation: methods used in determining value; application of the valuation process and the principal techniques by simulations, working problems and reviewing actual appraisals. Includes the opportunities available in the appraisal field. Lecture 3 hours per week.

Religion

REL 200 Survey of the Old Testament (3 credits)
Surveys books of the Old Testament with emphasis on prophetic historical books. Examines the historical and geographical setting and place of the Israelites in the ancient Middle East as background to the writings. Lecture 3 hours per week.

REL 210 Survey of the New Testament (3 credits)
Surveys books of the New Testament with special attention upon placing the writings within their historical and geographical setting. Lecture 3 hours per week.

REL 230 Religions of the World (3 credits)
Introduces the religions of the world with attention to origin, history, and doctrine. Lecture 3 hours per week.

Safety

SAF 127 Industrial Safety (2 credits)
Provides basic understandings of safety and health in an industrial situation. Includes hazardous materials, substances, conditions, activities and habits as well as the prescribed methods and equipment needed for the apprentice to protect himself/herself and others. Lecture 2 hours per week.

SAF 130 Industrial Safety - OSHA 10 (1 credit)
Presents an introduction to occupational health and safety and its application in the workplace. Emphasizes safety standards and the Occupational Safety and Health Act (OSHA), its rules and regulations (OSHA 10). Lecture 1 hour per week.

Small Unmanned Aerial Systems (sUAS)

UMS 107 Small Unmanned Aircraft Systems (sUAS) Remote Pilot Ground School (2-3 credits)
Presents the aeronautical knowledge required for FAA approved commercial operations as a Remote Pilot with small Unmanned Aircraft Systems (sUAS) rating. Covers the regulations applicable to small UAS operations, loading and performance, emergency procedures, crew resource management, determining the performance of the small unmanned aircraft, and maintenance/inspection procedures. Prepares students for the FAA written examination required to obtain the Remote Pilot certificate. Lecture 2-3 hours. Total 2-3 hours per week.

UMS 111 Small Unmanned Aircraft Systems (sUAS) I (3 credits)
Introduces students to the history of small Unmanned Aerial Systems (sUAS), surveys current platforms, applications, components, and sensors. Covers the theory of flight, operations, manual flight, maintenance, and required record keeping. Introduces mission planning, crew management, and autonomous control. Emphasizes the ethical, legal, and safe use of sUAS. Lecture 3 hours. Total 3 hours per week.

UMS 177 Small Unmanned Aircraft Systems (sUAS) Components and Maintenance (3 credits)
Provides an introduction to the basic equipment and techniques used in maintaining, repairing, and upgrading sUAS to assure airworthiness and proper operation of the other components. Emphasizes safe practices in repair and handling of components and develops fundamental skills in troubleshooting/repair of the circuits, subsystems and components typically found in the complete sUAS. Covers payload sensor mounting, power management and security threat management. Lecture 2 hours. Laboratory 2-3 hours. Total hours per week 4-5.

Sociology

SOC 200 Introduction to Sociology (3 credits)
Introduces the fundamental concepts and principles of sociology with attention to sociological theory, research methods, and the impact of social inequality. Examines a variety of topics such as culture, race, social class, gender, major social institutions and their role in contemporary society, and the processes of social change. Lecture 3 hours per week.

SOC 211 Cultural Anthropology (3 credits)
Examines the origins, development, research, diversification and evolution of human cultures. Includes exposure to the variability of both Western and Non-Western aspects of culture. Provides an introduction to the nature of culture and its relationship to various social institutions and societies. **This is a Passport Transfer course**. Lecture 3 hours per week.

SOC 215 Sociology of the Family (3 credits)
Studies topics such as marriage and family in social and cultural context. Addresses the single scene, dating and marriage styles, child-rearing, husband and wife interaction, single parent families, alternative life-styles. Lecture 3 hours per week.

SOC 235 Juvenile Delinquency (3 credits)
Studies demographic trends, casual theories and control of juvenile delinquency. Presents juveniles' interaction with family, school, police, courts, treatment programs, and facilities. Also approved for ADJ juvenile curriculum. Lecture 3 hours per week.

SOC 236 Criminology (3 credits)
Studies research and casual theories of criminal behavior. Examines crime statistics, crime victims, and types of criminal offenses. Introduces role of police, judicial and correctional systems in treatment and punishment of offenders. Is also approved for ADJ criminology. Lecture 3 hours per week.

