Course Description

This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language.

This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (Quantitive Option).
Prerequisite: MAT060 & MAT070 or DMA010, DMA020, DMA030, & DMA040 or sufficient placement test score in math.

Instructional Materials
- Students must bring a Windows laptop for their use while in class.
- An Android mobile device is quite helpful. For those without an Androice device, several Android tablets are available for students to borrow while participating in this course.

Grading Practices

<table>
<thead>
<tr>
<th>How Grades Are Computed:</th>
<th>Grading Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review Questions: 20%</td>
<td>A: 90-100</td>
</tr>
<tr>
<td>Lab Assignments: 20%</td>
<td>B: 80-89</td>
</tr>
<tr>
<td>Programming Assignments: 40%</td>
<td>C: 70-79</td>
</tr>
<tr>
<td>Final Exam: 20%</td>
<td>D: 60-69</td>
</tr>
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<td></td>
<td>F: 0-59</td>
</tr>
</tbody>
</table>

Please note that grades are not mailed. You may access grades, unofficial transcripts, and schedules online through your student WebAdvisor account.

Task Completion Policy

**Due Dates:** Assignments will be posted on the course web site and due as specified, typically at 11:55pm Friday night. Since this is a 5 contact hour class that meets only 2 hours per week, expect that considerable time outside of class will be required. It is the student's responsibility to keep track of all assignments and insure they are completed on time. The course web site is always the most current source of information on assignments. **Late Assignments:** Late assignments will not be accepted regardless of excuse.

Attendance Policy

There are no excused absences other than a conflicting academic obligation to the college. Three tardies constitute one absence. A student is considered tardy if not in attendance in the first 5 minutes after the start of class. The maximum number of class meetings that can be missed in this course is 2. The last day to voluntarily withdraw is Friday, April 7th. See **Attendance Policy** in Section 3 for full details on attendance and withdrawals.

Inclement Weather

If the college is on a delayed schedule due to weather, this class will meet from 11:30 am to 12:50 pm. In the event of a weather-related closure that falls on a Monday, **Wednesday** from 10am to 11:50 will be used as an alternate meeting time. Please see the Inclement Weather Policy in Section 3 for details regarding announcements, etc.

Class Rules & Regulations: see Section 3 for HCC rules
- Student conduct should contribute to a learning environment.
- Our classroom is not a phone booth. Phone calls & text messaging are distracting to others. If a phone call is urgent, please exit the room and return when finished.
- Students are expected to be present for the entire class period. From time to time it may be necessary for a student to leave during class. This should be infrequent, not habitual.
Academic Honesty: see Section 3 for full HCC policy and consequences of academic dishonesty. A guide for understanding plagiarism and how to avoid it is available through the Library’s resource webpages: http://haywood.libguides.com/plagiarism.

Course Competencies
Upon completion of this course, students will be able to:
1. Use common application components found in the App Inventor Component Designer
2. Use generally accepted guidelines to name application components
3. Use variables that follow generally accepted naming conventions
4. Use the application development process to solve a problem & implement a solution
5. Modify component properties using the Component Designer and Blocks Editor
6. Use common properties and events associated with a component
7. Describe the difference between compile (or syntax) errors and runtime errors
8. Use components to gather user input and display user output
9. Use string manipulation, concatenation, and other string methods
10. Use arithmetic, relational, and logical operators in conditional statements
11. Use formatting functions to improve the appearance of output
12. Add input validation to programs
13. Demonstrate the use of loops in programs
14. Explain what an infinite loop is and describe how to avoid them
15. Demonstrate how procedures allow blocks to be re-usable
16. Describe how procedures help modularize programs

Course Instructional Methods
- lecture
- example-based learning
- cooperative learning
- problem-based learning

Projected Schedule of Assignments
The first lessons require far less programming logic and will be due weekly. Programs begin to increase in complexity when conditional blocks are introduced and will be due every two weeks. Concepts presented in each lesson build upon those from previous lessons, making it vital to keep pace with the course assignments. You cannot expect to understand the material in lesson 6 if you’ve skipped lesson 5. Assignments will take the following forms:

- Concepts: Presented as reading assignments from the text and in lecture format using PowerPoint slides. Tutorials found in the text are key to your understanding of the concepts and should be consistently followed step by step. Your grasp of the concepts found in each lesson will be vital in completing the homework questions, lab & programming assignments.

- Homework Questions: These multiple choice and short answer questions accompany each lesson and will help test and solidify your understanding of the concepts presented.

