

NAME: _____

E-mail: _____

CSCI-1100	Computer Science I	4		ENGR-1200	Eng. Graphics & CAD ¹	1	
MATH-1010	Calculus I	4		CHEM-1100	Chemistry I	4	
ENGR-1100	Intro. to Eng. Analysis	4		MATH-1020	Calculus II	4	
	Hum., Arts or Soc. Sci. El.	4		PHYS-1100	Physics I	4	
					Hum., Arts or Soc. Sci. El.	4	
MATH-2400	Intro. to Differential Eqns.	4		ENGR-2350	Embedded Control	4	
PHYS-1200	Physics II	4		ECSE-2010	Electric Circuits	4	
	Multidisciplinary Elective ¹	4		ECSE-2610	Cptr. Comp. & Operations	4	
	Hum., Arts or Soc. Sci. El.	4		MATH-2010	Multivar Calc & Matrix Alg	4	
ENGR-2050	Intro. to Eng. Design	4		ECSE-2100	Fields & Waves I	4	
ECSE-2050	Intro. to Electronics	4		ECSE-2210	Microelectronics Tech.	3	
ECSE-2410	Signals & Systems	3		ECSE-2xxx	Electrical Energy Systems	4	
ECSE-2500	Engineering Probability	3			Free Elective ^{2,3}	3-4	
	Professional Devel. II ¹	2					
ENGR-4010	Professional Devel. III ¹	1			Restricted Elective ¹	3	
	Design Elective ¹	3			Concentration Elective II	3	
	Lab Elective ¹	3			Free Elective ^{1,2}	3-4	
	Concentration Elective I	3			Free Elective (if needed) ²	3-4	
	Free Elective ^{1,2}	3-4			Hum., Arts or Soc. Sci. El.	4	
	Hum., Arts or Soc. Sci. El.	4					

¹ May be taken either term.² The free electives must total to at least 12 credits.³ Students are encouraged to select a life science course, such as BIOL-1010.**128 credits minimum****RESTRICTED ELECTIVE**

ECSE-4xxx, ECSE-6xxx or ENGR-4xxx.

MULTIDISCIPLINARY ELECTIVESENGR-1600 Materials Science for Eng.
ENGR-2090 Engineering Dynamics
ENGR-2250 Thermal & Fluids Eng. I
ENGR-2530 Strength of Materials**CONCENTRATION ELECTIVES**

Students must select two courses in one of the concentration areas. See the CSE Homepage for areas and course lists.

LAB ELECTIVESENGR-4710 Adv. Manufacturing Lab I
ECSE-4160 (EPOW-4030) Electric Power Eng. Lab
ECSE-4090 Mechatronics
ECSE-4220 VLSI Design
ECSE-4690 Experimental Networking
ECSE-4760 Real-Time Cntrl & Comm.
ECSE-4770 Cptr H'ware Design
ECSE-4790 Microprocessor Systems**DESIGN ELECTIVES**MANE-4220 Inventor's Studio (F, S)
ECSE-4900 ECSE Design (F, S)

NAME: _____

E-mail: _____

ENGR-1200	Eng. Graphics & CAD ¹	1		MATH-2800	Intro. to Discrete Structures	4	
ENGR-1100	Intro. to Eng Analysis	4		MATH-1020	Calculus II	4	
MATH-1010	Calculus I	4		CSCI-1200	Computer Science II	4	
CSCI-1100	Computer Science I	4			Hum., Arts or Soc. Sci. El.	4	
	Hum., Arts or Soc. Sci. El.	4					
ENGR-2350	Embedded Control	4		ECSE-2660	Cptr Arch, Nets, & Op Sys	4	
ECSE-2610	Cptr. Comp. & Operations	4		MATH-2400	Intro. to Differential Eqns	4	
CSCI-2300	Data Struct & Algorithms	4		PHYS-1200	Physics II	4	
PHYS-1100	Physics I	4		CHEM-1100	Chemistry I	4	
ENGR-2050	Intro. to Eng. Design	4		ECSE-2410	Signals & Systems	3	
ECSE-2010	Electric Circuits	4		ECSE-2050	Intro. to Electronics	4	
MATH-2010	Multivar Calc & Matrix Alg.	4		ECSE-2500	Engineering Probability	3	
	Hum., Arts or Soc. Sci. El.	4			Free Elective ^{2,3}	3-4	
					Hum., Arts or Soc. Sci. El.	4	
ENGR-4010	Professional Devel. III ¹	1			Professional Devel. II ¹	2	
	Concentration Elective I	3-4			Concentration Elective II	3-4	
	Restricted Elective ¹	3-4			Design Elective ¹	3	
	Computer Eng Elective	3-4			Free Elective ^{1,3}	3-4	
	Free Elective ^{1,3}	3-4			Hum., Arts or Soc. Sci. El.	4	
					Free Elective (if needed) ²	3-4	

¹ May be taken either term.

