ECS 101 – Introduction to Engineering and Computer Science

Catalog Description
Gateway course: Discussion of disciplines within the college, technical communication, presentation of technical results, professional behavior, ethics, problem-solving, modeling, and data analysis. Laboratory topics: computers, computer language, and software packages.

Course Objectives
To provide students with the fundamental tools they need to be successful during their programs at the L.C. Smith College of Engineering and Computer Science (ECS).

Prerequisites
First-year student in the College of ECS

Course Outcomes
At the end of this course each student should know
- Fundamentals of computer utilization [ABET(c)]
- Information access, word processing, spreadsheets, presentation managers [ABET(a)]
- Mathematics fundamentals and tools [ABET(a)]
- The web and what engineering and computer science at SU are all about [ABET (i)].
- How to work in a team-based project with report and presentation [ABET (d, f)].
- How to be successful in work and life in general [ABET (h)].

Outcome Measurement
Every student is required to submit weekly, and one semester-project written reports. These reports are graded for grammar, spelling, style, and so forth, as well as for technical content, completeness, and accuracy.

Course Topics
What does it take to be an engineer or a computer scientist? What is a design methodology and what does it take to be personally successful? (a) managing the work-load; (b) learning to enjoy the success of solving a problem; (c) analysis and mathematics; (d) abstraction and modeling; (e) honesty and ethics. What does ECS provide for students? ECS curriculum, faculty, facilities, and postgraduate opportunities are discussed and demonstrated. (a) Dean’s office, an open door to assistance; departments-someone who will always try to help. What do students have available to them to be successful? (a) information sources and tools; (b) interacting with peers, staff, and faculty; (c) meet engineers and scientists from industry.

CAC Category Content
- 0 Data Structures
- 0 Algorithms
- 0.5 Software Design
- 0 Computer Organization & Architecture
- 0.5 Programming Languages