COMPUTER SCIENCE

2021/2022
Four-Year Academic Plan
Calculus I & ENGL-102 ready

University of Idaho
College of Engineering

Courses in italics are prerequisites **Courses in bold are co-requisites**

*A grade of C or better is required in all CS 100 and 200 classes as well as MATH 170, 175 and 176 before registration in upper-division classes is permitted.
See course catalog for complete degree requirements and additional information at uidaho.edu/registrar/classes/catalogs. Last updated 8/25/20

FRESHMAN	SEMESTER ONE		SEMESTER TWO		
*CS 120	Computer Science I *MATH 143, CS 112 or sufficient test scores*	4	*CS 121	Computer Science II *CS 120,* **MATH 176**	3
*MATH 176	Discrete Mathematics *C or better in MATH 143 or sufficient test scores*	3	*CS 150	Computer Organization and Architecture *CS 120*	3
COMM 101	Fundamentals of Public Speaking	2	*MATH 170	Calculus I *C or better in MATH 143, MATH 144 or sufficient test scores*	4
ENGL 102	College Writing and Rhetoric *English 101 or sufficient test scores*	3	ELECTIVE	Humanities / Social Science Elective *Must fulfill U of I General Degree Requirements (J-3)*	3
ELECTIVE	Free Elective	3	ELECTIVE	International / Diversity Elective *Must fulfill U of I General Degree Requirements (J-3)*	3
	Total Credits	**15**		**Total Credits**	**16**

*A grade of C or better is required in all 100-level CS courses as well as MATH 176 before registration in 200-level courses is permitted.

SOPHOMORE	SEMESTER ONE		SEMESTER TWO		
*CS 210	Programming Languages *CS 121*	3	*CS 240	Computer Operating Systems *CS 121, CS 150,* **CS 270**	3
*MATH 175	Calculus II *C or better in MATH 170*	4	*CS 270	System Software *CS 121*	3
ELECTIVE	Humanities / Social Science Elective *Must fulfill U of I General Degree Requirements (J-3)*	3	STAT 301	Probability & Statistics *MATH 175*	3
ELECTIVE	Science Elective with Lab *See listing below*	4	ELECTIVE	Science Elective with Lab *See listing below*	4
	Total Credits	**14**	ELECTIVE	Free Elective or Math Minor *Must fulfill U of I General Degree Requirements (J-3)*	2
				Total Credits	**15**

*A grade of C or better is required in all 200-level CS courses as well as MATH 170, 175 and 176 before registration in upper-division courses is permitted.

JUNIOR	SEMESTER ONE		SEMESTER TWO		
CS 385	Theory of Computation (fall only) *Permission*	3	CS 395	Analysis of Algorithms *MATH 175 and CS 121*	3
CS 383	Software Engineering *CS 210, CS 240, CS 270 or permission*	4	CS 360	Database Systems *CS 240, CS 270*	3
ELECTIVE	CS Technical Elective 300 or higher	3	ELECTIVE	CS Technical Elective 300 or higher	3
MATH 330	Linear Algebra *MATH 160 or MATH 170 (MATH 175 recommended)*	3	ENGL 317	Technical Writing *ENGL 102, Junior standing or permission*	3
ELECTIVE	Humanities / Social Science Elective *Must fulfill U of I General Degree Requirements (J-3)*	3	ELECTIVE	Humanities / Social Science Elective *Must fulfill U of I General Degree Requirements (J-3)*	3
	Total Credits	**16**		**Total Credits**	**15**

SENIOR	SEMESTER ONE		SEMESTER TWO		
CS 480	CS Senior Capstone Design I *CS 383, ENGL 317 and senior standing*	3	CS 481	CS Senior Capstone Design II *CS 480*	3
CS 445	Compiler Design *CS 210, CS 385*	4	ELECTIVE	CS Technical Elective 300 or higher	3
ELECTIVE	CS Technical Elective 300 or higher	3	ELECTIVE	CS Technical Elective 300 or higher	3
CS 400	Contemporary Issues in Computer Science *Senior standing*	1	ELECTIVE	International / Diversity Elective *Must fulfill U of I General Degree Requirements (J-3)*	3
ELECTIVE	Free Elective or Math Minor *Must fulfill U of I General Degree Requirements (J-3)*	3	ELECTIVE	Free Elective *Must fulfill U of I General Degree Requirements (J-3)*	3
	Total Credits	**14**		**Total Credits**	**15**