² The free electives must total at least 12 credits.

³ Students are encouraged to select a life science course, such as BIOL-1010.

129 credits minimum

RESTRICTED ELECTIVE

ECSE-4xxx , ECSE-6xxx, CSCI-4xxx, CSCI-6xxx or ENGR-4xxx.

CONCENTRATION ELECTIVES

Students must select two courses in one of the concentration areas. See the ECSE Homepage for areas and course lists.

COMPUTER ENGINEERING ELECTIVES

ECSE-4690 Experimental Networking
 ECSE-4670 Comp. Comm. Networks
 ECSE-4750 Computer Graphics
 ECSE-4790 Microprocessor Systems
 CSCI-4380 Database Systems
 CSCI-4440 Software Dsg & Doc

DESIGN ELECTIVES

MANE-4220 Inventor's Studio (F, S)
 ECSE-4900 ECSE Design (F, S)

ELECTRIC POWER ENGINEERING CURRICULUM CHECKLIST

Class of 2012 (revised)

NAME: _____

E-mail: _____

ENGR-1100	Intro. to Eng. Analysis	4		ENGR-1300	Eng. Processes ¹	1	
ENGR-1200	Eng. Graphics & CAD ¹	1		MATH-1020	Calculus II	4	
CHEM-1100	Chemistry I	4		ENGR-1600	Materials Science for Eng.	4	
MATH-1010	Calculus I	4		PHYS-1100	Physics I	4	
	Hum., Arts or Soc. Sci. El.	4			Hum., Arts or Soc. Sci. El.	4	
CSCI-1190	Beginning C Prog for Eng	1		ENGR-2350	Embedded Control	4	
ENGR-2250	Thermal & Fluids Eng I	4		MANE-4050	Model & Cont of Dynamic Systems	4	
MATH-2400	Intro. to Differential Eqns.	4		ECSE-2010	Electric Circuits	4	
PHYS-1200	Physics II	4			Hum., Arts or Soc. Sci. El.	4	
	Hum., Arts or Soc. Sci. El.	4					
ENGR-2050	Intro. to Eng. Design	4		ECSE-2100	Fields & Waves I	4	
ECSE-2410	Signals & Systems	3		ECSE-2xxx	Electrical Energy Systems	4	
ECSE-2050	Intro. to Electronics	4			Technical Elective ⁴	3-4	
ENGR-2600	Model & Anal Uncertainty	3			Free Elective ^{1,3,5}	3-4	
	Professional Devel. II ^{1,2}	2		ENGR-4010	Professional Devel. III ¹	1	
ECSE-4110 (EPOW-4010)	Power Eng Fundamentals	4			Design Elective ¹	3	
ECSE-4080 (EPOW-4080)	Semiconductor Pwr Electron	3		ECSE-4120 (EPOW-4020)	Electromechanics	3	
	Hum., Arts or Soc. Sci. El.	4		ECSE-4160 (EPOW-4030)	EPE Laboratory	4	
	Free Elective ^{1,3}	3-4			Free Elective ^{1,3}	3-4	
					Free Elective (if needed) ^{1,3}	3-4	

¹ May be taken either term.

² May be taken in the third year

³ Free electives must total to at least 12 credits

⁴ Any course in engineering or science at the 2000 level or higher.

⁵ Students are encouraged to select a life science course, such as BIOL-1010.

128 credits minimum**DESIGN ELECTIVES**

MANE-4220 Inventor's Studio (F, S)

ECSE-4900 ECSE Design (F, S)

