COURSE: PREFIX NO: | EFFECTIVE DATE | NEXT REVIEW DATE
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CPT 114 | Fall 2014 | Fall 2015

TITLE: CREDITS |
Computers and Programming 3 |

CONTACTS CLASS - LAB - TOTAL
3 0 3

PREREQUISITES: Keyboarding skills or permission of instructor

DESCRIPTION: This course introduces computer concepts and programming. Topics include basic concepts of computer architecture, files, memory and input/output devices. Programming is done in a modern high-level procedural language.

LEVEL II: Starting with a broad overview of contemporary computing, we will then focus our attention on developing skills in problem analysis and solution design and development using traditional and contemporary program development techniques, and consider the application of those skills utilizing a modern higher-level programming language.


MATERIALS (*specifying those to be purchased by student): Students should use a flash drive or cloud storage (e.g. SkyDrive) to store all their files, handouts, etc., since work cannot be saved to the lab computers. Students must acquire a notebook for recording class and lecture notes, as well as their problem analysis and design specifications from the latter half of the course.

CLASS MANAGEMENT ACTIVITIES (Attendance, tardies, testing, etc.):

ACADEMIC DISHONESTY: Students are reminded of the college policy regarding Academic Dishonesty as outlined in the Student Code Handbook. Should a student break college policy and complete any assignment not entirely his/her own work or by using unauthorized materials, said student will receive a grade of 0/F on that assignment.

ATTENDANCE: Attendance is taken in class, and is monitored via your login to the SNAP system, so failing to login and use the software will negatively impact your class grade. You must have and wear your student id whenever you are on campus; should you forget it, you will be required to obtain a temporary id or retrieve your regular id; this may be counted as an absence for attendance purposes. As mentioned above, more than three absences during a regular semester (two absences during a summer semester) is grounds for dismissal from the course. Make sure you contact your instructor immediately if any situation arises where you will be unable to participate in class, so the instructor is informed about your situation.
EXCESSIVE ABSENCES:
In the event that the student misses more than the allowable absences, the Instructor, who will complete a Withdrawal form, with a grade of "F", will drop the Student. If the student wishes to withdraw from the class, the STUDENT must complete a Withdrawal form which can be found in the Student Development Office of the College. The student will receive a grade of "W" if the work completed to date is acceptable; a grade of "WF" will be assigned if the work is unacceptable.

DISABILITIES STATEMENT:
Students with disabilities are encouraged to contact the Dean of Student Services to discuss needs or concerns as they pursue an academic program and participate in campus life. The Dean of Student Services will provide guidance regarding official documentation of disabilities and/or accommodation of needs. (See College Catalog)

ELECTRONICS:
Cell phone, PDA, IPod or similar electronic device usage is forbidden during classes in the labs. Because of the potential for abuse, it is considered a violation of academic honesty to use these devices during testing or other assessments. Please turn them off or silence them and secure them in a purse or book bag until after you have finished your work. Should you need access to these devices while in the lab, contact the lab administrator to make arrangements.

RESOURCES (A-V, persons, tools/equipment):
Personal Computers
Lab Assistants

SOFTWARE: This course is supported through the use of the SNAP Learning Management System; it is accessible through the computing facilities on the NETC campuses. You can also access it on your personal computer via http://snap2013.emcp.com. The course may also utilize Microsoft’s Visual Studio for programming purposes; this is also installed on the campus computers. The website http://www.visualstudio.com/downloads/download-visual-studio-vs can be used to access and download the free 2013 Express version of this software (be aware that there are several versions; the “Windows” version works with Windows 8 and newer; the “Desktop” version is for Windows 7 and earlier.

When you first access SNAP on your personal computer, you will need to check your system’s configuration to make sure it is able to support SNAP; use the “Check Configuration” option on the right-hand side of the SNAP sign-on screen. You can also obtain help through the “FAxS & User Guides” option, also on the right-hand side of the screen. This option also allows you to access the on-line help provided by Paradigm. If you already have a SNAP account, you can use the “Student Registration” option to add a new course to your list of courses; if you do not have a SNAP account, you will need to create one. Be aware that if you purchase your text second-hand, you will likely also need to purchase a separate activation code card so you can create your SNAP account; new texts come with an activation code
card bundled with the text. In addition to the activation code, you will need an enrollment key, which is obtained from your instructor.

**EXPECTATIONS OF THE STUDENT:** It is expected that you will:

- Visit the course site and complete activities a minimum of two days per calendar week; failure to do so constitutes an absence from the course. More than three absences during a regular semester (two absences during a summer semester) is grounds for dismissal from the course.
- Complete all readings from text and other course related documents; the readings are essential to being able to complete the end of section assessment exercises;
- Participate and contribute to class discussion forums and/or course blogs, if posted;
- Use appropriate ‘netiquette’ when responding to others in on-line class forums;
- Submit all work in a timely manner; not all instructors will necessarily have deadlines for every assignment, and not every assignment for a given instructor may have a deadline, but it is your responsibility to observe and adhere to any deadlines that are posted;
- Complete all course work on your own unless otherwise instructed;
- Cite/document all non-original material as to not plagiarize others’ work.