- Lab Assignments: These will be functioning programs for which a solution will be presented. Students will create the application by following the development process presented in an accompanying video. This utilizes one of the best methods to learn programming; through functioning examples. Once the video solution is complete, it will be the responsibility of each student to implement additional features and functionality as required in the lesson.
Programming Assignments: These will be programs in which the student develops an original solution from scratch. The lab assignment provides a useful example of the concepts required for this assignment and should be completed before tackling the original program. Programming assignments do not have a single “right answer”. Both lab and programming assignments will be evaluated on successful implementation of the required features.

Final Exam: This will be a comprehensive, in-class exam on the final day of class, similar in format to the homework questions.

The schedule of lessons is as follows (subject to change):

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Lesson</th>
<th>Application</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Intro to Programming &amp; App Inventor</td>
<td>1</td>
<td>Guitar lab and Soothing Sounds application</td>
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<tr>
<td>2</td>
<td>Working with Media</td>
<td>2</td>
<td>Change Counter lab and Temperature Converter application</td>
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<tr>
<td>3</td>
<td>Input, Variables, and Calculations</td>
<td>3</td>
<td>Paint Pot lab and Draw Shapes application</td>
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<tr>
<td>4</td>
<td>Graphics &amp; Using a Canvas</td>
<td>4</td>
<td>Mole Mash lab and Tic-Tac-Toe application</td>
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<tr>
<td>5</td>
<td>Decision Blocks and Boolean Logic</td>
<td>5</td>
<td>President Quiz lab and Number Guessing Game application</td>
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<tr>
<td>6</td>
<td>Working with Lists, Check Boxes, List Pickers, &amp; Notifiers</td>
<td>6</td>
<td>Blackjack Game lab and Random Number Test application</td>
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<tr>
<td>7</td>
<td>Repetition Blocks (Loops)</td>
<td>7</td>
<td>Validate Password lab and Date Formatting application</td>
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<tr>
<td>8</td>
<td>Working with Text</td>
<td>8</td>
<td>Popping Balloons lab and Trap the Ghosts application</td>
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<tr>
<td>9</td>
<td>Graphics and Animation</td>
<td>9</td>
<td>Break Out Game lab and Airline Seat Selection application</td>
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<tr>
<td>10</td>
<td>Creating and Using Procedures</td>
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<td>16</td>
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<tr>
<td>Final Exam</td>
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</tbody>
</table>

Concerns with Course
If you have any concerns about this course, including accessibility concerns, first consult your instructor. If after meeting with your instructor, you feel that your concern has not been satisfactorily addressed, or if you feel that you cannot effectively communicate with your instructor about the issue, you may contact the following people in the following order:

First Contact
Business & Industry Dean: Doug Long 828-565-4070 delong@haywood.edu
Second Contact
Vice President of Instruction: Wendy Hines 828 565-4069 whines@haywood.edu
Section 2: Department-specific policies & information

Program Outcomes
The Associate in Computer Information Technology degree program is designed to develop the following skills:
- Install and configure Windows application and operating system software
- Perform basic PC hardware/software troubleshooting
- Be familiar with the use of Linux workstations
- Understand the basic concepts of computer networking
- Manage a Windows Server Active Directory domain-based network
- Design and utilize a multiple table, non-redundant database
- Design and develop a static or active content Web site
- Design and develop database-driven business applications in a Windows server environment
- Exhibit professionalism, communication skills, and ethical conduct
- Understand the basic concepts of information security

Technical Standards
The Computer Information Technology curriculum is designed to prepare graduates for employment with organizations that use computers to process, manage, and communicate information. Course work will develop a student’s ability to communicate complex technical issues related to computer hardware, software, and networks in a manner that computer users can understand. To effectively train Computer Information Technology professionals, the performance of certain functions is incorporated throughout the program. Faculty and students are required to demonstrate proficiency of these functions in the Computer Information Technology program. The essential functions include:

1. Critical Thinking: critical thinking ability sufficient to gather relevant information, interpret data, recognize problems, and use a process to make informed, independent decisions that show good judgment. For example, making a good decision about the best computer to purchase based on user needs.

2. Interpersonal Skills: interpersonal abilities sufficient to interact with other students, function and contribute as part of a team, be accountable for self and others, and maintain appropriate hygiene for an office environment. For example, the ability to communicate properly with other students on a team project.

