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Bachelor of COMPUTER SCIENCE (CS)

4-Year Recommended Course Sequence with *Calculus Entry*

Click on the Course Name to access the course in the Undergraduate Catalog 24-25

Updated July 2025

Fall Semester 1	Spring Semester 2	Fall Semester 3	Spring Semester 4	Fall Semester 5	Spring Semester 6	Fall Semester 7	Spring Semester 8
☆INQ 170 [3] Intro to Engineering Design	CIS 260 [4] Intro to Programming (CIS 151)	CIS 265 [4] Data Structures and Algorithms (CIS 260, MTH 181)	CIS 335 [3] Language Processors (CIS 265)	CIS 340 [3] Systems Programming (CIS 265)	CIS 345|CIS 545 [3] Operating Systems (CIS 340)	CIS 493 [2] Senior Design I (ESC 102 or ENG 102, *CIS 345)	CIS 494 [3] Senior Design II (CIS 493)
CIS 151 [3] Invitation to Computing	PHY 241 [5] Physics I (MTH 181)	MTH 220 [3] Discrete Math (MTH 182- C or better)	MTH 288 [3] Linear Algebra (MTH 182- C or better)	CIS 402 [2] CS Technical Writing (CIS 260, ENG 102 or ESC 102)	CIS 454|CIS 584 [3] Computer Networks (CIS 340)	CIS 475 [3] Computer Security (CIS 340)	Complexities of Pluralistic Society Elective [3]
ENG 100 [3] Intensive Writing **or** ENG 101 [3] College Writing I	ENG 108 [3] AI & Writing (Preferred) (ENG 101) **OR** ENG 102 [3] College Writing II (ENG 101)	ESC 310 [3] Statistics and Probability (MTH 182) **OR** STA 323 [3] Statistical Methods (MTH 182- C or better)	PHL 215 [3] Technology Ethics (ENG 102 or ESC 102) OR PHL 216 [3] AI & Data Ethics (ENG 102 or ESC 102)	CIS 390|CIS 550 [3] Introduction to Algorithms (CIS 265, MTH 220)	CIS 434 [3] Software Engineering (CIS 265)	18 Credits of Technical Elective Courses (9 credits PER semester) EEC 383 (*EEC 310 or *PHY 241) Digital Sys [3] CIS 368 (CIS 265) Object-Oriented Design/Program [3] CIS 408 (CIS 265) Internet Program. [3] CIS 457 (CIS 368) Computer Graphics [3] CIS 465 (CIS 368) Multimedia [3] CIS 467 (CIS 390) Artificial Intelligence [3] CIS 470 (CIS 340) Mobile App Dev. [3] CIS 490 (MTH 220, CIS 335) Foundations of Computing [3] CIS 492 (prerequisites vary) Special Topics in Computer Science[3]	
MTH 181 [4] Calculus I	MTH 182 [4] Calculus II (MTH 181- C or better)	PHY 242 [5] Physics II (PHY 241)	ESC 282 [3] Engineering Economy (MTH 182)	CIS 424 [3] Comparative Programming Languages (CIS 265)	CIS 430|CIS 530 [3] Database Concepts (CIS 265)		
		**ESC 130 [1] Engineering & Computer Science Career Preparation	Society and Human Behavior Elective [3]	CIS 480|CIS 580 [3] Computer Architecture (CIS 335)	Global Human Perspectives Elective [3]		
				American Civic Literacy Elective [3]			
13 Total Credit Hours	16 Total Credit Hours	15 Total Credit Hours	15 Total Credit Hours	17 Total Credit Hours	15 Total Credit Hours	14 Total Credit Hours	15 Total Credit Hours

Degree Total Hours: 120 or 121 including ESC 130 Engineering Co-op Orientation

(Prerequisites) • (*Pre/co-requisite) • [# of Course Credits] • CIS XXX = Only Offered That Fall/Spring Semester

- Required CIS Courses ** ESC 130 is highly recommended but not required
- Required Science Courses
- Required English Courses
- Required Writing Across the Curriculum (WAC) Courses
- Required CIS Electives **3 semesters of co-op can replace one elective
- Required Math Courses
- Core Curriculum Electives

☆**ESC 120** Intro to Engineering Design can replace **INQ 170** for transfer students and students who completed an inquiry launch course other than INQ 170. Neither course is required for transfer students with an Associates of Applied Science degree

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500-level courses that satisfy Undergraduate and Master's degree credits

↓ **Scroll Down to View the Precalculus Entry 4-Year Plan Degree Chart** ↓

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Bachelor of COMPUTER SCIENCE (CS)