**COURSE TOPICAL OUTLINE** (List topics and sub-topics of course) and Calendar or approximate length of time devoted to topic.

The following is a general list of topics and readings for the course; the particular instructor will determine the actual order and treatment of material based on class progress.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Concepts</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Technologies</td>
<td>What is a Computer? Types of Computers, How are Computers Used? What is Information Technology?</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>Computer Hardware &amp; Software</td>
<td>Digital Devices, Parts of a Computer, Buying a Computer, Software Controls &amp; Operating Systems</td>
<td>Chapter 3 &amp; 4</td>
</tr>
<tr>
<td>Applications Software</td>
<td>Types of Applications, Developing &amp; Delivering Software, Integrating Applications</td>
<td>Chapter 5</td>
</tr>
</tbody>
</table>
**Course Outline**

**CPT 114**

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<table>
<thead>
<tr>
<th>Topic</th>
<th>Concepts</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Social Web</td>
<td>Social Technology &amp; Networking, Blogging, Social Bookmarking, Wikis</td>
<td>Chapter 7</td>
</tr>
<tr>
<td>Program Design &amp; Development</td>
<td>Intro to Computing, Structured Programming and Problem Solving, Designing Programs</td>
<td>Handout(s) on SNAP</td>
</tr>
<tr>
<td>Coding</td>
<td>Working with Data, Computations, Error Handling, Writing and Completing Programs</td>
<td>Handout(s) on SNAP</td>
</tr>
</tbody>
</table>

**LEARNING OUTCOMES:** Upon successfully completing this course, the student should be able to:

- Explain, identify, and demonstrate knowledge of basic computer concepts.
- Use acronyms and terms related to computers accurately - RAM, ROM, CPU, machine cycle, input devices, output devices, etc.;
- Differentiate between various types of computers;
- Differentiate between various types of software;
- Explain networking and Internet concepts; LANS and WANS; and Internet Technology and security;
- Review computer history, careers, and ethics;
- Discuss the issues surrounding the problems with software development that led to the creation of program development methodologies;
- Discuss the basic concepts of the program development process;
- Explain the use of traditional and contemporary design and development methods in creating solutions for computer programming problems;
- Apply programming logic by analyzing, designing, and developing solutions for computer programming problems.

**COLLEGE-WIDE COMPETENCY:**

The student will be able to identify and use sources of information by utilizing information processing skills compatible with job demands in a computer-literate society.

**INSTRUCTIONAL METHODS TO COMPLETE OUTCOMES:**

- Lectures
- Assignments/Homework
- Tests

**EVALUATIVE METHODS TO APPRAISE OUTCOMES:**

The student must pass both of the exams in order to pass the class; failing either of these will prevent you from passing the course. Because of the comprehensive nature of the material in these exams, failure to successfully pass them will indicate you have not sufficiently mastered the material covered by the examination assessment.
GRADE WEIGHTS:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>Tutorials/Assignments/Homework</td>
<td>50%</td>
</tr>
<tr>
<td>Tutorial Evaluations/Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Exams</td>
<td>30%</td>
</tr>
</tbody>
</table>

ASSESSMENTS:
Generally, each concept presented in the readings has a short assessment associated with it (in SNAP) that must be completed to demonstrate familiarity with the material. In addition, additional assessments are provided at the end of each chapter that are designed to see how well you understand and can apply the concepts presented in that chapter. Homework assignments are also associated with each chapter and expand on your ability to synthesize and apply the concepts you study in each chapter. Your instructor may have additional requirements (quizzes and/or homework), at their discretion. There are two major exams which will generally cover material from the first- and second-half of the term. All work is due on the assigned due date(s). Should you miss a class, you are responsible for checking with classmates regarding assignments that may have been given out. No late work will be accepted without instructor authorization, so pay careful attention to due dates and plan your work accordingly. By NETC policy, at least one assessment must be taken on-campus; both the midterm and final are password protected to adhere to this policy, and you must obtain this password from your instructor.

GRADING SCALE:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
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<tbody>
<tr>
<td>93-100%</td>
<td>A</td>
</tr>
<tr>
<td>85-92%</td>
<td>B</td>
</tr>
<tr>
<td>77-84%</td>
<td>C</td>
</tr>
<tr>
<td>70-76%</td>
<td>D</td>
</tr>
<tr>
<td>&lt;69%</td>
<td>F</td>
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