

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 AY19-20

MAJOR MAP

BACHELOR OF SCIENCE IN INFORMATION AND COMPUTER SCIENCE – CYBERSECURITY

Purpose Statement: This degree equips students to apply problem-solving and critical-thinking skills and use popular computer technologies in producing technology solutions. This program covers skills and knowledge needed in cybersecurity and related fields, including cryptography, computer system security, network security, web security, secure programming, security management, digital forensics, ethical hacking and countermeasures, etc. Also, it prepares students for graduate school in the field of cybersecurity.

	Credit Hours
University Graduation Requirements – BS	
LE 100 First-Year Seminar (<i>first-time freshman only; waived for transfer students</i>)	3
EN 306 Professional Writing in the Disciplines, or departmental equivalent	3
University Liberal Education Requirements	
EN 105 First-Year Writing Seminar I	3
EN 106 First-Year Writing Seminar II	3
CS 140 Introduction to Computers, or higher CS course, or departmental equivalent (will be satisfied in core)	*
MA 120 Basic Concepts of Statistics, MA 135 College Algebra, or higher MA course (will be satisfied in core)	*
Communication requirement (CA 103 Oral Communication, CA 105 Introduction to Human Communication, or TH 105 Oral Communication)	3
Citizenship requirement	3
Ethics requirement (will be satisfied in core)	*
Science course that has a lab	4
LE Natural and Physical Science Elective (<i>except computer science</i>)	3
LE Social Science Elective	6
LE Arts & Humanities Elective	6
LE 300 Seminar in Integrative and Interdisciplinary Learning	3
Requirements for the Major	
Core Curriculum	
CS 152 Introduction to Python Programming	3
CS 208 Discrete Mathematics	3
CS 300 Technology in a Global Society (departmental equivalent LE Ethics course)	3
CS 365 Computer Networking	3
IS 205 Managing Information Systems	3
IS 361 Data Management Concepts	3
MA 120 Basic Concepts of Statistics	3
Cybersecurity:	
CS 202 Secure Programming	3
CS 319 Computer Architecture	3
CS 335 Introduction to Cybersecurity	3
CS 351 Computer Operating Systems	3
CS 366 Computer Networking Laboratory	1
CS 375 Secure Operation	3

This guide is not a substitute for academic advisement.

CS 377 Digital Forensics	3
CJ 316 Cybersecurity Administration (offered online only) or IS370 Information Security	3
Select three courses from this list:	
CS 151 Introduction to Programming	3
CS 240 Web Programming I	3
CS 322 Web Programming II	3
CS 369 Operating System Administration	3
CS 371 Internetworking	3
CS 372 Advanced Networking	3
CS 385 Modern Developments in Advanced Networking	3
Additional Courses	
Additional courses in or outside of the major.	28
TOTALS	120

Recommended Schedule

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

First Year – Fall (15 cr.)	First Year – Spring (16 cr.)
CS152 CS208 LE100 EN105 LE elective 1*	CS365 CS366 (1 cr.) MA120 EN106 LE elective 2 LE elective 3
Second Year – Fall (15 cr.)	Second Year – Spring (16 cr.)
CS319 CJ316 or IS370 IS361 LE elective 4 LE elective 5	CS335 IS205 LE elective 6 LE elective 7 LE science with a lab (4 cr.)
Third Year – Fall (15 cr.)	Third Year – Spring (15 cr.)
CS202 CS375 EN306 CS elective 1# Additional course 1†	CS300 CS351 CS elective 2 Additional course 2 Additional course 3
Fourth Year – Fall (15 cr.)	Fourth Year – Spring (13 cr.)
LE300 CS elective 3 Additional course 4 Additional course 5 Additional course 6	CS377 Additional course 7 Additional course 8 Additional course 9 Additional course 10

Plan B: you need to take MA125. CS152 and CS208 require MA125>=C.

First Year – Fall (15 cr.)	First Year – Spring (15 cr.)
MA125 (additional course 1†) LE100 EN105 LE elective 1* LE elective 2	CS152 CS208 EN106 LE elective 3 LE elective 4
Second Year – Fall (16 cr.)	Second Year – Spring (16 cr.)
IS361 CS365 CS366 (1 cr.) LE elective 5 LE elective 6 LE elective 7	CS335 IS205 MA120 LE science with a lab (4 cr.) Additional course 2
Third Year – Fall (15 cr.)	Third Year – Spring (15 cr.)
CS202 CS319 CJ316 or IS370 EN306 Additional course 3	CS300 CS351 CS elective 1# Additional course 4 Additional course 5
Fourth Year – Fall (15 cr.)	Fourth Year – Spring (13 cr.)
CS375 LE300 CS elective 2 CS elective 3 Additional course 6	CS377 Additional course 7 Additional course 8 Additional course 9 Additional course 10

* LE (Liberal Education) Elective: aside from EN105, EN106, CS300 (LE Ethics), Science course with a lab (4 hrs), you will need 7 more LE courses: 1 LE Communication, 1 LE Natural Science, 1 LE Citizenship, 2 LE Social/ADM Science (Social Science), and 2 LE Humanities. For a list of qualifying courses go to MyPark>Resources tab>CLAS Academic Advising Resources located in "Your Personalized Resources">Handouts>Liberal Education Requirements.doc

† Additional Course: any additional courses in or outside of the major. You need 28 hrs (9-10 additional courses) to reach 120 hrs.

CS Electives: may start earlier depending on the courses you pick and when courses are offered. Check CSIS Course rotation table (home campus): https://my.park.edu/ICS/Offices/Information_and_Computer_Science/



B.S. in Information and Computer Science Specialty Area – Cybersecurity

Core Courses
 Specialty Area Courses
 Other Courses

