Computer Science Undergraduate Track Elective Suggestions

Undergraduate certificates awarded upon graduation if required number of courses are taken in a specific track area (optional).

Software	Software Development (Choose 5) 3470: Scripting Language/Design 4230: Parallel Programming 4480: Computer Networks 4540: Web Software Architecture 5140: Data Mining 5460: Operating Systems 5470: Compilers 5530: Database Systems 5540: Human Computer Interaction 5785: Adv. Embedded Software Web/Mobile Development (Choose 4) 3470: Scripting Language/Design 4480: Computer Networks 4540: Web Software Architecture 4962: iPhone/Android Development 5530: Database Systems 5540: Human Computer Interaction
Computer Systems	Computer Systems (Choose 3) 4230: Parallel Programming 4480: Computer Networks 5460: Operating Systems 5470: Compilers 5490: Network Security 5530: Database Systems Programming Languages (Choose 3) 3470: Scripting Language/Design 5100: Foundations of CS 5470: Compilers 5510: Programming Languages

ı nu	mber of courses are taken in a specific track area
Artificial Intelligence	Robotics (Choose 3) 4300: Artificial Intelligence 5310: Robotics 5350: Machine Learning *6320: 3D Computer Vision *6330: Intro to Robot Control *6370 Geometric Motion Planning
	Artificial Intelligence (Choose 4) 4300: Artificial Intelligence 4640: Image Processing Basics 5100: Foundations of CS 5130: Computational Statistics 5140: Data Mining 5320: Computer Vision 5340: Natural Language Processing 5350: Machine Learning
Data	Information (Choose 3) 4300: Artificial Intelligence 5140: Data Mining 5340: Natural Language Processing 5350: Machine Learning 5530: Database Systems 5630: Visualization *6150: Adv. Algorithms
Theory	Theory (Choose 3) 3100: Models of Computation 5100: Foundations of CS 5130: Computational Statistics 5140: Data Mining 5350: Machine Learning *6150: Adv. Algorithms

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urapnics	Visual Computing (Choose 4) 3200: Intro Sci Comp 4600: Intro Computer Graphics 4640: Image Processing Basics 5320: Computer Vision 5350: Machine Learning 5610: Interactive Comp Graphics 5630: Scientific Visualization 5650: Perception for Graphics
Hardware	Computer Organization (Choose 4) 3700: Digital System Design 3710: Computer Design Lab 5460: Operating Systems 5710: Digital VLSI Design 5830: VLSI Architecture Embedded Systems (Choose 4) 3710: Computer Design Lab 4480: Computer Networks 5470: Compilers 5780: Embedded System Design 5785: Adv. Embedded Software 5789: Embedded Sy/Kinetic Art CAD for Digital Systems (Choose 4) 5710: Digital VLSI Design 5740: Computer-Aidied Design 5745: Testing/Verif. Digital Circuits 5750: Synthesis/Veri. VLSI Sys. 5830: VLSI Architecture

^{*}Open to undergrads with instructor consent & permission code.