

Subject	Crs #	Quarter #	Units	Short Title	Semester Pre/Co-req	Quarter Pre/Co-req	Notes
CMPS	1200	120	3.00	Basic Computer Skills	None	None	
CMPS	2010	150 + 221 + first part of 222	4.00	Programming I: Prog Fundament	Prereq: MATH 0930 or Other satisfaction of the ELM requirement	Prereq: MATH 85 or Other satisfaction of the ELM requirement	
CMPS	2020	Rest of 222 + 223	4.00	Programming II: Data Structure	Prereq: CMPS 2010 with a grade of C- or better	Prereq: CMPS 222 with a grade of C- or better	
CMPS	2120	295	4.00	Discrete Structures	Prereq: CMPS 2010 with a grade of C- or better and MATH 1040 or 1050 or 1060 or 2320 or 2520 (or any other Calculus course numbers needed for "or higher" mathematics)	Prereq: CMPS 221 with a grade of C- or better and MATH 190 or 191 or 192 or 201 or 231 (or any other Calculus course numbers needed for "or higher" mathematics)	
CMPS	2240	224	4.00	Comp Arch I: Assembly Lang Prog	Prereq: CMPS 2010 with a grade of C- or better	Prereq: CMPS 221 with a grade of C- or better	
CMPS	2650	215 + 216	4.00	Linux Environment and Administ	None	None	
CMPS	2680	211	3.00	Web Programming I	None	None	
CMPS	2770	277	3.00	Special Topics	Prereq: CMPS 2010 with a grade of C- or better	Prereq: CMPS 221 with a grade of C- or better	
CMPS	2771		1.00	Special Topics Laboratory	Co-req: CMPS 2770		
CMPS	3120	312	3.00	Algorithm Analysis	Prereq: CMPS 2020 with a grade of C- or better and CMPS 2120	Prereq: CMPS 223 with a grade of C- or better and CMPS 295	
CMPS	3140	NEW	3.00	Theory of Computation	Prereq: CMPS 3120	Prereq: CMPS 312	
CMPS	3240	321	4.00	Comp Arch II: Organization	Prereq: CMPS 2240 or ECE 3200	Prereq: CMPS 224 or ECE 320	New prereqs for semesters.
CMPS	3300	305	4.00	Numerical Analysis	Prereq: (1) C- or better in MATH 2020, MATH 2320, or MATH 2520, and (2) C- or better in MATH 2610 or CMPS 2010.	Prereq: (1) C- or better in MATH 203, MATH 212, or MATH 233, and (2) C- or better in CMPS 221 or MATH 230	Will be scheduled under MATH 3300. See Mathematic's schedule for more details.
CMPS	3350	335	4.00	Software Engineering	Prereq: CMPS 2020 with a grade of C- or better	Prereq: CMPS 222 with a grade of C- or better and CMPS 223 with a grade of C- or better	
CMPS	3390	394	4.00	Client, Serv, Internt & Dev Pr	Prereq: CMPS 2020 with a grade of C- or better	Prereq: CMPS 222 with a grade of C- or better and CMPS 223 with a grade of C- or better	
CMPS	3420	342	4.00	Database Systems	Prereq: CMPS 2020 with a grade of C- or better and CMPS 2120	Prereq: CMPS 223 with a grade of C- or better and CMPS 295	
CMPS	3480	371	4.00	Computer Graphics	Prereq: CMPS 2020 with a grade of C- or better	Prereq: CMPS 223 with a grade of C- or better	
CMPS	3500	350	3.00	Programming Languages	Prereq: CMPS 2020 with a grade of C- or better	Prereq: CMPS 222 with a grade of C- or better and CMPS 223 with a grade of C- or better	

Subject	Crs #	Quarter #	Units	Short Title	Semester Pre/Co-req	Quarter Pre/Co-req	Notes
CMPS	3560	356	3.00	Artificial Intelligence	Prereq: CMPS 2020 with a grade of C- or better and CMPS 2120	Prereq: CMPS 223 with a grade of C- or better and CMPS 295	
CMPS	3600	360	4.00	Operating Systems	Prereq: CMPS 2020 with a grade of C- or better	Prereq: CMPS 223 with a grade of C- or better	
CMPS	3620	376	4.00	Computer Networks	Prereq: CMPS 2020 with a grade of C- or better	Prereq: CMPS 223 with a grade of C- or better	
CMPS	3640	NEW	3.00	Distributed and Parallel Compu	Prereq: CMPS 3600 and CMPS 3620	Prereq: CMPS 360 and CMPS 376	
CMPS	3650	340	4.00	Digital Forensics	Pre or Co-req: CMPS 2010 with a grade of C- or better or CMPS 2650	Pre or Co-req: CMPS 221 with a grade of C- or better or CMPS 215	New prereqs for semesters.
