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**COURSE NUMBER:** CSCI100

**CREDITS:** 3

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**COURSE TITLE:** SOFTWARE PACKAGES AND PROGRAMMING    **PREREQUISITES:** Math 12 or Math 100 or  
Math 110

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**Weekly Hours:** 3

**Lecture:** 1.5

**Lab:** 1.5

**Total Hours:** 39

**Total Weeks:** 13

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**COURSE DESCRIPTION:**

Introduction to the fundamentals of computers, computer applications, the Internet and the World Wide Web. Emphasis is placed on the use of software packages for word processing, spreadsheet applications, database management and graphical presentation. The course includes a gentle introduction to computer programming using a high-level programming language such as Python 3 or Visual Basic, and the icon based Lego Mindstorms EV3 software for Lego robots.

**TEXTBOOK:**

Technology In Action Complete, 14/E

Alan Evans, Kendall Martin, Mary Anne Poatsy

Print ISBN: 9780134608228, 0134608224

EText ISBN: 9780134608563, 0134608569

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**LEARNING OUTCOMES:**

On successful completion of this course, the student will be able to:

Describe some key points in computer history.

Describe how digital technology plays a critical role in modern life.

List the major types of computers and their principal uses.

Discuss the social and ethical impact of information technology.

Describe the basic structure and organization of a computer.

Distinguish between different types of memory and storage devices.

Identify various input and output devices and their uses.

Explain how computers store and manipulate information.

Describe numbering systems and the computer's internal data representation.

Describe the fundamental categories of software and their relationships.

Describe the role of the operating system in a modern computer system.

List some of the current operating systems.

Apply key features of word processing software.

Apply key features of spreadsheet software for "What-if" type analysis.

Explain what a relational database is and describe its basic structure.

Describe and use database operations for storing, sorting, updating, querying, and summarizing information.

Describe the technology at the heart of the Internet.

Demonstrate the ability to use web applications and cloud storage.

Demonstrate the ability to effectively use web browsers, search engines and email.

Discuss the tools people use to build websites.

Construct a website using HTML5 and style sheets.

Develop a simple algorithm to solve a problem.

List some of the current high-level programming languages.

Describe the process of designing, programming and debugging a software system.

Demonstrate the ability to write a simple computer program in a high-level programming language.



**COURSE CONTENT:**

Week	Topic	Chapter
Week 1	Using Technology and Communicating on the Web	1/3
Week 2	Hardware Basics	2
Week 3	System Software	5
Week 4	Application Software (MS Word)	4
Week 5	Application Software (MS Powerpoint )	4
Week 6	Application Software (MS Excel)	4
Week 7	Database Systems (MS Access)	11
Week 8	The Internet and the WWW	13/3
Week 9	Web Development (HTML5 and CSS)	13
Week 10	Introduction to Software Development (SDLC)	10
Week 11	Introduction to Programming (Python 3, VB, Lego EV3)	
Week 12	Introduction to Programming (Python 3, VB, Lego EV3)	
Week 13	Introduction to Programming (Python 3, VB, Lego EV3)	



**EVALUATION:**

Lab Assignments / Participation	15%
Midterm	30%
Final exam	35%
Quizzes / Lab Tests	20%
Total	100%

Midterm Exam—Questions types may include: multiple choice, short answer, interpreting code (predict the output), writing code, as well as other kinds of questions. Questions could be based on the course resources and notes, example programs, and lab activities.

Cheating: Students cheating on tests and exams will receive a “F” grade in this course.

If a student misses an exam, a mark of zero will be assigned unless there are extenuating circumstances. In such cases, the proportion of grade assigned to the missed exam will be added to the proportion assigned to the final exam. The final exam will be held during exam week. NO consideration will be given to any student wishing to write the exam at any other time than that assigned.

It is a student’s responsibility to know and follow the school’s policies regarding cheating on exams.

The school’s policy regarding electronic devices is that any student who has a cell phone or other unauthorized electronic device (ie. Ipad, laptop, playbook, etc.) on their person or around their desk during an exam will be guilty of cheating and will a grade of “F” for the course.