SOC 266 Race and Ethnicity (3 credits)
Prerequisite: Ability to read in English at the college level.
Considers race and ethnicity as social constructs that deeply affect our personal experience and our social institutions. Examines the relationships of racial and ethnic groups with each other and with the larger society, and the ways in which these relationships are constantly changing. Explores the experience of different groups and examines ideas of racial justice and equality. Introduces significant theoretical approaches to the study of race and ethnicity. Lecture 3 hours, Total 3 hours per week.

SOC 268 Social Problems (3 credits)
Introduces the fundamental concepts underlying social problems construction with attention to how these problems are defined, understood and arbitrated. Examines a variety of topics such as researching social problems and policymaking.

Spanish

SPA 101 Beginning Spanish I (4-5 credits)
Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish sentence structure. May include an additional hour of oral drill and practice per week. Part I of II. Lecture 4-5 hours per week. May include one additional hour of oral practice per week.

SPA 102 Beginning Spanish II (4-5 credits)
Prerequisite: SPA 101 or division approval
Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish sentence structure. May include an additional hour of oral drill and practice per week. Part II of II. Lecture 4-5 hours per week. May include one additional hour of oral practice per week.

SPA 201 Intermediate Spanish I (3-4 credits)
Prerequisite: SPA 102 or division approval
Continues to develop understanding, speaking, reading, and writing skills. May include oral drill and practice. Part I of II. Lecture 3-4 hours per week. May include one additional hour of oral practice per week.

SPA 202 Intermediate Spanish II (3-4 credits)
Prerequisite: SPA 201 or division approval
Continues to develop understanding, speaking, reading, and writing skills. May include oral drill and practice. Part II of II. Lecture 3-4 hours per week. May include one additional hour of oral practice per week.

Student Development

All students enrolled in an associate degree, diploma or certificate program must complete an orientation (SDV) course during their first semester in college.

SDV 100 College Success Skills (1-3 credits)
Assists students in transition to colleges. Provides overviews of college policies, procedures, curricular offerings. Encourages contacts with other students and staff. Assists students toward college success through information regarding effective study habits, career and academic planning, and other college resources available to students. May include English and Math placement testing. Strongly recommended for beginning students. Required for graduation. Lecture 1-3 hours per week.

SDV 101 Orientation to College Success (1 credit)
Introduces students to the skills which are necessary to achieve their academic goals, to the services offered at the college and to the discipline in which they are enrolled. Covers topics such as services offered at the college including the learning resources center; counseling, and advising; listening, test taking, and study skills; and topical areas which are applicable to their particular discipline. Lecture 1-3 hours per week.

SDV 106 Preparation for Employment (1-2 credits)
Provides experience in resume writing, preparation of applications, letters of application, and successfully preparing for and completing the job interview. Assists students in identifying their marketable skills and aptitudes. Develops strategies for successful employment search. Assists students in understanding effective human relations techniques and communication skills in job search.
Lecture 1-2 hours per week.

SDV 108 College Survival Skills (1- 3 credits)
Provides an orientation to the college. Introduces study skills, career and life planning. Offers an opportunity to engage in activities aimed at self-discovery. Emphasizes development of "coping skills" such as listening, interpersonal relations, competence, and improved self-concept. Recommended for students enrolled in developmental courses. Lecture 1-3 hours per week.

Welding

WEL 110 Welding Processes (3 credits)
Introduces types of welding, their advantages and disadvantages. Points out effects of welds on metals to be machined. Provides practice and demonstration in welding. Lecture 2 hours, Laboratory 3 hours, Total 5 hours per week.

WEL 117 Oxyfuel Welding and Cutting (3-4 credits)
Introduces history of oxyacetylene welding, principles of welding and cutting, nomenclature of the equipment, development of the puddle, running flat beads, and butt welding in different positions. Explains silver brazing, silver and soft soldering, and safety procedures in the use of tools and equipment. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

WEL 120 - Introduction to Welding
Introduces history of welding processes. Covers types of equipment, and assembly of units. Stresses welding procedures such as fusion, non-fusion, and cutting oxyacetylene. Introduces arc welding and plasma arc cutting. Emphasizes procedures in the use of tools and equipment.
Lecture 1-2 hours. Laboratory 2-3 hours. 2-3 credits