3. Communication Skills: communication skills sufficient to speak English, write English, listen and comprehend written and spoken words, and communicate information and ideas so others will understand. For example, the ability to communicate problems in completing a project with an instructor.

4. Mobility: possess sufficient mobility to be able to complete computer installation and repairs related to computer hardware, software, and peripheral equipment.

5. Motor Skills: motor skills sufficient to sit for extended periods of time and manual dexterity for computer work/keyboarding, ability to work with small objects and small hand tools. For example, the ability to install more memory inside a personal computer.

6. Hearing: hearing ability to hear sounds at a close range (within a few feet of the observer). For example, being able to hear and respond to an instructor or other students in a classroom.
7. Visual: visual ability to see with normal or corrected vision, tolerate working indoors in artificial light and the glare of computer screens. For example, the ability to look at a computer screen for long periods of time.
8. Tactile: tactile ability to perform physical activities that require use of hands and arms. For example, the ability to install computer software on a computer.
9. Weight-Bearing: weight-bearing ability to lift and move 30 pounds. For example, the ability to lift a personal computer before repairing it.
10. Cognitive: cognitive ability to use logic and reason, attention to detail, and short-term and long-term memory skills. For example, the ability to remember a concept covered in a class in a previous week of a semester.

EXAMPLES ARE NOT ALL INCLUSIVE.

Haywood Community College is an ADA compliant institution. The College does not discriminate on the basis of disability in the admissions process or in access to its programs, services and/or activities for qualified individuals who meet essential eligibility requirements. The College will provide reasonable accommodations for documented disabilities of individuals who are eligible to receive or participate in college programs, services and/or activities. Student Services provides a disability counselor to assist students in requesting disability related accommodations. If a student believes that he/she cannot meet one or more of the essential functions without accommodations, the student is encouraged to disclose the disability to the disability counselor as soon as possible. Students must certify the ability to meet essential functions of the profession by a signed statement in the beginning of the program.

Honors Program
If you are eligible to participate in the Honors Program and wish to pursue honors credit for this course, please let your instructor know as soon as possible so that you can work together to develop a project and compose an honors contract. Honors contracts cannot be submitted for short semester courses or courses completed during summer semesters. More information about the honors program is available: https://www.haywood.edu/instruction/honors-program.
Section 3: HCC-specific policies & information

General Competencies
Haywood Community College seeks to take learning beyond the classroom by encouraging individuals to develop their abilities in collaboration, communication, and critical thinking/problem solving.

Collaboration is the process of working cooperatively to achieve the needs of a group or team. Students will:
1. Respect group members’ individual viewpoints and roles.
2. Develop group ideas, goals, and consensus.
3. Meet deadlines and goals responsibly.

Communication is the ability to comprehend and communicate through various forms of media. Students will:
1. Communicate, verbally and nonverbally, in relation to his/her course of study.
2. Communicate with a diverse audience.
3. Use appropriate mediums for communication.
4. Use appropriate grammar, spelling, style, and mechanics.

Critical thinking is the process of analyzing and evaluating issues and ideas, identifying good and bad reasoning, and constructing creative and sustainable solutions to problems, in a variety of settings. Students will:
1. Raise vital questions and issues.
2. Gather and evaluate information from a variety of sources.
3. Compare and contrast different points of view.
4. Develop well-reasoned, creative conclusions and solutions.

HCC Rules and Regulation

Electronic Communication: Faculty will only contact students through HCC email or Moodle message (an option for online class communication).

Food and Drink: NO food or drink allowed in computer labs.

Children: According to NC law, minors, under the age of sixteen, are not permitted in classrooms, shops, or laboratories during regularly scheduled courses unless they are attending as students enrolled in the Career and College Promise Program, Haywood Early College high school, or the Intellectually Gifted Program. Students are asked not to bring children to class, campus meetings, or activities, unless the activity specified it is open to children.

Classroom Behavior: Any conduct which is detrimental to that student's success or best performance or to the success or best interests of the class as a whole may result in the permanent removal of the student from the class. Detrimental activities include rude or disruptive behavior including but not limited to inappropriate emails, chats and discussion board posts to student or the instructor, lack of effort, negative influence upon others in the class, non-instructional use of cell phones, etc.

Tobacco: HCC is a tobacco-free campus.


Classroom Safety
The College reserves the right to maintain a safe and orderly educational environment for the students and staff. Therefore, when, in the judgment of College officials, a student’s conduct disrupts or threatens to disrupt the college community, appropriate disciplinary action will be taken to restore and protect the sanctity of the community.