NAME: _____

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ENGR-1100	Intro. to Eng. Analysis	4		ENGR-1200	Eng. Graphics & CAD ¹	1	
CSCI-1100	Computer Science I	4		MATH-1020	Calculus II	4	
MATH-1010	Calculus I	4		CHEM-1100	Chemistry I	4	
	Hum., Arts or Soc. Sci. El.	4		PHYS-1100	Physics I	4	
					Hum., Arts or Soc. Sci. El.	4	
ENGR-2050	Intro. to Eng. Design	4		ENGR-2350	Embedded Control	4	
MATH-2400	Intro. to Differential Eqns.	4		ECSE-2010	Electric Circuits	4	
PHYS-1200	Physics II	4		ECSE-2610	Cptr. Comp. & Operations	4	
BIOL-1010	Intro. to Biology ¹	4		MATH-2010	Multivar. Calc. & Matrix Alg.	4	
ECSE-2050	Intro. to Electronics	4		ECSE-2210	Microelectronics Tech.	3	
ECSE-2410	Signals & Systems	3		PHYS-2350	Experimental Physics	4	
PHYS-2100	Intro. Theoretical Physics	4		PHYS-4210	Electromagnetic Theory	4	
MATH-4600	Advanced Calculus	4		ECSE-2xxx	Electrical Energy Systems	4	
ECSE-2500	Engineering Probability	3			Hum., Arts or Soc. Sci. El.	4	
ECSE-4010	Professional Devel. III ¹	1			Professional Devel. II ^{1,2}	2	
ECSE-4220	VLSI Design	3		ECSE-4900	ECSE Design ¹	3	
PHYS-2330	Intermediate Mechanics	4		PHYS-4420	Thermody. & Stat. Mechanics	4	
PHYS-2510	Quantum Physics	4		PHYS-4370	Research Participation	4	
	Microelectronics Elective ¹	3-4			Hum., Arts or Soc. Sci. El.	4	
	Hum., Arts or Soc. Sci. El.	4					

¹ May be taken either term.² May be taken in the third year**138 credits minimum**

* EE must be your first named major. Otherwise an additional 2 credit hours of H&SS are required.

MICROELECTRONICS ELECTIVE

ECSE-4080 Semiconductor Pwr Electronics

ECSE-4250 Int. Ckt. Process & Design

ECSE-4720 Solid-State Physics

NAME: _____

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ENGR-1100	Intro. to Eng. Analysis	4		ENGR-1200	Eng. Graphics & CAD ¹	1	
MATH-1010	Calculus I	4		MATH-1020	Calculus II	4	
CSCI-1100	Computer Science I	4		MATH-2800	Intro. Discrete Structures	4	
	Hum., Arts or Soc. Sci. El.	4		CSCI-1200	Computer Science II	4	
					Hum., Arts or Soc. Sci. El.	4	
ENGR-2350	Embedded Control	4		ECSE-2660	Cptr Arch, Nets, & Op Sys	4	
ECSE-2610	Cptr. Comp. & Operations	4		MATH-2400	Intro. to Differential Eqns	4	
CSCI-2300	Data Struct. & Algorithms	4		PHYS-1200	Physics II	4	
PHYS-1100	Physics I	4		CHEM-1100	Chemistry I	4	
ENGR-2050	Intro. to Eng. Design	4		ECSE-2050	Intro. to Electronics	4	
ECSE-2010	Electric Circuits	4		ECSE-2100	Fields & Waves I	4	
	Multidisc. Elective ¹	4		ECSE-2410	Signals & Systems	3	
MATH-2010	Multivar Calc & Matrix Alg	4		ECSE-2500	Engineering Probability ³	3	
	Hum., Arts or Soc. Sci. El.	4		ECSE-2xxx	Electrical Energy Systems	4	
ENGR-4010	Professional Devel. III ¹	1			Professional Devel. II ^{1,2}	2	
ECSE-2210	Microelectronics Tech.	3			Design Elective ¹	3	
	Computer Eng Elective ¹	3-4			Restricted Elective ¹	3-4	
	Lab Elective ¹	3			Concentration Elective 2	3-4	
	Concentration Elective 1	3-4			Hum., Arts or Soc. Sci. El.	4	
	Hum., Arts or Soc. Sci. El.	4					

¹ May be taken either term.² May be taken in the third year³ For some choices of Concentration Electives, it is necessary to take ECSE-2210 here and delay ECSE-2500 until the senior year**135 credits minimum****RESTRICTED ELECTIVE**ECSE-4xxx, ECSE-6xxx, CSCI-4xxx,
CSCI-6xxx or ENGR-4xxx.**MULTIDISCIPLINARY
ELECTIVES**ENGR-1600 Materials Science for Eng.
ENGR-2090 Engineering Dynamics
ENGR-2250 Thermal & Fluids Eng. I
ENGR-2530 Strength of Materials**CONCENTRATION ELECTIVES**Students must select two courses in one
of the concentration areas. See the
ECSE Homepage for areas and course
lists.**COMPUTER ENGINEERING
ELECTIVES**ECSE-4690 Experimental Networking
ECSE-4670 Comp. Comm. Networks
ECSE-4750 Computer Graphics
ECSE-4790 Microprocessor Systems
CSCI-4380 Database Systems
CSCI-4440 Software Dsg & Doc**LAB ELECTIVES**ECSE-4690 Experimental Networking
ENGR-4710 Adv Manufacturing Lab I
ECSE-4160 (EPOW-4030) Electric
Power Eng. Lab
ECSE-4090 Mechatronics
ECSE-4220 VLSI Design
ECSE-4760 Real-Time Cntrl & Comm.
ECSE-4770 Cptr. H'ware Design
ECSE-4790 Microprocessr Sys**DESIGN ELECTIVES**MANE-4220 Inventor's Studio (F, S)
ECSE-4900 ECSE Design (F, S)

