

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.

Example Career Info:

- Occupational Outlook Handbook > Information Security Analysts: <https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm>
- O*NET Online > Information Security Analysts: <https://www.onetonline.org/link/summary/15-1122.00>

	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	3
36 hours upper division (300 – 400) level course work	*
EN 306, Professional Writing in the Disciplines, or departmental equivalent	3
Requirements for the Major	
Core Curriculum	21
CS 152 Introduction to Python Programming	3
CS 208 Discrete Mathematics	3
CS 300 Technology in a Global Society (LE Ethics)	3
CS 365 Computer Networking	3
IS 205 Managing Information Systems	3
IS 361 Data Management Concepts	3
MA 120 Basic Concepts of Statistics (LE Math)	3
Cybersecurity:	33

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 (3 cr. starting 2020-2021)	3
CS 375 Secure Operation	3
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
Additional Courses	
Additional courses in or outside of the major.	26
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*	IS205 MA120 EN106 LE elective 2 LE elective 3
Second Year – Fall (15 cr.)	Second Year – Spring (16 cr.)
CS319 CS365 IS361 LE elective 4 LE elective 5	CS335 CS366 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 CJ316 or IS370 EN306 Additional course 1†	CS300 CS351 Select-Three 1# Additional course 2 Additional course 3
Fourth Year – Fall (15 cr.)	Fourth Year – Spring (14 cr.)
LE300 Select-Three 2 Select-Three 3 Additional course 4 Additional course 5	CS377 Additional course 6 Additional course 7 Additional course 8 Additional course 9

Plan B: You need to take MA125. CS152 and CS208 require a grade of C or higher in MA125.

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 (15 cr.)	Second Year – Spring (16 cr.)
IS361 CS365 LE elective 5 LE elective 6 LE elective 7	CS335 CS366 IS205 MA120 LE science with a lab (4 cr.)
Third Year – Fall (15 cr.)	Third Year – Spring (15 cr.)
CS202 CS319 CJ316 or IS370 EN306 Additional course 2	CS300 CS351 Select-Three 1# Additional course 3 Additional course 4
Fourth Year – Fall (15 cr.)	Fourth Year – Spring (14 cr.)
CS375 LE300 Select-Three 2 Select-Three 3 Additional course 5	CS377 Additional course 6 Additional course 7 Additional course 8 Additional course 9

* 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 26 credit hours (9 additional courses) to reach 120 credit hours.

Select-Three: 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