CMPS	3680	311	3.00	Web Programming II	Prereq: CMPS 2010 with a grade C- or better and CMPS 2680 or instructor approval	Prereq: CMPS 221 with a grade of C- or better and CMPS 211 or instructor approval	
CMPS	3770	377	3.00	Special Topics	Prereq: CMPS 2020 with a grade of C- or better or permission of instructor	Prereq: CMPS 223 with a grade of C- or better or permission of instructor	
CMPS	3771		1.00	Special Topics Laboratory	Co-req: CMPS 3770		
CMPS	4210	421	4.00	Advanced Computer Architecture	Prereq: CMPS 3240	Prereq: CMPS 321	
CMPS	4300	475	4.00	Applied Cryptography	Prereq: (1) C- or better in MATH 2020, MATH 2320, or MATH 2520, and (2) C- or better in MATH 3000 or CMPS 2120.	Prereq: (1) C- or better in MATH 203, MATH 212, or MATH 233, and (2) C- or better in CMPS 295 or MATH 300	Will be scheduled under MATH 4300. See Mathematic's schedule for more details.
CMPS	4350	435	4.00	Advanced Software Engineering	Prereq: CMPS 3350	Prereq: CMPS 335	
CMPS	4420	442	4.00	Advanced Database Systems	Prereq: CMPS 3420	Prereq: CMPS 342	
CMPS	4450	445	4.00	Data Mining and Visualization	Prereq: CMPS 3120	Prereq: CMPS 312	
CMPS	4460	446	4.00	Image Processing	Prereq: ECE 3040	Prereq: ECE 304	Will be scheduled under ECE 4460
CMPS	4470	447	4.00	Computer Vision	Prereq: MATH 2320 or 2520 and (CMPS 3120 or ECE 3040)	Prereq: MATH 203 or 233 and (CMPS 312 or ECE 304)	Will be scheduled under ECE 4470
CMPS	4490	473	4.00	Game Design	Prereq: CMPS 2020 with a grade of C- or better	Prereq: CMPS 223 with a grade of C- or better	
CMPS	4500	450	4.00	Compiler Design	Prereq: CMPS 3500 or permission of the instructor	Prereq: CMPS 350	
CMPS	4510	451	4.00	Vulnerability Analysis	Prereq: CMPS 2240 and CMPS 3500	Prereq: CMPS 224 and CMPS 350	New prereqs for semesters.
CMPS	4560	456	4.00	Advanc Artificial Intelligence	Prereq: CMPS 3560	Prereq: CMPS 356	

Subject	Crs #	Quarter #	Units	Short Title	Semester Pre/Co-req	Quarter Pre/Co-req	Notes
CMPS	4620	476	4.00	Network and Computer Security	Prereq: CMPS 2020 with a grade of C- or better and either CMPS 3620 or CMPS 3650	Prereq: CMPS 223 with a grade of C- or better and either CMPS 376 or CMPS 340	New prereqs for semesters.