NAME: _____

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ENGR-1100	Intro. to Eng. Analysis	4		MATH-2800	Intro. to Discrete Structures	4	
ENGR-1200	Eng. Graphics & CAD ¹	1		MATH-1020	Calculus II	4	
MATH-1010	Calculus I	4		CSCI-1200	Computer Science II	4	
CSCI-1100	Computer Science I	4			Hum., Arts or Soc. Sci. El.	4	
	Hum., Arts or Soc. Sci. El.	4					
ENGR-2350	Embedded Control	4		ECSE-2660	Cptr Arch, Nets, & Op Sys	4	
ECSE-2610	Cptr. Comp. & Operations	4		CHEM-1100	Chemistry I ⁴	4	
CSCI-2300	Data Structures & Algorithms	4		MATH-2400	Intro. to Differential Eqns	4	
PHYS-1100	Physics I	4		PHYS-1200	Physics II	4	
ENGR-2050	Intro. to Eng. Design	4		ECSE-2410	Signals & Systems	3	
ECSE-2010	Electric Circuits	4		CSCI-4430	Programming Languages	4	
CSCI-2400	Models of Computation	4		CSCI-4210	Operating Systems	4	
MATH-2010	Multivar Calc & Matrix Alg.	4		ECSE-2050	Introduction to Electronics	4	
	Hum., Arts or Soc. Sci. El.	4		ECSE-2500	Engineering Probability	3	
ENGR-4010	Professional Devel. III ¹	1			Professional Devel. II ^{1,3}	2	
BIOL-1010	Intro. to Biology ¹	4			Design Elective ¹	3	
CSCI-4440	Software Design & Doc.	4			Concentration Elective 2 ²	3-4	
	Concentration Elective 1 ²	3-4			CSE/CS Elective ²	3-4	
	Hum., Arts or Soc. Sci. El.	4			Hum., Arts or Soc. Sci. El.	4	

¹ May be taken either term.² **Concentration Elective 1, Concentration Elective 2, Design Elective and CSE/CS Elective must include 3 courses that satisfy the CSE/CS Elective description given below.** Some choices for Concentration and Design Electives may require that additional CSE/CS Electives be taken to meet this requirement.³ May be taken in the third year⁴ Intro. to Biology (shown in senior year) can be taken here, with Chemistry I moving to the senior year

* CSE must be your first named major. Otherwise an additional 2 credit hours of H&SS are required.

134 credits minimum**MULTIDISCIPLINARY ELECTIVES**ENGR-1600 Materials Science for Eng.
ENGR-2090 Engineering Dynamics
ENGR-2250 Thermal & Fluids Eng. I
ENGR-2530 Strength of Materials**CONCENTRATION ELECTIVES**

Students must select two courses in one of the concentration areas. See the ECSE Homepage for areas and course lists.

CSE/CS ELECTIVE

Any course numbered CSCI-4xxx, CSCI-6xxx, ECSE-46xx or ECSE-47xx may be used, excluding ECSE-4630, ECSE-4640, ECSE-4720 and reading and independent study courses. ECSE-4480 and ECSE-4490 may also fulfill this requirement.

