

MAJOR REQUIREMENTS (72 UNITS) *Grades of "C" or better required. Courses should be completed in order listed.*

	FALL	WINTER	SPRING
Computer Science Core Curriculum - (34 Units)			
CPTG 121 Introduction to Computer Science I (4) Prerequisite: MATH 121	_____	_____	_____
CPTG 122 Introduction to Computer Science II (4) Prerequisite: CPTG 244	_____	_____	_____
CPTG 244 Data Structures (4) Prerequisite: CPTG 122	_____	_____	_____
CPTG 245 Computer Organization and Assembly Language Programming (4) Prerequisite: CPTG 122	_____	_____	_____
CPTG 255 Systems and Network Programming (4) Prerequisite: CPTG 244	_____	_____	_____
CPTG 324 Programming Languages (4) Prerequisite: CPTG 244 & 245	_____	_____	_____
CPTG 434 Operating Systems (4) Prerequisite: CPTG 244 & 245	_____	_____	_____
CPTG 445 Computer Architecture (4) Prerequisite: CPTG 244 & 245	_____	_____	_____
CPTG 485 Seminar (0.5; 2 units total required) Prerequisite: CPTG 224; For Majors only	_____	_____	_____
Required Cognates (8 units)			
MATH 131 Calculus I (4) Prerequisite: MATH 122 or appropriate Math Placement Test score. Prerequisite meets Foundational Studies III Mathematics requirements	_____	_____	_____
MATH 276 Discrete Mathematics (4) Prerequisite: CPTG 121 or MATH 131	_____	_____	_____
Computer Science and Cognate Career Path* Electives (30 units, at least 16 units of CPTG electives) Prerequisite			
CPTG 323 Data Science (4) Prerequisite: CPTG 121	_____	_____	_____
CPTG 334 Systems Analysis (4) Prerequisite: CPTG 244	_____	_____	_____
CPTG 335 Cyber Security (4) Prerequisite: CPTG 244	_____	_____	_____
CPTG 345 Digital Logic & Design (4) Prerequisite: CPTG 245	_____	_____	_____
CPTG 356 Principles of Networking (4) Prerequisite: CPTG 244 & 245	_____	_____	_____
CPTG 364 Analysis of Algorithms (4) Prerequisite: CPTG 244	_____	_____	_____
CPTG 374 Web Application Development (4) Prerequisite: CPTG 244	_____	_____	_____
CPTG 384 Mobile Application Development (4) Prerequisite: CPTG 244	_____	_____	_____
CPTG 424 Database Design and Management (4) Prerequisite: CPTG 244	_____	_____	_____
CPTG 436 UNIX Systems Administration (4) Prerequisite: CPTG 244 & 245	_____	_____	_____
CPTG 446 Embedded Systems Design (4) Prerequisite: CPTG 245	_____	_____	_____
CPTG 454 Compiler Theory (4) Prerequisite: CPTG 324	_____	_____	_____
CPTG 455 Software Engineering (4) Prerequisite: CPTG 334 & ENGL 113 or 124	_____	_____	_____
CPTG 486 Topics in Computer Science (2-4) Prerequisite: CPTG 244 & 245	_____	_____	_____
CPTG 494 Internship (0-8) Prerequisite: CPTG 244 & 245; Jr or SR class standing & Computer science majors; 4 units of UD CPTG courses	_____	_____	_____
CPTG 499 Directed Study (1-4) Prerequisite: CPTG 244, 245, department chair's consent, and a major in Computer Science Department	_____	_____	_____
ARTS 194 Photoshop & Illustrator Image Creation (4)	_____	_____	_____
ARTS 394C Interface Design (4) Prerequisite: ARTS 194	_____	_____	_____
ARTS 394G Motion Graphics (4)	_____	_____	_____
ARTS 395A Web Design Communication Principles (4) Prerequisites: ARTS 194	_____	_____	_____
BIOL 111/111L General Biology I, Laboratory (4)(1) Prerequisite: MATH 121 eligibility	_____	_____	_____
BIOL 302 Genetics (4) or BIOL 312 Genetics for Computer Science	_____	_____	_____
BIOL 490 Bioinformatics (4) Prerequisite: BIOL 302 or instructors consent	_____	_____	_____
BIOL 491 Bioinformatics for Computer Science (4) Prerequisite: BIOL 312 or BIOL 312L	_____	_____	_____
MATH 132 Calculus II (4) Prerequisite: MATH 131	_____	_____	_____
MATH 133 Calculus III (4) Prerequisite: MATH 132	_____	_____	_____
MATH 155 Introductory Statistics (4) Prerequisite: MATH 007 or appropriate score on exam	_____	_____	_____
MATH 231 Introduction to Linear Algebra & Discrete Mathematics (4) Prerequisite: MATH 132	_____	_____	_____
MATH 361 Numerical Methods I (4) Prerequisite: CPTG 121, MATH 231 & 232	_____	_____	_____
MATH 362 Numerical Methods II (4) Prerequisite: MATH 461	_____	_____	_____
MATH 461 Biomathematical Modeling I (4) Prerequisite: CPTG 121, MATH 232, BIOL 113/113L	_____	_____	_____
MATH 462 Biomathematical Modeling II (4) Prerequisite: MATH 461	_____	_____	_____
MGMT 304 The Practice of Management (4)	_____	_____	_____
MGMT 327 Information Technology Management (4)	_____	_____	_____
MGMT 356 Human Resource Management (4)	_____	_____	_____
PHYS 117 Introduction to Physics (3) Prerequisite: MATH 007 or equivalent	_____	_____	_____
PHYS 231 General Physics I (4) Prerequisite: MATH 122 (A) or MATH 132 (B); Physical Science*	_____	_____	_____
PHYS 232 General Physics II (4) Prerequisite: PHYS 231 & 231L. Physical Science*	_____	_____	_____
PHYS 353 Electronics (4) Prerequisite: PHYS 117	_____	_____	_____