SCIENCE ELECTIVES WITH LABS

BIOL 114 Organisms and Environments
CHEM 111/111L Principles of Chemistry I + Lab
ENVS 101/102 Intro. Environ. Sci. + Field Activities
GEOG 100/100L Physical Geography + Lab
GEOL 102 + 102L Historical Geology + Lab
PHYS 211 + 211L Engineering Physics I + Lab
SOIL 205 + 206 The Soil Ecosystem + Lab

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Four-Year Academic Plan
Pre-Calculus Ready

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*A grade of C or better is required in all CS 100 and 200 classes as well as MATH 170, 175 and 176 before registration in upper-division classes is permitted.
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FRESHMAN

SEMESTER ONE			SEMESTER TWO		
*CS 112	Computational Thinking *MATH 108 or sufficient test scores*	3	*CS 120	Computer Science I *MATH 143, CS 112 or sufficient test scores*	4
ENGL 101	Writing and Rhetoric I	3	*MATH 176	Discrete Mathematics *C or better in MATH 143 or sufficient test scores*	3
ENGL 109	Writing Studio	1	COMM 101	Fundamentals of Public Speaking	2
MATH 143	College Algebra *MATH 108 or sufficient test scores*	3	ENGL 102	College Writing and Rhetoric *English 101 or sufficient test scores*	3
MATH 144	Analytic Trigonometry **MATH 143** *or sufficient test scores*	1	ELECTIVE	Humanities / Social Science Elective *Must fulfill U of I General Degree Requirements (J-3)*	3
ELECTIVE	International and Diversity Elective *Must fulfill U of I General Degree Requirements (J-3)*	4		**Total Credits**	**15**
	Total Credits	**15**			

*A grade of C or better is required in all 100-level CS courses as well as MATH 176 before registration in 200-level courses is permitted.

SOPHOMORE

SEMESTER ONE			SEMESTER TWO		
*CS 121	Computer Science II *CS 120,* **MATH 176**	3	*CS 210	Programming Languages *CS 121*	3
*CS 150	Computer Organization and Architecture *CS 120*	3	*CS 270	System Software *CS 121*	3
*MATH 170	Calculus I *C or better in MATH 143, MATH 144 or sufficient test scores*	4	*CS 240	Computer Operating Systems *CS 121, CS 150,* **CS 270**	3
ELECTIVE	Science Elective with Lab *See listing below*	4	*MATH 175	Calculus II *C or better in MATH 170*	4
ELECTIVE	Humanities / Social Science Elective *Must fulfill U of I General Degree Requirements (J-3)*	3	ELECTIVE	Humanities / Social Science Elective *Must fulfill U of I General Degree Requirements (J-3)*	3
	Total Credits	**17**		**Total Credits**	**16**

*A grade of C or better is required in all 200-level CS courses as well as MATH 170, 175 and 176 before registration in upper-division courses is permitted.

JUNIOR

SEMESTER ONE			SEMESTER TWO		
CS 385	Theory of Computation (fall only) *Permission*	3	CS 395	Analysis of Algorithms *MATH 175 and CS 121*	3
CS 383	Software Engineering *CS 210, CS 240, CS 270 or permission*	4	CS 360	Database Systems *CS 240, CS 270*	3
ELECTIVE	CS Technical Elective 300 or higher	3	ELECTIVE	CS Technical Elective 300 or higher	3
MATH 330	Linear Algebra *MATH 160 or MATH 170 (MATH 175 recommended)*	3	ENGL 317	Technical Writing *ENGL 102, Junior standing or permission*	3
ELECTIVE	Humanities / Social Science Elective *Must fulfill U of I General Degree Requirements (J-3)*	3	ELECTIVE	Science Elective with Lab *See listing below*	4
	Total Credits	**16**		**Total Credits**	**16**

SENIOR

SEMESTER ONE			SEMESTER TWO		
CS 480	CS Senior Capstone Design I *CS 383, ENGL 317 and senior standing*	3	CS 481	CS Senior Capstone Design II *CS 480*	3
CS 445	Compiler Design *CS 210, CS 385*	4	ELECTIVE	CS Technical Elective 300 or higher	3
ELECTIVE	CS Technical Elective 300 or higher	3	ELECTIVE	CS Technical Elective 300 or higher	3
CS 400	Contemporary Issues in Computer Science *Senior standing*	1	ELECTIVE	International / Diversity Elective *Must fulfill U of I General Degree Requirements (J-3)*	3
ELECTIVE	Free Elective or Math Minor *Must fulfill U of I General Degree Requirements (J-3)*	5	ELECTIVE	Free Elective or Math Minor *Must fulfill U of I General Degree Requirements (J-3)*	4
	Total Credits	**16**		**Total Credits**	**16**