CMPS	4770	477	4.00	Special Topics	Prereq: CMPS 2020 with a grade of C- or better or permission of instructor	Prereq: CMPS 223 with a grade of C- or better or permission of instructor	
CMPS	4771		4.00	Special Topics Laboratory	Co-req: CMPS 4770		
CMPS	4800		4.00	Undergraduate Research	Prereq: Permission of instructor	Prereq: Permission of instructor	
CMPS	4860	496	15.00	Internship in Computer Science	Prereq: Permission of instructor	Prereq: Permission of instructor	
CMPS	4870	497	15.00	Cooperative Education	Prereq: Permission of instructor	Prereq: Permission of instructor	
CMPS	4890	489	15.00	Experiential Prior Learning	Prereq: CMPS 2020 with a grade of C- or better and permission of the instructor	Prereq: CMPS 223 with a grade of C- or better and permission of the instructor	
CMPS	4910	490A	2.00	Senior Project I	Prereq: At least 12 units of 3000- or 4000- level CMPS coursework	Prereq: At least 20 quarter units of 300- or 400- level CMPS courses (and also equivalent quarter units of 3000- and 4000- level CMPS courses taken under semesters)	
CMPS	4928	490B	2.00	Senior Project II	Prereq: CMPS 4910; Senior standing (completion of at least 90 semester units); Completion of GE UD C (Theme 2)	Prereq: CMPS 490A; Senior standing (at least 120 quarter units); GE Theme 2	
CMPS	4960		2.00	Leadership in Computer Science	Prereq: Permission of instructor	Prereq: Permission of instructor	
CMPS	4970		2.00	Service Learning in Computer S	Prereq: Permission of instructor	Prereq: Permission of instructor	
CMPS	4980		2.00	Teaching in Computer Science	Prereq: Permission of instructor	Prereq: Permission of instructor	
ECE	1618	First half of 160	2.00	Introduction to Engineering I	None	None	
ECE	1628	Second half of 160	2.00	Introduction to Engineering II	Prereq: ENGR/ECE 1618	No equivalent quarter course	
ECE	2070	207	4.00	Electric Circuits	Prereq: PHYS 2220 with a grade of C- or better, or permission of the instructor	Prereq: PHYS 222 with a grade of C- or better, or permission of instructor	
ECE	2600	NEW	4.00	High-speed Rail	Prereq: MATH 1040 or 1060 and basic computer skills	Prereq: MATH 190 or 191 and basic computer skills	
ECE	2770	277	15.00	Special Topics in Engineering	None	None	

Subject	Crs #	Quarter #	Units	Short Title	Semester Pre/Co-req	Quarter Pre/Co-req	Notes
ECE	2771		1.00	Special Topics Laboratory	Co-req: ECE 2770		
ECE	3040	304 + 330	4.00	Signals and Systems	Prereq: MATH 2320 or 2520 and ENGR/ECE/PHYS 2070	Prereq: MATH 203 or 233 and ENGR/PHYS 207	New prereqs for semesters.
ECE	3070	307	4.00	Analog Circuits	Prereq: MATH 2320 or 2520 and ENGR/ECE/PHYS 2070	Prereq: MATH 203 or 233 and ENGR/PHYS 207	New prereqs for semesters.
ECE	3200	320	4.00	Digital Circuits	Prereq: ENGR/ECE/PHYS 2070	Prereq: ENGR/PHYS 207	New prereqs for semesters.
ECE	3220	322	4.00	Digital Design with VHDL	Prereq: ENGR/ECE/PHYS 2070 and ECE 3200	Prereq: ENGR/PHYS 207 and ECE 320	New prereqs for semesters.
ECE	3230	423	4.00	Digital Communications	Prereq: MATH 2320 or 2520, ENGR/ECE/PHYS 2070, ECE 3040	Prereq: MATH 203 or 233, ENGR/PHYS 207, ECE 304	New prereqs for semesters.
ECE	3250	420	4.00	Embedded Systems	Prereq: ECE 3070 and 3200	Prereq: ECE 307 and 320	New prereqs for semesters.
ECE	3280	432	4.00	Instr, Contr, Data Acquisition	Prereq: ECE 3200	Prereq: ECE 320	New prereqs for semesters.
ECE	3320	332	4.00	Fields and Waves	Prereq: MATH 2320 or 2520 and ENGR/ECE/PHYS 2070	Prereq: MATH 203 or 233 and ENGR/PHYS 207	
ECE	3340	434	4.00	Control Systems	Prereq: ECE 3040	Prereq: ECE 304	
ECE	3370	337	4.00	Power Systems Fundamentals	Prereq: ENGR/ECE/PHYS 2070 and ECE 3040	Prereq: ENGR/PHYS 207 and ECE 304	
ECE	3380	336	4.00	Power Electronics & Elec Drive	Prereq: ECE 3070, ECE 3320, ECE 3370	Prereq: ECE 307, ECE 332, ECE 337	New prereqs for semesters.