No disciplinary sanctions other than temporary removal from class or activity (only for duration of said activity) may be imposed upon any student without due process. Due process procedures are established to guarantee a student accused of a Student Code of Conduct violation the right of a hearing, a presentation of charges, evidence for charges, the right to present evidence, the right to have witnesses on one’s behalf and to hear witnesses on behalf of the accuser(s), the right to counsel, and the right to appeal.

Students have the right to a voluntary medical withdrawal. When illness, injury, or psychological/psychiatric conditions or disabilities occur while a student is enrolled that interfere with a student’s ability to participate in the College’s programs, a student or guardian may request a medical withdrawal from school. The Vice President of Student Services must approve all medical withdrawals.

It may become necessary for an involuntary/administrative withdrawal for a student with illness, injury, or psychological/psychiatric conditions or disabilities when Section III.E of the Student Code of Conduct is violated due to behavior related to a disability that is sufficiently serious to constitute a direct threat.

See the Catalog and Student Handbook (Student Rights and Code of Conduct) at www.haywood.edu for a full explanation of policy and procedures.

Attendance Policy
First attendance: Students are expected to be in immediate, regular attendance for all HCC classes beginning with the course start date and prior to the census (10%) date. Students registered for fully online courses must complete the HOP attendance quiz in each fully online course prior to the census (10%) date. Students registered for a hybrid course must complete the HOP Assignment before the 10% census date unless the class physically meets prior to the 10% date. Students who do not meet these requirements will be reported as “No Shows.” To access Moodle, HCC’s online course delivery system: http://moodle2.haywood.edu.

“No Shows” forfeit their registration in the course. This may negatively impact academic progress and any financial aid award per federal guidelines. Reinstatement will be made only under the most unusual circumstances. Reinstatement requires the recommendation of the instructor, the consent of the division chair, and the approval of the Vice President of Instruction.

Attendance throughout the semester: Students who miss fifteen percent (15%)* or more of the total possible time for a course for any reason before the “last day to withdraw from a course” as set forth in the Academic Calendar, will receive a grade of “W” for the course.

It is the student’s responsibility to withdraw from course(s) if they cannot meet the requirements of the course(s). The student should first consult his/her instructor or advisor before requesting
to be withdrawn from a course. Students receiving financial aid should also consult a financial aid advisor before requesting to be withdrawn from a course.

To officially begin the withdrawal process: The student should notify Enrollment Management of withdraw intent by completing the web form found on the college web site. To find this form:

1. Go to the web site [www.haywood.edu](http://www.haywood.edu) in your web browser
2. Click the Students link found near the top of the page to display a list of additional links
3. Click the Enrollment Management link in the All Students column
4. Click Withdrawal Request at the bottom of the sidebar to the left
5. Fill out each data item on the form and click the Submit button at the bottom

The student may alternatively visit Student Services (1500 bldg.) and complete an official withdrawal form. A grade of “W” will be recorded on his/her academic record. Withdrawals are recorded on the transcript, but not computed in the GPA.

If students do not initiate the withdrawal process, the instructor is required to initiate the administrative process to withdraw the student from the course assigning a grade of “W”. A student who registers for a course as audit work, but withdraws, will be assigned a grade of “W” for the course.

Students who stop attending courses may not be given a grade of “F”. They must be given a grade of “W”. Students are given an “F” if they attended the entire semester but failed to complete academic work with a passing grade.

Students have the right to appeal any grades given due to lack of attendance.

Faculty members are responsible for administering the attendance rules for their respective courses, for excusing absences, for determining how missed work should be made up, and for assessing grade penalties. An instructor may drop a student from a course whenever the instructor concludes that a student’s class attendance or punctuality endangers the student’s success or places other students at risk.

Please see Section 1 for the maximum amount of time/assignments/etc. that can be missed in this course and for the last day to withdraw voluntarily from a class this semester.

*The college policy is 15%; some courses and departments have stricter policies; if this course has a stricter policy, it will be listed in section 1 of this syllabus.

**ADA Notification: Alternate Learning Styles/Additional Support**

Services for students with disabilities are available at Haywood Community College through the Counseling Office. The College complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 which stipulate that no student shall be denied the benefits of an education “solely by reason of a disability.” Disabilities covered by law include, but are not limited to, learning disabilities, psychological disabilities, and hearing, sight or mobility impairments. All information is kept confidential with the exceptions required by law which include disclosure of current child abuse/neglect or a resolute decision to commit suicide or harm others.

