

Academic Fact Sheet

Wayne State College

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:

Molly Curnyn, M.S.
Timothy P. Garvin, Ph.D.
Lourdes Herling, M.S.
Jack Imdieke, Ph.D.
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
- Engineering Programmer
- Systems Programmer
- Systems Analyst
- Interface Designer
- 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
432	Parallel Programming	3
380	Advanced Operating Systems	3
450	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

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

2nd Semester

CSC 450	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:

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|---------|--|---------|--|
| 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) |
| | | CSC 450 | (already in the major for CSC) |

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