# **Computer Information Systems**

Computer Information Systems (CIS) is a rapid-growth, high-demand area combining studies in computer science and business management. The CIS major, one of two computer-oriented majors at Cal Lutheran, has been designed to meet the demand for graduates with knowledge of information systems and their application to business environments.

Along with an emphasis on computer applications in software, hardware and programming, CIS majors receive a strong business and liberal arts education. CIS represents a major area in computing, and Cal Lutheran graduates are prepared for careers in a variety of industries.

Included in the computer science facility are the computer laboratories, a study area for majors, and electronic classrooms with large screen projection systems for lectures, as well as faculty offices. Small classes allow faculty members to provide individualized attention to students and their projects and research. The department also maintains an experimental networking lab, which runs various network operating systems. The department is fully connected to the Internet and every lab PC or workstation has complete Internet access.

CIS graduates are encouraged to participate in internships and major projects offered through numerous research industries located near the University.

CIS graduates have gone on to work at:

- noted research corporations such as:
  - Rockwell International
  - Prudential Insurance
  - J.D. Power & Associates
  - IBM
  - HP
  - Hughes
  - Raytheon
  - Litton Industries
- industries that range from:
  - entertainment
  - banking
  - pharmaceuticals

### **Bachelor of Science in Computer Information Systems**

48 credits minimum, 40 credits upper division.

CSC 210	Introduction to Computer Programming	4
CSC 331	Systems Analysis	4
CSC 350	Intro Data Communication & Networks	4
CSC 410	Database Management Systems	4
CSC 499	Capstone	4
MATH 241	Discrete Mathematics	4
BUS 367	Behavior in Organizations	4
BUS 381	Info Systems & Organization Design	4
Additional Upper Division CSC credits <sup>*</sup>		16
Total Hours		48

\* 8 credits can be substituted by recommended Business Administration courses.

#### Recommended

BUS 361	Human Resource Management	4
BUS 394	International Business	4
BUS 445	Marketing and Management of Services	4
BUS 448	Organization Development	4
BUS 449	Managerial Leadership: Core Competencies	4
BUS 468	Venture Development	4
BUS 477	Personal Financial Planning	4

ECON 312	Quantitative Analysis in Business	4
Total Hours		32

## **Certificate in Information Systems**

32 Credits; GPA 2.25 or better.

CSC 210	Introduction to Computer Programming	4
CSC 331	Systems Analysis	4
CSC 350	Intro Data Communication & Networks	4
CSC 410	Database Management Systems	4
MATH 241	Discrete Mathematics	4
BUS 367	Behavior in Organizations	4
BUS 381	Info Systems & Organization Design	4
Additional Upper Division credits		4
Total Hours		32

# **Minor in Computer Information Systems**

20 credits minimum, 12 credits upper division

Total Hours	, , , , , , , , , , , , , , , , , , , ,	20
BUS 381	Info Systems & Organization Design	4
BUS 367	Behavior in Organizations	4
Computer Science credits		12