COMPUTER ENGINEERING

SEMESTER CURRICULUM

YEAR ONE – FALL SEMESTER		**YEAR ONE – SPRING SEMESTER**	
EE 1014 Intro to Electrical Engin. (F,S)	4	EE 1024 Intro to Computer Engin. (F,S)	4
MATH 2301 Calculus I (F,S)	4	MATH 2302 Calculus II (F,S)	4
CS 2400 Intro to Computer Science I (F,S)	4	CS-2401 Intro to Computer Science II (F,S)	4
Tier 2CP	2	ET 1500 Career Orientation	0.5
Tier 2SS	2	Tier 1E First Year Composition	3
total credit hours	16	total credit hours	15.5

YEAR TWO – FALL SEMESTER		**YEAR TWO – SPRING SEMESTER**	
EE 2213 Instrumentation Laboratory (F,S)	3	PHYS 2051 General Physics I (F,S)	5
EE 2104 Electric Circuits I (F,S)	4	EE 2114 Electric Circuits II (F,S)	4
EE 2324 Analytical Foundations of EE (F,S)	4	CS 3000 Intro to Discrete Structures (F,S)	4
CS 3560 Software Engineering Tools (F,S)	3	Science Elective (with Lab)	4
CHEM 1510 Fundam. of Chemistry I (F,S)	4	total credit hours	17
total credit hours	18		

YEAR THREE – FALL SEMESTER		**YEAR THREE – SPRING SEMESTER**	
EE 3613 Computer Organization (F,S)	3	EE 3954 Microcontrollers (F,S)	4
CS 3610 Data Structures (F,S)	4	EE 3753 Computer Networks (S)	3
EE 3343 Electronics I (F,S)	3	EE 3513 Digital Signal Processing (F,S)	3
EE 3713 Applied Prob & Stat. for EE (F,S)	3	EE 3214 Emag and Materials I (F,S)	4
Tier 1J Junior Composition	3	Tier 2FA	2
total credit hours	16	total credit hours	16

YEAR FOUR – FALL SEMESTER		**YEAR FOUR – SPRING SEMESTER**	
EE 4953 EE&CpE CapStone Design I (F)	3	EE 4963 EE&CpE CapStone Design II(S)	3
EE 4673 Embedded Systems (F)	3	EE 4683 Computer Architecture (S)	3
Tier 2HL	2	CS 4420 Operating Systems (F,S)	3
Senior Elective #1	3	Senior Elective #2	3
Tech Elective #1	3	Tech Elective #2	2.5
total credit hours	14	total credit hours	14.5

Computer Engineering **Minimum Hours for graduation = 127**   (Aug-2014)

1. Foundations in Electrical and Computer Engineering – Take 16 Required Courses - 54 hours

- EE 1014: Introduction to Electrical Engineering
- EE 1024: Introduction to Computer Engineering
- EE 2104: Circuits I
- EE 2114: Circuits II
- EE 2213: Instrumentation Laboratory
- EE 3214: Electromagnetics and Materials I
- EE 3343: Electronics I
- EE 3513: Digital Signals and Systems
- EE 3613 Computer Organization
- EE 3753 Intro to Computer Networks
- EE 3954: Microprocessors and Microcontrollers
- EE 4673: Embedded Systems
- EE 4683: Computer Architecture
- EE 4953: EE and CpE Capstone Design I
- EE 4963: EE and CpE Capstone Design II
- CS 4420: Operating Systems (3.0)