4-Year Recommended Course Sequence with *Precalculus Entry*

Click on the Course Name to access the course in the Undergraduate Catalog 24-25

Fall Semester 1	Spring Semester 2	Summer Semester #1	Fall Semester 3	Spring Semester 4	Fall Semester 5	Spring Semester 6	Summer Semester #2	Fall Semester 7	Spring Semester 8
★ **INQ 170 [3]** Intro to Engineering Design	**CIS 151 [3]** Invitation to Computing		**CIS 260 [4]** Intro to Programming (ESC 151 or CIS 151)	**CIS 265 [4]** Data Structures and Algorithms (CIS 260, MTH 181)	**CIS 340 [3]** Systems Programming (CIS 265)	**CIS 345|CIS 545 [3]** Operating Systems (CIS 340)		**CIS 493 [2]** Senior Design I (ESC 102 or ENG 102, *CIS 345)	**CIS 494 [3]** Senior Design II (CIS 493)
Society and Human Behavior Elective [3]	**American Civic Literacy Elective [3]**		**MTH 182 [4]** Calculus II (MTH 181- C or better)	**MTH 288 [3]** Linear Algebra (MTH 182- C or better)	**CIS 335 [3]** Language Processors (CIS 265)	**CIS 480|CIS 580 [3]** Computer Architecture (CIS 335)		**18 Credits of Technical Elective Courses (9 credits PER semester)** **EEC 383** (*EEC 310 or *PHY 241) Digital Systems [3] **CIS 368** (CIS 265) Object-Oriented Design/Program [3] **CIS 408** (CIS 265) Internet Program [3] **CIS 457** (CIS 368) Computer Graphics [3] **CIS 465** (CIS 368) Multimedia [3] **CIS 467** (CIS 390) Artificial Intelligence [3] **CIS 470** (CIS 340) Mobile App Dev. [3] **CIS 490** (MTH 220, CIS 335) Foundations of Computing [3] **CIS 492** (prerequisites vary) Special Topics in Computer Science [3]	
ENG 100 [3] Intensive Writing **or** **ENG 101 [3]** College Writing I	**ENG 108 [3]** (Preferred) (ENG 101) **OR** **ENG 102 [3]** College Writing II (ENG 101)		**PHY 241 [5]** Physics I (MTH 181)	**MTH 220 [3]** Discrete Math (MTH 182-C or better)	**CIS 390|CIS 550 [3]** Introduction to Algorithms (CIS 265, MTH 220)	**CIS 434 [3]** Software Engineering (CIS 265)			
MTH 165 [3] Intensive Precalc I **OR** **MTH 167 [3]** Precalculus I	**MTH 168 [3]** Precalculus II (MTH 165 or MTH 167- C or better)	**SUMMER CALCULUS I [4]** (Average B- or better in MTH 167&168)	**Complexities of Pluralistic Society Elective [3]**	**ESC 310 [3]** Statistics + Prob. (MTH 182) **OR** **STA 323 [3]** Statistical Methods (MTH 182- C or better)	**CIS 424 [3]** Comparative Programming Languages (CIS 265)	**CIS 430|CIS 530 [3]** Database Concepts (CIS 265)	**CIS 475 [3]** Computer Security (CIS 340)		
	Global Human Perspectives Elective [3]		****ESC 130 [1]** Engineering & Computer Science Career Preparation	**PHY 242 [5]** Physics II (PHY 241)	**PHL 215 [3]** Technology Ethics OR **PHL 216 [3]** AI & Data Ethics (ENG 102 or ESC 102)	**ESC 282 [3]** Engr. Economy (MTH 182)			
						CIS 402 [2] CS Technical Writing (CIS 260, ENG 102 or ESC 102)		**CIS 454|CIS 584 [3]** Computer Networks (CIS 340)	
12 Total Credit Hours	**15 Total Credit Hours**	**4 Credit hrs**	**17 Total Credit Hours**	**18 Total Credit Hours**	**15 Total Credit Hours**	**17 Total Credit Hours**	**3 Credit hrs**	**15 Total Credit Hours**	**15 Total Credit Hours**

Total Credits for CS Degree: 126 or 127 including ESC 130 Engineering Co-op Orientation

(Prerequisites) • (*Pre/co-requisite) • [# of Course Credits] • CIS XXX = Only Offered That Fall/Spring Semester

- Required CIS Courses ** ESC 130 is highly recommended but not required
- Required Science Courses
- Required English Courses
- Required Writing Across the Curriculum (WAC) Courses
- Required CIS Electives **3 semesters of co-op can replace one elective
- Required Math Courses
- Core Curriculum Electives

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500-level courses that satisfy Undergraduate and Master's degree credits

★**ESC 120** Intro to Engineering Design can replace **INQ 170** for transfer students and students who completed an inquiry launch course other than INQ 170. Neither course is required for transfer students with an Associates of Applied Science degree.