SEE REVERSE FOR UNIVERSITY STUDIES REQUIREMENTS

*A maximum of 4 units from the Major, and 8 units of Cognates required by the Major, may apply to University Studies General Studies requirements (2020-2021 Undergraduate Academic Bulletin)

NOTE: Should a student's general education and major degree program requirements not meet the minimum 190 units required for graduation, the student must complete elective units to make up the deficiency.

UNIVERSITY STUDIES (73-86 UNITS)

Foundational Studies (21-34 units) *Grades of "C" or better required*

FALL WINTER SPRING

- I. First Year Seminar UNST 101A (1), UNST 101B (1), UNST 101C (1)
- II. Rhetorical Skills
 - A. ENGL 111 (3), ENGL 112 (3), ENGL 113 (3) **OR**
ENGL 124 Freshman Seminar (4)
 - B. Upper Division Rhetoric in CPTG 334 (4) or CPTG 455 (4)
- III. Mathematics One college-level Mathematics course (4) Major requires MATH 131
- IV. World Languages Level 3 proficiency (e.g. 153) in one non-English language (4-12)
- V. Health and Fitness HLSC 120 (2)

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General Studies (52 units, 16 upper division) *Grades of "D" or better required, unless courses are required by major*

THEME I. Social Sciences (SSCI) 8 units

- Globalization, Identity and Citizenship (4 units from SSCI 204, 205, 206, 207, 208 or 209) Prerequisite: ENGL 113 or 124
- Social Science Breadth Course (4 units)

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THEME II. Arts and Humanities (HUMN) 12 units

- Exploring Culture (4 units from HUMN 104, 105, 106, 107, 108 or 109)
Prerequisite: ENGL 111 or 124
- Arts and Humanities Breadth Course (4 units)
- Arts and Humanities Breadth Course (4 units)

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THEME III. Religious Beliefs and Practices (RLGN) 16 units

- RLGN 304 Adventism in Global Perspective or RLGN 305 Religion in Three Cultures (4 units) Prerequisite: ENGL 113 or 124, Junior Status
- A. Spiritual Experience and Expressions (0-4 units)
- B. Beliefs and Heritage (4 units)
- C. Scripture (4 units)
- D. Religion and Society (4 units)

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THEME IV. Natural Sciences (NSCI) 12 units

- Scientific Foundations (4 units from NSCI 404, 405, 406, 407, 408 or 409) Prerequisite: ENGL 113 or 124, College-Level Math, Junior or Senior Status
- Life Science (4 units) Either life science or physical science must include a lab
- Physical Science (4 units) Either life science or physical science must include a lab

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THEME V. Senior Seminar (UNST) 4 units

- UNST 404N Religion, Values, and Social Responsibility (4)

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Service Learning (3 Courses)

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