Fall 2022 Course List

Updated September 2, 2022

Undergraduate:

- ROB 101: Computational Linear Algebra (Grizzle)
- ROB 102: Intro to AI & Programming (Jenkins / Pavlasek)
- ENG 100.850: Robotics Mechanisms (Yeo)
- ROB 311: How to Build Robots and Make Them Move (Rouse)
- ROB 330: Localization, Mapping, and Navigation (Skinner)

Robotics Core:

- ROB 501: Math for Robotics (Ozay)
- ROB 502: Programming for Robotics (TBD)
- ROB 550: Robotics Systems Lab (Gaskell)

Sensing:

- AEROSP 567: Inference Estimation and Learning (Gorodetsky)
- EECS 442/504: Computer Vision (Owens)
  *Note: Enrollment for 442 is primarily reserved for undergraduate students. Grad enrollment with instructor consent.
- EECS 551: Matrix Methods for Signal Processing (Liu)
- IOE 491: Wearable Sensors (Stirling)

Reasoning:

- AEROSP 584: Navigation & Guidance of Aerospace Vehicles (Tzoumas)
- EECS 498: Principles of Machine Learning (Qu) *credit only if taken before EECS 545 and EECS 553
- EECS 548: Info Visualization (Adar)
- EECS 550: Information Theory (Neuhoff)
- EECS 553: Machine Learn ECE (Balzano)
- EECS 592: Foundations of Artificial Intelligence (Lu)
- EECS 595: Natural Language Processing (Chai)
- EECS 598: Approximation Algorithms (Lee)

- IOE 512: Dynamic Programming (Shen)
- IOE 536: Cognitive Ergonomics (Sarter)
- IOE 611: Nonlinear Programming (Fattahi)

Acting:

- AEROSP 470: Control of Aerospace Vehicles (Panagou)
- AEROSP 540 / MECHENG 540: Intermediate Dynamics (Bernstein)
- AEROSP 584: Navigation & Guidance of Aerospace Vehicles (Tzoumas)
- EECS 460: Control Systems Analysis and Design (Seiler)
- EECS 461: Embedded Systems Control (Freudenberg)
- EECS 560 / MECHENG 564 / AEROSP 550: Linear Systems Theory (Gillespie)
- EECS 566: Discrete Event Systems (Lafortune)
- MECHENG 584: Advanced Mechatronics for Manufacturing (Okwudire)
- NAVARCH 540: Marine Dynamics III (Pan)

Elective:

**In addition to the courses listed below, any 500-level CoE course can count as an elective.*

- AEROSP 585: Aerospace Seminar (topic varies by term)
- EECS 471: Applied GPU Programming
- EECS 501: Probability & Random Processes (Sadanandarao)
- EECS 587: Parallel Computing (Stout)
- ELI 521: Writing for Academic Purposes I
- ENGR 580: Teaching Engineering (Finelli)
- ENTR 407: Entrepreneurship Hour
- ENTR 500: Intro to Innovation Careers
- ENTR 520: Tech-Inspired Business Models
- ENTR 530: Innovation & IP Strategy
- ENTR 550: Interpersonal Skills
- ENTR 560: Project Management and Consulting
- ENTR 599 (all sections)
- ISD 599F: Vehicle Crashworthiness and Occupant Protection (Hu)
- KINESLGY 431: Clinical Gait Analysis (Gates)
- MATH 451: Advanced Calculus I (Ji)

- MATH 525: Probability Theory (TBD)
- TCHNCLCM 610: Academic and Professional Writing (Snyder)