

Cybersecurity (BEng) – General Program September Entry

Department of Cybersecurity and
Intelligent Systems Engineering

Year 1: 30 credits		Year 2: 29 credits		Year 3: 31 credits		Year 4: 30 credits	
Fall: 14.5 credits	Winter: 15.5 credits	Fall: 14.5 credits	Winter: 14.5 credits	Fall: 16 credits	Winter: 15 credits	Fall: 15 credits	Winter: 15 credits
ENGR 213 Applied Ordinary Differential Equations (3) pre: MATH 205; co: MATH 204	ENGR 233 Applied Advanced Calculus (3) pre: MATH 204, 205	ENGR 201 Professional Practice & Responsibility (1.5)	ENGR 202 Sustainable Development & Environmental Stewardship (1.5)	INSE 331 Database Security (3) pre: INSE 349; COMP/COEN 352	ENGR 301 Engineering Management Principles & Economics (3)	INSE 441 Mobile Application Security & Privacy (3) pre: INSE 349, 445	ENGR 392 Impact of Technology on Society (3) pre: ENCS 282; ENGR 201, ENGR 202
INSE 201 Security Ethics, Laws, Standards & Compliance (1.5)	General Elective Course 1 (3)	ENGR 371 Probability & Statistics in Engineering (3) pre: ENGR 213, 233	ENGR 391 Numerical Methods in Engineering (3) pre: ENGR 213, 233; COMP 248/COEN 243	INSE 351 Operating System Security (3) pre: INSE 349; COMP/COEN 346	INSE 390 Cybersecurity Engineering Team Design Project (3) pre: ENCS 282; INSE 331, 351, ENGR 371 co-req: INSE 445	INSE 412 Cybercrime & Digital Forensics (3) pre : INSE 401, 442	INSE 452 Penetration Testing & Ethical Hacking (3) pre: INSE 442, 445
COMP 232 Mathematics for Computer Science (3) pre: MATH 203, 204	INSE 221 Cryptography I (3) pre: COMP 232 or COEN 231	INSE 349 Secure Programming & Software Design (3) pre: INSE 221	COMP 346 Operating Systems (4) pre: COMP/SOEN 228; COMP 352	INSE 387 Introduction to Artificial Intelligence & Machine Learning in Cybersecurity (3) pre: ENGR 371, 391	INSE 445 Network Security (3) pre: INSE 321, 349; COMP 445 or ELEC/COEN 366	INSE 48x Cybersecurity Engineering Elective Course 1 (3)	INSE 48x Cybersecurity Engineering Elective Course 3 (3)
COMP 248 Object-Oriented Programming I (3.5) pre: MATH 204	COMP 249 Object-Oriented Programming II (3.5) pre: COMP 248; MATH 203, 205	COMP 352 Data Structures & Algorithms (3) pre: COMP 232, 249	INSE 386 Introduction to Cybersecurity Management & Governance (3) pre: INSE 201	INSE 401 Usability & Human Aspects of Security (3) pre: INSE 321	INSE 442 Reverse Engineering, Application & Malware Analysis (3) pre: INSE 331, 351	INSE 48x Cybersecurity Engineering Elective Course 2 (3)	INSE 48x Cybersecurity Engineering Elective Course 4 (3)
ELEC 275 Principles of Electrical Engineering (3.5) pre: PHYS 205; co-req: ENGR 213	Engineering & Natural Science Group: Cybersecurity Engineering Course 1 (3)	SOEN 228 System Hardware (4) pre: MATH 203, 204	ENCS 282 Technical Writing & Communication (3) pre: EWT/ENCS 272	COMP 445 Data Communication & Computer Networks (4) pre: COMP 346	INSE 413 Security Auditing & Compliance (3) pre: INSE 331, 351 co-req: INSE 445	INSE 490 Capstone Cybersecurity Engineering Design Project (6) pre: INSE 390; ENGR 301, 391	