



This degree requires a minimum of 120 credit hours to graduate (at least 36 credit hours must be upper-division, 300 or 400-level) and a cumulative GPA of 2.0. A minimum of 30 credit hours must be earned at Park.

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION SYSTEMS
 Chair, Bin “Crystal” Peng, Ph.D. (crystal.peng@park.edu)

Catalog AY21-22

MAJOR MAP

BACHELOR OF SCIENCE IN INFORMATION AND COMPUTER SCIENCE – SOFTWARE DEVELOPMENT

Purpose Statement: This degree equips students to apply problem-solving and critical-thinking skills and use popular computer technologies in producing technology solutions. It prepares students for a wide range of jobs in industry such as applications programmer, software engineer, web developer, and systems analyst. Also, it prepares students for graduate school in the field of Software Development. Although a respectable mathematics aptitude is required for all of the ICS specialty areas, students who prefer more of the design and business side of things should choose the Software Development specialty area rather than the Computer Science specialty area.

Example Career Info:

- Occupational Outlook Handbook > Computer and Information Technology Occupations: <https://www.bls.gov/ooh/computer-and-information-technology/home.htm>
- O*NET Online > Computer Programmer: <https://www.onetonline.org/link/summary/15-1131.00>
- O*NET Online > Software Quality Assurance Engineers and Testers: <https://www.onetonline.org/link/summary/15-1199.01>

	Credit Hours
University Liberal Education Requirements	37
LE 100, First-Year Seminar (<i>first-time freshman only; waived for transfer students</i>)	3
EN 105 First-Year Writing Seminar I	3
EN 106 First-Year Writing Seminar II	3
Math requirement: MA 120, MA 135, or higher MA course (will be satisfied in core)	*
Ethics requirement (will be satisfied in core)	*
Humanities requirement	6
Natural Science requirement	3
Science with a lab requirement	4
Citizenship requirement	3
Communications requirement: CA 103, CA 105, or TH 105.	3
Social Science requirement	6
LE 300: Seminar in Integrative and Interdisciplinary Learning	3
University Graduation Requirements – BS	6
36 hours upper division (300 – 400) level course work	*
Writing Across the Curriculum	
• Professional Writing: EN 306a/b/c	3
• A Writing Intensive (WI) course from the major: CSIS WI course (will be satisfied in core)	*
• A WI course outside of the major	3
Requirements for the Major	

This guide is not a substitute for academic advisement.

Core Curriculum	21
CS 152 Introduction to Python Programming	3
CS 208 Discrete Mathematics	3
CS 300 Technology in a Global Society (LE Ethics, CSIS WI course)	3
CS 365A Computer Networking I	3
IS 205 Managing Information Systems	3
IS 361 Data Management Concepts	3
MA 120 Basic Concepts of Statistics (LE Math)	3
Software Development:	36
CS 130 Developing the User Experience	3
CS 202 Secure Programming	3
CS 240 Web Programming I	3
CS 252 Object-Oriented Programming	3
CS 322 Web Programming II	3
CS 352 Data Structures	3
IS 315 Computer Systems Analysis and Design I	3
IS 316 Computer Systems Analysis and Design II	3
IS 370 Information Security	3
MA 135 College Algebra (or any MA course > MA 135, except MA 208)	3
MG 371 Management and Organizational Behavior	3
IS362 or any CS course at 300-400 level that is not already required by this degree	3
Additional Courses	
Additional courses in or outside of the major.	20
TOTALS	120

Recommended Schedule

Plan A: You already have MA125 or equivalent, or have tested out. CS152 and CS208 require a grade of C or higher in MA125. Take Park's math placement test ASAP to know which math course you should start with.

First Year – Fall (15 cr.)	First Year – Spring (15 cr.)
CS152 CS208 LE100 EN105 LE elective 1*	CS252 MA135 EN106 LE elective 2 LE elective 3
Second Year – Fall (15 cr.)	Second Year – Spring (16 cr.)
CS130 CS352 IS205 LE elective 4 LE elective 5	CS365A MA120 MG371 LE science with a lab (4 cr.) LE elective 6
Third Year – Fall (15 cr.)	Third Year – Spring (15 cr.)
CS202 CS240 IS361 EN306 LE elective 7	CS300 CS322 IS362 or 300-400 level CS elective Additional course 1† Additional course 2

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Fourth Year – Fall (15 cr.)	Fourth Year – Spring (14 cr.)
IS315 IS370 LE300 Additional course 3 Additional course 4	IS316 A WI courses outside of the major Additional course 5 Additional course 6 Additional course 7

Plan B: You need to take MA125. CS151 and CS208 require a grade of C or higher in MA125.

First Year – Fall (15 cr.)	First Year – Spring (15 cr.)
IS205 MA125 (additional course 1†) LE100 EN105 LE elective 1*	CS152 MA135 EN106 LE elective 2 LE elective 3
Second Year – Fall (15 cr.)	Second Year – Spring (16 cr.)
CS130 CS208 CS365A LE elective 4 LE elective 5	CS252 MA120 MG371 LE science with a lab (4 cr.) LE elective 6
Third Year – Fall (15 cr.)	Third Year – Spring (15 cr.)
CS352 IS315 IS361 EN306 LE elective 7	CS300 IS316 IS362 or 300-400 level CS elective Additional course 2 Additional course 3
Fourth Year – Fall (15 cr.)	Fourth Year – Spring (14 cr.)
CS202 CS240 IS370 LE300 Additional course 4	CS322 A WI course outside of the major Additional course 5 Additional course 6 Additional course 7

* LE (Liberal Education) Elective: Aside from MA120 (Math), CS300 (Ethics), and Science with a lab (4 cr.), you will need 7 more LE courses: 2 Humanities, 1 Natural Science, 1 Citizenship, 1 Communication, and 2 Social Science. For a list of qualifying courses, see Liberal Education Requirements section in the degree description of this program in the catalog: <https://catalog.park.edu/>.

† Additional Course: any additional courses in or outside of the major. You need 20 credit hours (7 additional courses) to reach 120 credit hours.

Prerequisite Tree



B.S. in Information and Computer Science

Specialty Area – Software Development