SCIENCE ELECTIVES WITH LABS

BIOL 114 Organisms and Environments
CHEM 111/111L Principles of Chemistry I + Lab
ENVS 101/102 Intro. Environ. Sci. + Field Activities
GEOG 100/100L Physical Geography + Lab
GEOL 102 + 102L Historical Geology + Lab
PHYS 211 + 211L Engineering Physics I + Lab
SOIL 205 + 206 The Soil Ecosystem + Lab

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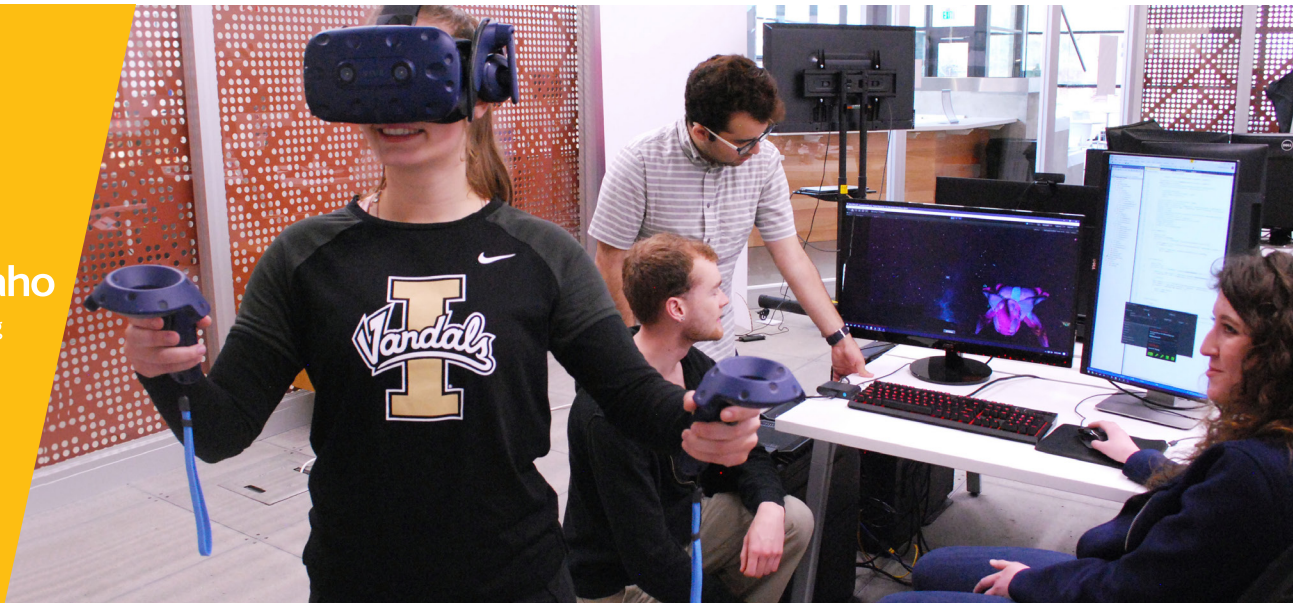

COMPUTER SCIENCE

Transform ideas into working computer programs that solve real problems in areas such as robotics, cybersecurity, social media, video games, computer networks, and control systems for aircraft and vehicles.

ABOUT YOUR DEGREE PATH

Computer Science majors have one-on-one interaction with professors. Work with faculty to tailor your education to your interests, and the opportunity to be involved in award-winning, cutting edge research with a department of national distinction.

Choose from advanced courses in computer and network security, games and virtual environments, embedded systems, distributed and network computing, fault tolerant systems, artificial intelligence, evolutionary computing, computer architecture, software engineering, and database systems.

Apply your skills to help others in almost every other discipline including medicine, performing arts, engineering, biology, business, political science and others.

MATCH YOUR INTERESTS

- Robotics
- Video Games and Virtual Environments
- Artificial Intelligence
- Cybersecurity
- Automation
- Communication Networks
- Biological Modeling
- Collaborative Virtual Environments
- Computer Hardware and Software
- Embedded Systems
- Reconfigurable Computing
- Large Scale Data Management

YOUR DEGREE IS ACCREDITED

Our undergraduate Computer Science program is accredited by the Computing Accreditation Commission of ABET, www.abet.org.

DEPARTMENT OF COMPUTER SCIENCE
208-885-6592 csinfo@uidaho.edu uidaho.edu/engr/cs