

Computer Science, BS Artificial Intelligence & Data Science Concentration 2026-2027 Catalog

Charger Foundations

Area I: Freshman Composition 3-6 credits

Course Number	Credits	Course Name	Semester Usually Offered
EH 101 and 102	6	College Writing I and II	Fall, Spring, Summer
EH 103	3	Accelerated College Writing	Fall, Spring
EH 105	3	Honors English Seminar	Fall

Area II: Humanities and Fine Arts 12 credits

Course Number	Credits	Course Name	Semester Usually Offered
Varies	3	Fine Art	Fall, Spring, Summer
Varies	3	Literature	Fall, Spring, Summer
PHL 102 or 150	3	Non-Literature Humanity - Filled by CS Ethics Requirements	Fall, Spring, Summer
Varies	3	Humanities/Fine Art/Literature	Fall, Spring, Summer

Area III: Mathematics and Sciences 12-14 credits

Mathematics 4-6 credits

Course Number	Credits	Course Name	Semester Usually Offered
MA 171 or MA 171S or MA 150 & 151	4-6	Calculus I or Calculus I with Foundations A & B	Fall, Spring, Summer

Natural Sciences (Lab) 8 credits

Course Number	Credits	Course Name	Semester Usually Offered
AES 103/103L & AES 104/104L	4 4	Environmental Earth Science + Lab & Weather and Climate Change + Lab	Fall, Spring, Summer
BYS 119/121 & BYS 120/122	3/1 3/1	Principles of Biology + Lab & Organismal Biology + Lab	Fall, Spring, Summer
CH 121/125 & CH 123/126	3/1 3/1	General Chemistry I + Lab & General Chemistry II + Lab	Fall, Spring, Summer
PH 111/114 & PH 112/115	3/1 3/1	General Physics with Calculus I + Lab & General Physics with Calculus II + Lab	Fall, Spring, Summer

Area IV: History and Social and Behavioral Sciences 12 credits

Course Number	Credits	Course Name	Semester Usually Offered
Varies	3	History	Fall, Spring, Summer
Varies	3	Social & Behavioral Science	Fall, Spring
Varies	3	Social & Behavioral Science	Fall, Spring
Varies	3	History/Social and Behavioral Science	Fall, Spring, Summer

Area V: Pre-Professional

Additional Requirements 24 credits

Course Number	Credits	Course Name	Semester Usually Offered
FYE 101S or HON 101	1	Charger Success - Science or Introduction to Honors Research	Fall
CS 104	3	Intro to CS Using Python	Fall, Spring, Summer
PHL 102 or 150	3	Ethics Requirement: Intro to Ethics or Technology, Science, & Human Values	Fall, Spring
EH 301	3	Technical Writing	Fall, Spring, Summer
MA 172	4	Calculus II	Fall, Spring, Summer
MA 201	4	Calculus III	Fall, Spring, Summer
MA 244	3	Intro to Linear Algebra	Fall, Spring, Summer
MA 385	3	Intro to Probability & Statistics	Fall, Spring, Summer

Major Requirements

Computer Science Core 30 credits

Course Number	Credits	Course Name	Semester Usually Offered
CS 121	3	Computer Science I	Fall, Spring, Summer
CS 214	3	Intro to Discrete Structures	Fall, Spring, Summer
CS 221	3	Computer Science II: Data Structures	Fall, Spring, Summer
CS 309/309L	3	Computer Org & Switching Theory + Lab	Fall, Spring
CS 321	3	Intro Object-Oriented Prog Java	Fall, Spring
CS 413/413L	3	Intro to Digital Comp Architecture + Lab	Fall, Spring
CS 417	3	Intro Design/Analysis of Algorithms	Fall, Spring, Summer
CS 424	3	Principles Programming Languages	Fall, Spring, Summer
CS 490	3	Intro to Operating Systems	Fall, Spring
CS 499	3	Senior Project: Team Software Design	Fall, Spring

Artificial Intelligence & Data Science Concentration Requirements 9 credits

Course Number	Credits	Course Name	Semester Usually Offered
CS 430	3	Survey of Artificial Intelligence	Fall, Spring
CS 488	3	Intro to Big Data Computing	Fall, Spring
CS 443, 445, 454, 481, 482, or 487	3	Intro to Multimedia Systems, Intro to Computer Graphics, Intro to Cloud Computing, Modeling & Simulation I, Modeling & Simulation II, or Database Systems	Fall, Spring

Artificial Intelligence & Data Science Concentration Elective Requirements 6 credits

Choose two CS courses at the 300-level or higher not listed above to reach at least 6 credits.

