

COMPUTER SCIENCE MAJOR (57 Hours)

The Computer Science major is administered by the
Computer Technology and Information Systems Department.

Facts about the Program

Degrees Offered:

B.S.
B.A.

Faculty:

Timothy P. Garvin, Ph.D.
Lourdes Herling, M.S.
Jack Imdieke, Ph.D.
Rod Kuchta, M.S.
Lori Nicholson, M.S.

Career Opportunities

Graduates of the Computer Science program can pursue occupations that are concerned with applications of computers and computer language and how the computer is used in business and industry. Some career possibilities are listed below:

- Software Engineer
- Computer Programmer
- Programmer Analyst
- Engineering Programmer
- Systems Programmer
- Systems Analyst
- Network Central Operators & Supervisors
- Data Communications Analyst
- Computer Security Coordinator

Program Description

Objectives: The Computer Science (CSC) program objectives are to provide its students and graduates with; (1) the foundational principles and concepts of computer science and mathematics essential for further study in the field; (2) a working knowledge of computer hardware and architecture; (3) the ability to analyze, design, build/program, implement, and evaluate software and systems; (4) an understanding of fundamental scientific principles and the scientific method; (5) the ability to work independently, as well as in groups across a range of diverse situations; (6) a working familiarity with sources of information and assistance in this field and related fields, as well as a knowledge of the systems for accessing such resources; (7) the ability to communicate effectively in a variety of forms for a variety of purposes; (8) additional instruction in the advanced undergraduate Computer Science topics and skills; (9) an awareness of the types and range of career opportunities in the field, couples with the ability to manage one's own career, and (10) an understanding of the contexts and environments in which Computer Science exists.

Scholarships and Financial Aid

Wayne State College is committed to providing a quality, affordable education for its students. There are several types of financial assistance available for Wayne State students, including grants, loans, work-study and scholarships. The aid packages are composed of money from Pell grants, SEOG grants, SSIG grants, Perkins loans, Stafford student loans, PLUS loans and a variety of scholarships. Contact the Financial Aid Office at (402) 375-7230 for further information.

Program Content

Major in Computer Science (BA or BS) 57 hours

PHY 330 Electronics must be taken as the Physical Sciences Gen. Ed. requirement and MAT 137 Applied Calculus (or MAT 140 Calculus with Analytic Geometry) must be taken as the Mathematics Gen. Ed. requirement.

Core: (24 hours)

CIS	132	Principles of Computer and Information Systems	3
	171	Networking I.....	3
	360	Computer Info Systems: Analysis & Design.....	3
	366	Intro to Database	3
	372	Computer Hardware.....	3
CSC	150	Programming Fundamentals I.....	3
	480	Seminar in Computer Science.....	3
			21

Computer Science: (27 hours)

CSC	160	Programming Fundamentals II.....	3
	310	Data Structures.....	3
	320	Computer Organization	3
	345	Computer Graphics	3
	390	Computer Science Practicum OR	
	394/494	Cooperative Education	3
	430	Parallel Programming	3
	380	Advanced Operating Systems.....	3
	440	Server Security and Management	3
CIS	361	Computer Info Sys: Design, Implementation & Evaluation	3
CSC/CIS		electives numbered 300 or above.....	3
			30

Math Support Courses: (6 hours)

MAT	305	Discrete Mathematics.....	3
Plus 3 hours from:			
MAT	180	Applied Probability and Statistics.....	3
	320	College Geometry	3
	350	Linear Algebra.....	3
	410	Probability and Statistics.....	3
			6

For more information contact:

Dr. Tim Garvin, Chair
Computer Technology and Information Systems Department
Wayne State College
Wayne, NE 68787
(402) 375-7545 or 1-800-228-9972
tigarvi1@wsc.edu
www.wsc.edu

Academic Fact Sheet - Wayne State College

COMPUTER SCIENCE MAJOR (57 Hours)

FRESHMAN YEAR

1st Semester

CIS	132	Prin. of Computing & Info. Systems	3
CSC	150	Programming Fund. I	3
CSC	165	Intro to Web Design	3
MAT		Gen Ed Math	3
ENG	102	Composition Skills	<u>3</u>
			15

2nd Semester

CIS	171	Networking I	3
CSC	160	Programming Fund. II	3
		Life Science	3
CNA	100	Prin. of Human Comm.	3
		General Education	<u>3</u>
			15

SOPHOMORE YEAR

1st Semester

CSC	310	Data Structures	3
		Mathematics Elective (recommend MAT 180)	3
		General Education	<u>9</u>
			15

2nd Semester

CSC	320	Computer Organization	3
CSC	345	Computer Graphics	3
MAT	305	Discrete Mathematics	3
☐ PHY	326	Electronics	3
		General Education	<u>3</u>
			15

JUNIOR YEAR

1st Semester

CSC	380	Operating Systems	3
CIS	360	Analysis and Design	3
CIS	366	Intro to Database	3
CIS	372	Computer Hardware	3
		General Education	<u>3</u>
			15

2nd Semester

CIS	361	CIS Design, Implementation Evaluation	3
CSC	390	Computer Science Practicum OR	
CSC 394/494		Cooperative Education	3
		General Education	<u>9</u>
			15

SENIOR YEAR

1st Semester

CSC	430	Parallel Programming	3
		Electives/minor	6
		General Education	<u>6</u>
			15

2nd Semester

CSC	440	Server and Security Management	3
	480	Seminar in CS	3
		Electives	6
		*CSC/CIS Electives	<u>3</u>
			15

*The CIS/CSC elective courses approved by the Computer Technology & Information Systems Department are:

CSC	365	Scripting Language (3)	CIS	354	Advanced Structured Business Programming (3)
CSC	390	Computer Science Practicum (3)	CIS	356	Visual Basic (3)
CSC	425	Computer Architecture (3)	CIS	371	Networking III (3)
BUS	496	Seminar in Project Management (3)	CIS	375	Intro to E-Commerce (3)
CIS	271	Networking II (Note: approved elective, but NOT 300 level) (3)	CIS	430	Management Information Systems (3)
CIS	346	Introduction to MVS/JCL (3)	CIS	466	Advanced Data Base (3)
CIS	350	CICS Application Programming (3)	CIS	471	Networking IV (3)
CIS	352	Structured Business Programming (3)	CIS	475	Topics in Computer Information Systems (3)

☐ PHY 326 offered in spring semester of even numbered year.