2. Senior EE/CS Electives – Choose 2 Courses – (minimum of 6 hours)

- EE 4053: Physical and Power Electronics
- EE 4143: Design of Digital Circuits
- EE 4183: Micro and Nano Fabrication
- EE 4213: Feedback Control Theory
- EE 4313: Optoelectronics and Photonics
- EE 4403: Microwave Theory and Devices
- EE 4523: Intro to Electric Power System Engineering & Analysis
- EE 4713: Communication Engineering
- EE 4853: Electronic Navigation Systems
- EE 4913: Programmable Logic Controllers
- CS 4000: Intro to Distributed, Parallel, & Web-Centric Computing (3.0)
- CS 4040: Design & Analysis of Algorithms (3.0)
- CS 4060: Computation Theory (3.0)
- CS 4100: Intro to Formal Lang.&Compilers (3.0)
- CS 4160: Prblm Solving w/ Bioinf. Tools (3.0)
- CS 4170: Programming for Bioinformatics (3.0)
- CS 4250: Interactive Computer Graphics (3.0)
- CS 4440: Data Communications (3.0)
- CS 4500: Advanced Object Oriented Design & GUI Techniques (3.0)
- CS 4580: Operating Systems II (3.0)
- CS 4620: Database Systems (3.0)
- CS 4750: Internet Engineering (4.0)
- CS 4800: Artificial Intelligence (3.0)

3. Technical Electives – Choose 2 Courses – (min: 6 hours)) (+0.5 ET 1500 Career Orientation).

- Any EE 4XXX,
- Any CS 4XXX,
- Any MATH 4XXX;
- MGT 2000;
- ME 3510 (CAD);
- CE 3400 (Fluid Mech);
- ET 2240 (Dynamics);
- ET 3200 (Thermo);
- ET 1500 (Career)
- ET 2300 (Materials);
- ET 2220 (Strengths)

4. Math&Basic Science (Take 7 Required + 1 Elective) (min: 32 hours; Accreditation Requirement)

- MATH 2301: Calculus I (4.0)
- MATH 2302: Calculus II (4.0)
- CS 3000: Intro to Discrete Structures (4.0)
- CHEM 1510: Fundamentals of Chemistry I (4.0)
- PHYS 2051: Gen. Phys (5.0)
- EE 3713: Applied Probability & Statistics
- EE 2324: Analytical Foundations of EE
- Science Elective with Lab (4.0) [>PHYS 2502 .or. > CHEM 1510 .or. (BIOS 1700 .and. BIOS 1705)]
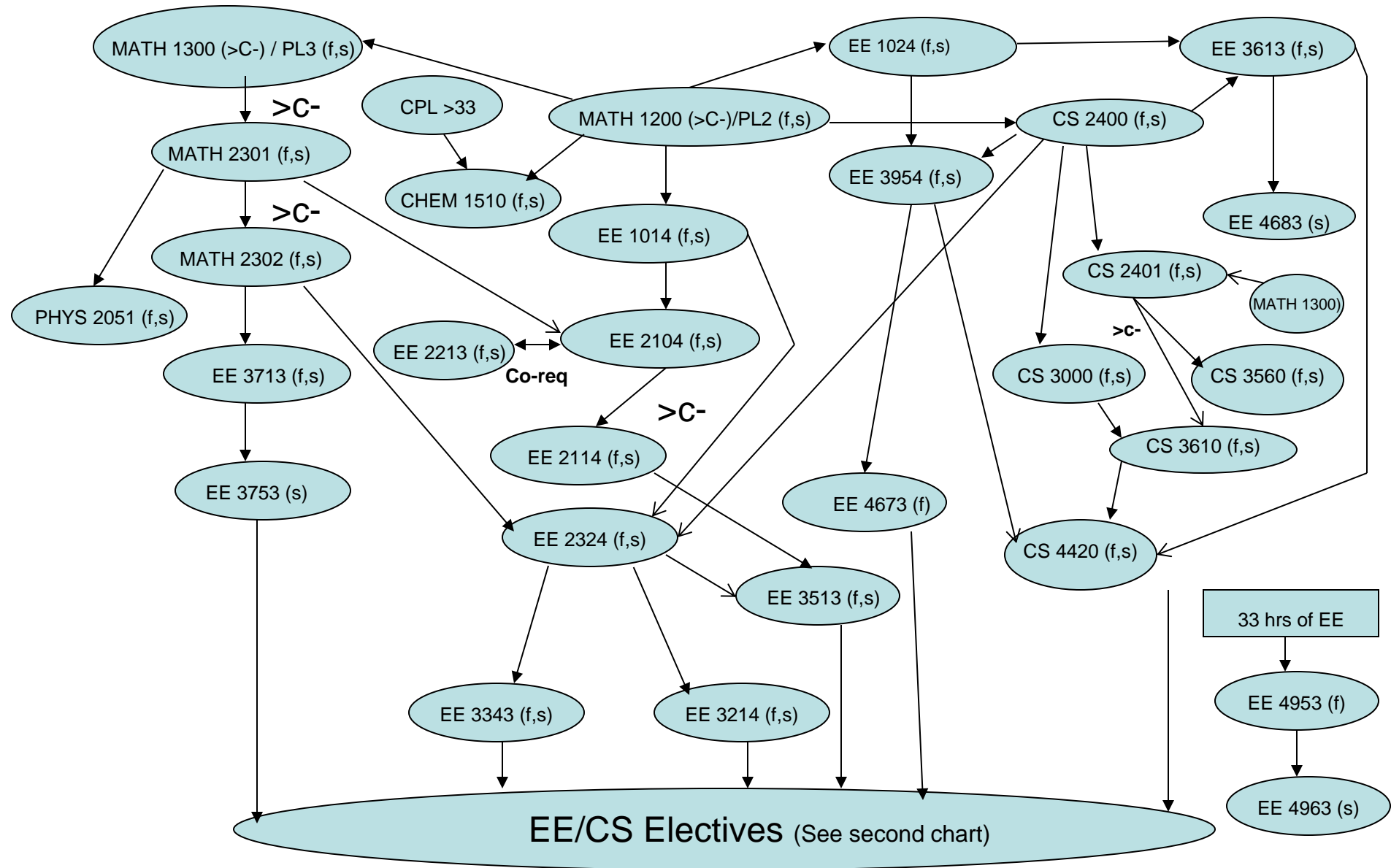
5. Additional Requirements-(15 semester hours General Engineering+14 hours of General Education)

