



4038 Minerva University  
Seymour, Indiana, 47274

The Computer and Information Science degree is a course of study that is both academically rigorous and practically sound. The distinction is important in light of the large gap that exists between most colleges' curriculum in this field and the needs of the computer industry. Driven by cost-cutting pressures and by the effects of downsizing, companies expect their new employees to be ready to start work and be productive.

The CIS degree is unique in its strong emphasis on the areas of data management, Web technologies, computer networks and applied software development. Therefore, all of our majors are required to take the following courses: Software Engineering, Database Management, Computer Networks, Systems Design and Implementation, and Technical Communications.

CIS majors may choose to emphasize system software or information systems or computer and network security. The languages of instruction are C++ and Java. Students use LISP for the Artificial Intelligence course.

The total enrollment in each course is limited to maximize the interaction between faculty and students. The material is presented in a closely coordinated series of lectures. Concepts taught in the classroom are reinforced and tested through programming assignments. Students design, implement, and test components of their computer projects in the department's computing laboratory.

#### **General Education Requirements ( 20 Credits required)**

Consult your advisor for help

#### **Liberal Education Requirements ( 20 Credits required)**

Appointment with advisor is strongly encouraged

#### **Major Requirements ( 80 Credits required)**

Computer Programming 1 (4cr)  
Computer Programming 2 (4cr)  
Computer Architecture (4cr)  
Data Structures and Algorithms (4cr)  
C++ Object-Oriented Programming (4cr)  
Software Engineering (4cr)  
Database Management Systems (4cr)  
Webb Development (4cr)  
System Design & Implementation (4cr)  
Artificial Intelligence (4cr)  
Computer Networks (4cr)  
Operating Systems (4cr)  
Data Mining (4cr)  
Computer Security (4cr)  
Computer Network Security (4cr)  
Applied Cryptography (4cr)  
Calculus 1 (4cr)  
Discrete Mathematics (4cr)  
Probability & Statistics (4cr)  
Linear Algebra (4cr)

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