WEL 123 Shielded Metal ARC Welding (Basic) (3-4 credits)
Teaches operation of AC and DC power sources, welding polarities, heats, and electrodes for use in joining various metal alloys by the arc welding process. Deals with running beads, butt, and fillet welds in all positions. Emphasizes safety procedures. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

WEL 124 Shielded Metal Arc Welding (Advanced) (3 credits)
Continues instruction on operation of AC and DC power sources, welding polarities, heats and electrodes for use in joining various metal alloys by the arc welding process. Deals with running beads, butt, and fillet welds in all positions. Emphasizes safety procedures. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

WEL 130 Inert Gas Welding (3-4 credits)
Introduces practical operations in the uses of inert-gas-shield arc welding. Discusses equipment, safety operations, welding practice in the various positions, process applications, and manual and semi-automatic welding. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week.

WEL 136 Welding III (Inert Gas) (2 credits)
Studies Tungsten and metallic inert gas procedures and practices including principles of operation, shielding gasses, filler rods, process variations and applications, manual and automatic welding, equipment and safety. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

WEL 150 Welding Drawing and Interpretation (3 credits)
Teaches fundamentals required for successful drafting as applied to the welding industry. Includes blueprint reading, geometric principles of drafting and freehand sketching, basic principles of orthographic projection, preparation of drawings and interpretation of symbols. Lecture 2-3 hours per week.

WEL 160 Gas Metal Arc Welding (3-4 credits)
Introduces semi-automatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes, and gases. Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week

WEL 161 - Flux Cored Arc Welding (FCAW)
Introduces flux cored semi-automatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes, and gases. Lecture 2 hours. Laboratory 3 hours. 3 credits

WEL 164 - Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG)
Introduces practical operations in the use of tungsten arc welding and equipment. Studies equipment operation setup, safety, and practice of Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG).
Lecture 2 hours. Laboratory 3 hours. 3 credits

Administration, Faculty, Instructional & Support Staff

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B.S., University of Tennessee, 1998
M.S., Virginia Polytechnic Institute & State University, 2001

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B.S., Liberty University, 2008
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Superintendent of Buildings & Grounds

Ms. Jessie O'Quinn
Executive Assistant to the President

Ms. Michelle Phillips
Admissions & Records Specialist

Mr. Harold Powers
*Housekeeping Worker**

Mr. Mike Price
*Marketing Counselor, Small Business Development Center**

Ms. Ella Ratcliffe-Sutherland
Office Manager, Upward Bound and EXCEL

Ms. Andrea Repass
Office Manager, Instruction & Student Services

Mr. Adam Rhea
Computer Technology Specialist

Ms. Sharon Rowe
Office Manager, Professional & Technical Studies

Mr. Jeffery Russell
Research & Assessment Specialist

Ms. Reva Russell
Testing Center Specialist

Mr. Dillon Scott
*Moose Academic Resource Center Coordinator**

Ms. Crystal Shaver
*Testing Center Assistant**

Ms. Mary Snead
Finance Manager

Ms. Shasta Sowers
Connections Coach

Ms. Kayla Spenser
*Office Manager, Financial & Administrative Services/Buildings & Grounds**

Ms. Gleneda Sproles
Payroll Technician

Mr. Danny Thomas
Buildings and Grounds Technician

Ms. Vota Thomas
Office Manager, Workforce Development & Continuing Education

Ms. Kristy Trent
Accountant

Ms. Drema Waters
*Advancement Specialist, Institutional Advancement**

Ms. Karin Widener
Office Manager, Arts & Sciences

Mr. Kevin Widener
Police Chief

Ms. Cathy Zeigler
Admissions Assistant

**Part-time Staff*

Classified Staff Emeriti

Ms. Dorothy C. Adams
Purchasing Officer

Ms. Peggy H. Bailey
Secretary, Vice President of Administration

Ms. Linda M. Carty
Administrative Assistant to the President

Ms. Joyce Crusenberry
Library Reference Assistant

Mr. Ralph "Bucky" Farris
Police Chief

Ms. Patricia R. Fullen
Financial Aid Officer

Ms. Deborah Hale
Human Resource Manager

Ms. Judy S. Plummer
Secretary, Center for Business and Industry

Ms. Judy B. Sullins
Receptionist/Switchboard Operator

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