- **Take Four Computer Science Courses for General Engineering (15 hours)**
    - CS 2400: Introduction to Computer Science - I (4.0)
    - CS 2401: Introduction to Computer Science - II (4.0)
    - CS 3560: Software Engineering Tools and Practices (3.0)
    - CS 3610: Data Structures (4.0)
- **Take Six General Education Courses**: (14 hours = 3+3+2+2+2+2) (1E;1J;2CP;2HL;2FA;2SS)

6. IMPORTANT NOTES:
a) **You cannot use the** same course to satisfy two program requirements at the same time (unless in TierIII or in Minors).
b) **Failing a Required** course 3-times (with F, WF, FS, or with < C in EE 2104, MATH 2301, 2302), forces you out of the program.
c) **Cannot retake** class to improve a grade, if the class is a prereq to another class that you have already passed.
d) **To graduate:** You need three (OU, ENT, Major) GPAs > 2.0 and at least 127 hours of credit.

COMPUTER ENGINEERING (under semesters) (October 2015)

MATH 1300 (>C-) / PL3 (f,s)

>C-

MATH 2301 (f,s)

>C-

MATH 2302 (f,s)

PHYS 2051 (f,s)

EE 3713 (f,s)

EE 3753 (s)

CPL >33

CHEM 1510 (f,s)

MATH 1200 (>C-)/PL2 (f,s)

EE 1014 (f,s)

EE 2213 (f,s)

Co-req

EE 2104 (f,s)

>C-

EE 2114 (f,s)

EE 2324 (f,s)

EE 3343 (f,s)

EE 3214 (f,s)

EE 1024 (f,s)

EE 3613 (f,s)

CS 2400 (f,s)

EE 3954 (f,s)

EE 4683 (s)

CS 2401 (f,s)

MATH 1300)

>c-

CS 3000 (f,s)

CS 3560 (f,s)

CS 3610 (f,s)

CS 4420 (f,s)

EE 4673 (f)

EE 3513 (f,s)

33 hrs of EE

EE 4953 (f)

EE 4963 (s)

EE/CS Electives (See second chart)

October 2015

EE/CpE SENIOR ELECTIVES (2015 / 2016) (OCTOBER 2015)