I. **Course Title:** Essentials of Information Technology

II. **Course Prefix/Number:** CSCI 100

III. **Credit Hours:** 3

IV. **Prerequisites:**
- *None*

V. **Catalog Description:**
Introduction to information technology. While this course satisfies the Technology Proficiency Requirement, its depth goes beyond simple proficiency and provides the student with a robust understanding of what is needed to use information and selected consumer technology effectively across a broad range of applications for personal, workforce, educational, and societal needs. An emphasis is placed on computer security topics that are relevant to even the most casual computer user. Course includes two hours of lecture and one lab period per week.

VI. **Curricular Relationships:**
This course teaches students the necessary technology proficiency skills to be successful in their academic and career endeavors. The course is required by a few programs on campus. It provides students with enough knowledge of computing and communications technology, terminology, and software usage to make them more effective in their chosen fields.

VII. **Student Learning Outcomes:**
- Students will understand the power and limitations of computing, communications, and other current consumer technologies.
- Students will describe the evolution of computing hardware/software and the current implementation of different functional components of computers.
- Students will demonstrate an understanding of telecommunications concepts and tools.
- Students will list and describe some of the social implications, ethics, and uses/misuses of computing and communications technology.
- Students will be able to speculate on possible future uses of computing, communications and other current consumer technologies.
- Students will demonstrate proficiency with software including operating system, word processor, spreadsheet, web browser, presentation, and utility software (virus checkers for example)
- Students will demonstrate basic skills in the use of selected computer, communications and other current consumer technologies.
- Students will be able to write a simple computer program using a user-friendly language such as Alice.
- Students will be able to write a simple web page using HTML.
- Students will be knowledgeable about computer security.
VIII. Content Outline

- Hardware: Components of computers and operating parameters of those components, chip technology, and design and interaction of components.
- Software use: System software such as Linux, Windows or other mainstream system software. Application software such as word processors, spreadsheets, data-base managers, presentation packages, and browsers.
- Software background: A basic understanding of how software is developed as well as current options in choosing software such as freeware, shareware, licensed, web based and open source software.
- Information processing systems: The interrelationships of hardware, software, data, procedures and people.
- Connectivity: Networking and the use of communications technology such as the internet, email, and web 2.0 applications.
- Social issues: Uses and misuses of computing and communications technology and the impact of computers on society.
- Beginning programming: Basics of HTML and application programming.
- Computer Security: Anti-virus software, back-up and restore, phishing, cookies, spyware, updates and patches, pop-up blockers, etc.
- Special uses of computers, speculations on future computers and their uses, and other current topics.

IX. Course Procedures / Policies / Grading Scale:

- Students will attend lectures and work in the computer laboratory.
- Examinations will determine approximately 70% of the grade and laboratory activities approximately 30%.
- Laboratory activities require the use of such software as a word processor, spreadsheet, database manager, presentation package, network browser, and multimedia applications.
- A comprehensive final examination will be given.

X. Required/Recommended Readings:

A textbook is required. Example textbooks include:

XI. Any Issues Unique to this Course

The course consists of 2 one-hour lecture sessions per week and a two-hour laboratory session. Students are expected to spend a significant amount of time working on productivity software laboratory assignments.