↓ **Scroll Down to View the Precalculus Entry 5-Year Plan Degree Chart** ↓

Begin to earn credits toward a Master's Degree while taking undergraduate courses!
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Bachelor of COMPUTER SCIENCE (CS)

5-Year Recommended Course Sequence with *Precalculus Entry*

Click on the Course Name to access the course in the Undergraduate Catalog 24-25

Updated July 2025

Fall Semester 1	Spring Semester 2	Fall Semester 3	Spring Semester 4	Fall Semester 5	Spring Semester 6	Fall Semester 7	Spring Semester 8	Fall Semester 9	Spring Semester 10
☆INQ 170 [3] Intro to Engineering Design	CIS 151 [3] Invitation to Computing	CIS 260 [4] Intro to Programming (ESC 151 or CIS 151)	CIS 265 [4] Data Structures and Algorithms (CIS 260, MTH 181)	CIS 340 [3] Systems Programming (CIS 265)	CIS 345|CIS 545 [3] Operating Systems (CIS 340)	CIS 390|CIS 550 [3] Introduction to Algorithms (CIS 265, MTH 220)	CIS 480|CIS 580 [3] Computer Architecture (CIS 335)	CIS 493 [2] Senior Design I (ESC 102 or ENG 102, *CIS 345)	CIS 494 [3] Senior Design II (CIS 493)
Society and Human Behavior Elective [3]	Global Human Perspectives Elective [3]	MTH 181 [4] Calculus I (MTH 168- C or better)	MTH 182 [4] Calculus II (MTH 181- C or better)	CIS 335 [3] Language Processors (CIS 265, MTH 181)	MTH 288 [3] Linear Algebra (MTH 182- C or better)	CIS 424 [3] Comparative Programming Languages (CIS 265)	CIS 434 [3] Software Engineering (CIS 265)	CIS 475 [3] Computer Security (CIS 340)	
ENG 100 [3] Intensive Writing or ENG 101 [3] College Writing I	ENG 108 [3] (Preferred) (ENG 101) OR ENG 102 [3] College Writing II (ENG 101)	American Civic Literacy Elective [3]	PHY 241 [5] Physics I (MTH 181)	PHY 242 [5] Physics II (PHY 241, MTH 182)	MTH 220 [3] Discrete Math (MTH 182 -C or better)	CIS 454|CIS 584 [3] Computer Networks (CIS 340)	CIS 430|CIS 530 [3] Database Concepts (CIS 265)	18 Credits of Technical Elective Courses (9 credits PER semester) EEC 383 (*EEC 310 or *PHY 241) Digital Systems [3] CIS 368 (CIS 265) Object-Oriented Design/Program [3] CIS 408 (CIS 265) Internet Program. [3] CIS 457 (CIS 368) Computer Graphics [3] CIS 465 (CIS 368) Multimedia [3] CIS 467 (CIS 390) Artificial Intelligence [3] CIS 470 (CIS 340) Mobile App Dev. [3] CIS 490 (MTH 220, CIS 335) Foundations of Computing [3] CIS 492 (prerequisites vary) Special Topics in Computer Science[3]	
MTH 165 [3] Intensive Precalc I OR MTH 167 [3] Precalculus I	MTH 168 [3] Precalculus II (MTH 165 or MTH 167- C or better)	**ESC 130 [1] Engineering & Computer Science Career Preparation		ESC 282 [3] Engr. Economy (MTH 182)	ESC 310 [3] Statistics and Probability (MTH 182) OR STA 323 [3] Statistical Methods (MTH 182- C or better)	PHL 215 [3] Technology Ethics OR PHL 216 [3] AI & Data Ethics (ENG 102 or ESC 102)	CIS 402 [2] CS Technical Writing (CIS 260, ENG 102 or ESC 102)		
							Complexities of Pluralistic Society Elective [3]		
12 Total Credit Hours	12 Total Credit Hours	12 Total Credit Hours	13 Total Credit Hours	14 Total Credit Hours	12 Total Credit Hours	12 Total Credit Hours	14 Total Credit Hours	14 Total Credit Hours	12 Total Credit Hours

Total Credits for CS Degree: 126 or 127 including ESC 130 Engineering Co-op Orientation

(Prerequisites) • (*Pre/co-requisite) • [# of Course Credits] • CIS XXX = Only Offered That Fall/Spring Semester

Required CIS Courses ** ESC 130 is highly recommended but not required
Required Science Courses
Required English Courses
Required Writing Across the Curriculum (WAC) Courses

Required CIS Electives **3 semesters of co-op can replace one elective
Required Math Courses
Core Curriculum Electives

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500-level courses that satisfy Undergraduate and Master's degree credits

☆**ESC 120** Intro to Engineering Design can replace **INQ 170** for transfer students and students who completed an inquiry launch course other than INQ 170. Neither course is required for transfer students with an Associates of Applied Science degree

List of CS undergraduate courses that satisfy Master's Degree credits

Course Number & Name
CIS 390|CIS 550: Introduction to Algorithms
CIS 480|CIS 580: Computer Architecture
CIS 345|CIS 545: Operating Systems
CIS 454|CIS 584: Computer Networks
CIS 430|CIS 530: Database Concepts

Access CampusNet to check when courses are offered each semester!