General Electives

Elective courses can be taken from any department and do not have to be taken in your major or minor. Only 4 HPE credits can apply.

Graduation Requirements

- Minimum of 120 credits required for graduation
 - At least 36 credits must be completed at the 300 level or higher
 - All prerequisite courses must be completed with a grade of C- or higher
 - The UAH Catalog is the final authority for all degree requirements
-

Charger Foundations Choices

Freshman Composition	Choose 1	College Writing I & II (EH 101 + 102) Accelerated College Writing (EH 103; equivalent to EH 101 & EH 102) Honors English Seminar (EH 105; equivalent to EH 101 & EH 102)
Fine Arts	Choose 1	Ancient & Medieval Art (ARH 100) Renaissance to Modern Art (ARH 101) World Art (ARH 103) Drawing: Foundations (ARS 160) Intro to Film Studies (FMA 1230) Intro to Music Literature (MU 100) Theatre Appreciation (TH 122)
Literature	Choose 1 or 2	Readings in Literature & Culture I (EH 207) Readings in Literature & Culture II (EH

		<p>208)</p> <p>Literature without Borders (EH 241)</p> <p>Mythology (EH 242)</p> <p>Protest Literature (EH 243)</p> <p>Heroes &/or Monsters (EH 244)</p> <p>Love &/or Romance (EH 245)</p> <p>Speculative Realities (EH 246)</p>
Humanities (Non-Literature)	<p>Choose 1 or 2</p> <p>One must satisfy the ethics requirement</p>	<p>Ancient & Medieval Art (ARH 100)</p> <p>Renaissance to Modern Art (ARH 101)</p> <p>World Art (ARH 103)</p> <p>Drawing: Foundations (ARS 160)</p> <p>Intro to Film Studies (FMA 123)</p> <p>Intro to Music Literature (MU 100)</p> <p>Theatre Appreciation (TH 122)</p> <p>Ancient & Medieval Worlds (AMS 229)</p> <p>Public Speaking (CM 113)</p> <p>Intro to Philosophy (PHL 101)</p> <p>Intro to Ethics (PHL 102)</p> <p>Intro to Logic (PHL 103)</p> <p>Tech, Science, & Human Values (PHL 150)</p> <p>Intro to Women's Studies (WGS 200)</p> <p>Foreign Language (WLC 101)</p> <p>International Cinema (WLC 204)</p>
Mathematics	Choose 1	<p>Calculus I with Foundations A & B (MA 150 & MA 151) or Calculus I (MA 171 or MA 171S)</p>
Natural Sciences (Lab) Sequence	Choose 1 sequence	<p>Environmental Earth Science (AES 103/103L) + Weather & Climate Change (AES 104/104L)</p> <p>Principles of Biology (BYS 119/121) + Organismal Biology (BYS 120/122)</p> <p>General Chemistry I (CH 121/125) + General Chemistry II (CH 123/126)</p> <p>General Physics with Calculus I (PH 111/114) and General Physics with Calculus II (PH 112/115)</p>
History	Choose 1 or 2	<p>World History to 1500 (HY 103)</p> <p>World History since 1500 (HY 104)</p> <p>United States to 1877 (HY 221)</p> <p>United States since 1877 (HY 222)</p>
Social & Behavioral Sciences	Choose 2 or 3	<p>World Geography (AES 105)</p> <p>Human Geography (AES 110)</p> <p>Global Systems & Cultures (GS 200)</p> <p>Macroeconomics (ECN 142)</p> <p>Microeconomics (ECN 143)</p>

		Intro to American Government (PSC 101) Intro to Comparative Politics (PSC 102) Intro to International Relations (PSC 260) General Psychology I (PY 101) Life-Span Development (PY 201) Intro to Sociology (SOC 100) Intro to Criminology (SOC 103) Intro Justice & Equity Studies (JES 200)
--	--	--

Students must take one literature and one history course.
Students must also take either a second literature or history course to complete a sequence.