DESIGN ELECTIVESMANE-4220 Inventor's Studio (F, S)
ECSE-4900 ECSE Design (F, S)

NAME: _____

E-mail: _____

ENGR-1100	Intro. to Eng. Analysis	4		ENGR-1200	Eng. Graphics & CAD ¹	1	
ENGR-1300	Eng. Processes	1		MATH-1020	Calculus II	4	
CSCI-1100	Computer Science I	4		CHEM-1100	Chemistry I	4	
MATH-1010	Calculus I	4		PHYS-1100	Physics I	4	
	Hum., Arts or Soc. Sci. El.	4			Hum., Arts or Soc. Sci. El.	4	
ENGR-2250	Thermal and Fluids Eng. I	4		ENGR-2350	Embedded Control	4	
MATH-2400	Intro. to Differential Eqns.	4		ECSE-2010	Electric Circuits	4	
PHYS-1200	Physics II	4		MANE-4050	Modeling & Control of Dynamic Systems	4	
ENGR-1600	Materials Science for Eng.	4		ECSE-2610	Cptr. Comp. & Operations	4	
ENGR-2050	Intro. to Eng. Design	4		ECSE-2100	Fields & Waves I	4	
ECSE-2050	Intro. to Electronics	4		ECSE-2210	Microelectronics Tech.	3	
ECSE-2500	Engineering Probability	3		ECSE-2xxx	Electrical Energy Systems	4	
ECSE-2410	Signals & Systems	3			Hum., Arts or Soc. Sci. El.	4	
MATH-2010	Multivar Calc & Matrix Alg	4					
	Professional Devel. II ^{1, 2}	2		ENGR-4010	Professional Devel. III	1	
ECSE-4110 (EPOW-4010)	Power Eng. Fundamentals	4		ECSE-4120 (EPOW-4020)	Electromechanics	3	
ECSE-4080 (EPOW-4080)	Semiconductor Pwr. Elec.	3		ECSE-4160 (EPOW-4030)	EPE Laboratory	4	
	Design Elective	3			Hum., Arts or Soc. Sci. El.	4	
	Hum., Arts or Soc. Sci. El.	4			Free Elective ^{1,5}	3-4	

¹ May be taken either term.² May be taken in the third year⁵ Students are encouraged to select a life science course, such as BIOL-1010.**130 credits minimum****DESIGN ELECTIVES**

MANE-4220 Inventor's Studio (F, S)

ECSE-4900 ECSE Design (F, S)

NAME: _____

E-mail: _____

ENGR-1100	Intro. to Eng. Analysis	4		ENGR-1200	Eng. Graphics & CAD ¹	1	
CSCI-1100	Computer Science I	4		MATH-1020	Calculus II	4	
MATH-1010	Calculus I	4		BIOL-2120	Intro. to Cell & Molec. Bio.	4	
	Hum., Arts or Soc. Sci. El.	4		PHYS-1100	Physics I	4	
					Hum., Arts or Soc. Sci. El.	4	
CHEM-1100	Chemistry I	4		BMED-2200	Modeling of Biomed. Sys.	4	
MATH-2400	Intro. to Differential Eqns.	4		ECSE-2010	Electric Circuits	4	
PHYS-1200	Physics II	4		ENGR-2600	Mod. & Anal. Uncertainty ³	3	
ENGR-2350	Embedded Control	4		ECSE-2610	Cptr. Comp. & Operations	4	
	Hum., Arts or Soc. Sci. El.	4		MATH-2010	Multivar Calc & Mat. Alg.	4	
BIOL-4290	Human Physiological. Sys.	4		BMED-4500	Advanced Sys. Physiology	4	
ENGR-2050	Intro. to Eng. Design	4		ECSE-2210	Microelectronics Tech.	3	
ECSE-2410	Signals & Systems	3		ECSE-2050	Intro. Electronics	4	
ECSE-2100	Fields & Waves I	4		ECSE-2xxx	Electrical Energy Systems	4	
				ECSE-2800	Sensing and Imaging	3	
ENGR-4010	Professional Devel. III ¹	1			Professional Development II ²	2	
BMED-4010	Bioengineering Lab	4		ECSE-4900 or BME-4600	ECSE Design or BME Design	3	
	EE Concentration Elective I	3-4			EE Concentration II	3-4	
	BME Concentration Elective	3-4			EE Restricted Elective	3-4	
	Hum., Arts or Soc. Sci. El.	4			Hum., Arts or Soc. Sci. El.	4	

¹ May be taken either term.² May be taken in the third year³ May be replaced with ECSE-2500 Engineering Probability (ECSE-2410 is a co-requisite, so it should be taken in the 5th semester)**135 credits minimum****EE RESTRICTED ELECTIVE**

ECSE-4xxx, ECSE-6xxx or ENGR-4xxx.

BME CONCENTRATION ELECTIVE

Selected to satisfy the BME Concentration requirements.
Students should consult their BME advisor in selecting this course.

EE CONCENTRATION ELECTIVES

Students must select two courses in one of the concentration areas. See the ECSE Homepage for areas and course lists.