ECE	3770	377	15.00	Special Topics in Engineering	None	None	
ECE	3771		1.00	Special Topics Laboratory	Co-req: ECE 3770		
ECE	4220	422	4.00	Digital Signal Processing	Prereq: MATH 2320 or 2520, ENGR/ECE/PHYS 2070, ECE 3040	Prereq: MATH 203 or 233, ENGR/PHYS 207, ECE 304	New prereqs for semesters.
ECE	4240	424	4.00	Microprocessor System Design	Prereq: ENGR/ECE/PHYS 2070 and ECE 3200	Prereq: ENGR/PHYS 207 and ECE 320	New prereqs for semesters.
ECE	4250	425	4.00	Wireless Communication	Prereq: MATH 2320 or 2520, ENGR/ECE/PHYS 2070, ECE 3040	Prereq: MATH 203 or 233, ENGR/PHYS 207, ECE 304	New prereqs for semesters.
ECE	4260	426	4.00	Wireless Network	Prereq: MATH 2320 or 2520	Prereq: MATH 203 or 233	New prereqs for semesters.
ECE	4330	433	4.00	Mechatronics	Prereq: CMPS 2020 with a grade of C- or better, ECE 3070, and ECE 3200	Prereq: CMPS 223 with a grade of C- or better, ECE 307, and ECE 320	
ECE	4370	464	4.00	Power System Analysis	Prereq: ECE 3370	Prereq: ECE 337	New prereqs for semesters.
ECE	4460	446	4.00	Image Processing	Prereq: ECE 3040	Prereq: ECE 304	

Subject	Crs #	Quarter #	Units	Short Title	Semester Pre/Co-req	Quarter Pre/Co-req	Notes
ECE	4470	447	4.00	Computer Vision	Prereq: MATH 2320 or 2520 and (CMPS 3120 or ECE 3040)	Prereq: MATH 203 or 233 and (CMPS 312 or ECE 304)	
ECE	4570	457	4.00	Robotics	Prereq: ENGR/ECE/PHYS 2070 and ECE 3040	Prereq: ENGR/PHYS 207 and ECE 304	New prereqs for semesters.
ECE	4770	477	15.00	Special Topics in Engineering	Prereq: Permission of the instructor	Prereq: Permission of the instructor	
ECE	4771		1.00	Special Topics Laboratory	Co-req: ECE 4770		
ECE	4800		4.00	Undergraduate Research	Prereq: Permission of the instructor	Prereq: Permission of the instructor	
ECE	4860	496	4.00	Internship	Prereq: Permission of the instructor	Prereq: Permission of the instructor	
ECE	4870	497	4.00	Cooperative Education	Prereq: Permission of the instructor	Prereq: Permission of the instructor	
ECE	4890	489	4.00	Experiential Prior Learning	Prereq: CMPS 2010 with a grade of C- or better and permission of the instructor	Prereq: CMPS 221 with a grade of C- or better and permission of the instructor	
ECE	4910	490A	2.00	Senior Project I	Prereq: At least 12 semester units of 3000- or 4000- level ECE and CMPS courses	Prereq: At least 20 quarter units of 300- or 400- level ECE and CMPS courses	
ECE	4928	490B	2.00	Senior Project II	Prereq: ECE 4910; Senior standing (completion of at least 90 semester units); Completion of GE UD C (Theme 2)	Prereq: ECE 490A; Senior standing (at least 120 quarter units); GE Theme 2	
ECE	4960		2.00	Leadership in Engineering	Prereq: Permission of the instructor	Prereq: Permission of the instructor	
ECE	4970		2.00	Service Learning in Engineerin	Prereq: Permission of the instructor	Prereq: Permission of the instructor	
ECE	4980		2.00	Teaching in Engineering	Prereq: Permission of the instructor	Prereq: Permission of the instructor	