Services for qualified students are designed to provide support for and access to the same educational experience available to other students. Students with disabilities are expected to meet the same academic standards as other students. The disability support counselor offers numerous services to assist students in reaching their academic goals.
Disclosure of a disability must be initiated by the student, as noted on all HCC course syllabi. At
the college level, it is also the student’s responsibility to contact the disability counselor and
provide required documentation. Recent professional medical/psychological documentation
from a qualified professional specifying the disability and recommended accommodations is
required. It is the student’s responsibility to contact the disability counselor prior to each
semester to discuss/review required accommodations. Students are responsible for submitting
the Accommodations Request Form and discussing his/her accommodations with each of
his/her instructors.

Some accommodations require a minimum of two weeks’ notice to implement. Some can take
longer; therefore, students should contact the disability counselor as soon as possible.

Please contact Student Services for more information at (828) 627-4504.

Inclement Weather/Delayed Class Schedule

Haywood Community College is not on the same delay or cancellation schedules as the public
school system. Announcements concerning college operation will be posted to the Haywood
Community College website, on local TV and radio stations, and on the Haywood Community
College Hotline at (828) 627-4571. Whenever possible, announcements concerning college
operation for day classes will be made by 6 AM. It may become necessary to alter the 6 AM
announcement if weather conditions worsen; therefore, continue to monitor information outlets
for changes in the college schedule due to weather.

Please refer to the Inclement Weather Policy posted on the HCC website for the college’s delay
schedule, or see Section 1 for this class’ meeting time (exception: online courses).

When weather conditions dictate early dismissal of classes, the announcement will be made to
each class, on the Haywood Community College website, and on local TV and radio stations.

Academic Honesty

Students are expected to conduct themselves in accordance with generally accepted standards
of scholarship and morality. Such academic dishonesty not only includes cheating, but also
plagiarism (taking another’s ideas and/or words and presenting them as if they were your own).
Cutting/copying and pasting from the Internet into a paper without proper documentation is
considered plagiarism. The HCC faculty strongly encourages students to submit work that
meets the highest ethical standards.

Cheating includes, but is not limited to:
- copying, faxing, emailing, or in any way duplicating assignments that are turned in,
  wholly or in part, as original work
- exchanging assignments with other students, either handwritten or computer generated,
  whether you believe they will be copied or not
- using any form of memory aid during tests or quizzes without the expressed permission
  of the instructor
- giving or receiving answers during tests or quizzes. (It is the student’s responsibility to
  secure his or her papers so that other students will not have the opportunity to copy from
  them or the temptation to do so.)
- taking credit for group work when the student has not contributed an equal or
  appropriate share toward the final result
- accessing a test or quiz for the purpose of determining the questions in advance of its
  administration
• using summaries/commentaries (Cliff Notes, Spark Notes, etc.) in lieu of reading the assigned materials.

Plagiarism consists of taking another’s ideas and/or words and presenting them as if they were your own. Students submitting plagiarized material, in whole or in part, will be subject to penalty at the discretion of the instructor. Plagiarism results in a zero grade on the assignment, loss of credit in that course, and/or other administrative action. Plagiarism includes, but is not limited to:

• taking another’s assignment or portion of an assignment and submitting it as your own
• submitting material written by someone else or rephrasing the ideas of another without giving the author’s name or source
• presenting the work or tutors, parents, siblings, spouses, or friends as your own
• submitting papers from the Internet written by someone else as your own
• supporting plagiarism by providing your work to others, whether you believe it will be copied or not

In cases of suspected academic dishonesty, faculty may complete an “Academic Dishonesty Form” to the Vice President of Student Services and submit any evidence of academic dishonesty for further investigation and recommendation for appropriate action. Upon reviewing the case, the Vice President of Student Services may impose one or more of the following sanctions:

1. Academic probation
2. Reduction of credit or grade for the assignment or the course
3. Suspension or expulsion from the College

Acknowledgement
Our thanks to the English Department of North Hunterdon-Voorhees Regional High District of Annandale, NJ, for allowing HCC to use part of North Hunterdon’s existing academic honesty policy. The Hunderton policy: http://www.nhvweb.net/nhhs/English/cheatingplagiarismpolicy.htm.

Syllabus Changes
Other documents provided by the instructor are incorporated by reference into this syllabus and are binding. Changes announced or posted in class or via Moodle take precedence over the syllabus. It is the students’ responsibility to keep abreast of such changes.