

COMPUTER SCIENCE

This major is 48-51 credits • *2018-2019 Catalog Year*

Revised: 07-31-2018

CAREERS & POST-GRADUATE WORK

Recent Heidelberg graduates with this degree are doing ...

- Helpdesk Support
- Cyber Defense Engineer
- Software Developer
- IT Assistant

MAJOR ACADEMIC PLAN (MAP): A SAMPLE 4-YEAR PLAN

This MAP is a guide for students preparing for course selections. This is a suggested schedule. Actual course selections should be made with the advice of your advising specialist or faculty advisor. For course descriptions, pre-requisites, and rotations (e.g., fall or spring only classes, classes taught in alternate years), consult the Heidelberg University Undergraduate Catalog.

FIRST-YEAR FALL

Course	Prerequisites	Hrs	Notes
HEI 101: Advise, Inspire, Mentoring Program		1	Required of all first-year students.
WRI 101: College Writing II	Placement	3	
CPS 150: Fundamentals of Computer Science	Placement into, completion of, or concurrent enrollment in a 100-level or higher MTH course	4	
MTH 119: Statistics I	Placement	3	
General Education/Honors Support Courses		4	
Total Credits:		15	

FIRST-YEAR SPRING

Course	Prerequisites	Hrs	Notes
HEI 102: Advise, Inspire, Mentoring Program	HEI 101	0	Required of all first-year students.
MTH Course numbered 121 or higher		3	
PHI 202: Logic			
OR			
PHI 380: Symbolic Logic	Familiarity with a formal notational system such as mathematics, music, or a foreign language is desirable for PHI 380.	3	It is recommended that students take PHI 380 as a junior or senior
General Education/Honors Support Courses		9	Mathematics Placement Assessment score determines placement in MTH courses and eligibility for non-MTH Quantitative Literacy (Q) courses.
Total Credits:		15	

SECOND-YEAR FALL

Course	Prerequisites	Hrs	Notes
CPS 201: Computational Problem Solving	MTH 119 or placement into/completion of MTH 121 or higher	3	
WRI 251: Business & Professional Writing OR WRI 254: Writing to Inform OR WRI 260: Writing for Non-Specialist Audiences	WRI 101, exemption exam, or Honors Program	1	WRI 251, 254, and 260 meet for six weeks; students may take all three in one semester, but only one is required for the major.
General Education/Honors Support Courses		11	Consider completing the Foreign Language Requirement : Students not in the Honors Program must complete a foreign language to the 102-level or equivalent. Placement is based on the Foreign Language Assessment and some students may need to begin at the 101-level.
Total Credits:		15	

SECOND-YEAR SPRING

Course	Prerequisites	Hrs	Notes
CPS 202: Intermediate Computer Programming	CPS 201	3	
General Education/Honors Support Courses		12	
Total Credits:		15	

THIRD-YEAR FALL

Course	Prerequisites	Hrs	Notes
CPS 311: Data Structures OR CPS 325: Data Communications & Networking	CPS 202 CPS 201	3	
General Education/Honors Support Courses		12	
Total Credits:		15	

THIRD-YEAR SPRING

Course	Prerequisites	Hrs	Notes
CPS 301: Computer Organization OR CPS 312: Programming Languages	CPS 201, CPS 150 or 220 CPS 202	3	
CPS 345: Computer & Network Security	CPS 201, 325	3	
General Education/Honors Support Courses		9	
Total Credits:		15	

FOURTH-YEAR FALL

Course	Prerequisites	Hrs	Notes
CPS 311: Data Structures OR CPS 325: Data Communications & Networking	CPS 202 CPS 201	3	
General Education/Honors Support Courses		12	
Total Credits:		15	

FOURTH-YEAR SPRING

Course	Prerequisites	Hrs	Notes
CPS 490: Capstone Topics in Computing	Senior Standing	1	
CPS 301: Computer Organization OR CPS 312: Programming Languages	CPS 201, CPS 150 or CPS 220 CPS 202	3	
CPS 345: Computer & Network Security	CPS 201 CPS 325	3	
General Education/Honors Support Courses		8	
Total Credits:		15	

COMPUTER SCIENCE CONCENTRATIONS

Students must choose a concentration

<p>Computing Systems</p> <ul style="list-style-type: none"> 9 additional credit hours in <p>CPS 302: Operating Systems or CPS 330: Web Application Development or CPS 350: Topics in Computer Science or CPS 475 or CPS 476: Honors Course or any IST course at the 290 level or higher</p>	<p>Cybersecurity</p> <ul style="list-style-type: none"> IST 320: Issues in Information Systems Security IST 340: System and Network Administration POL 313: National Security Investigations or POL 389: Intelligence Operations 3 additional credit hours in <p>CPS 302: Operating Systems or CPS 330: Web Application Development or CPS 350: Topics in Computer Science or CPS 475 or CPS 476: Honors Course or any IST course at the 290 level or higher</p>
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