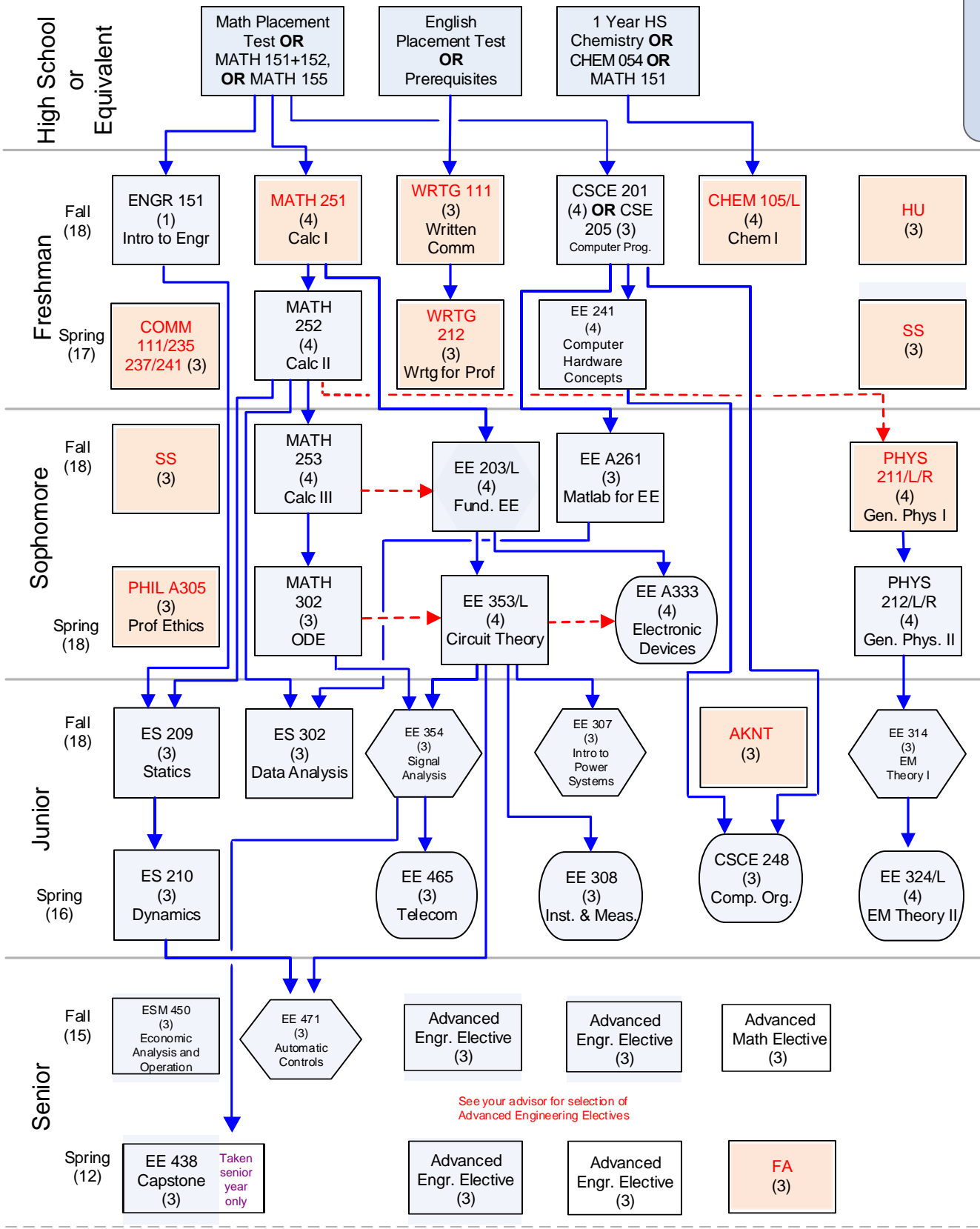# UAA Bachelor of Science in Electrical Engineering (BSEE)
Recommended Course Sequence & Prerequisites Flowchart

Name: _____

Preparatory Coursework: Must be completed with a grade of C or better

"Major" Status Courses

All prerequisites for engineering courses must be completed with a grade of C or higher, and all courses listed in the major requirements must be completed with a grade of C or higher

High School or Equivalent

- Math Placement Test **OR** MATH 151+152, **OR** MATH 155
- English Placement Test **OR** Prerequisites
- 1 Year HS Chemistry **OR** CHEM 054 **OR** MATH 151

Freshman

Fall (18)
- ENGR 151 (1) Intro to Engr
- MATH 251 (4) Calc I
- WRTG 111 (3) Written Comm
- CSCE 201 (4) **OR** CSE 205 (3) Computer Prog.
- CHEM 105/L (4) Chem I
- HU (3)

Spring (17)
- COMM 111/235 237/241 (3)
- MATH 252 (4) Calc II
- WRTG 212 (3) Wrtg for Prof
- EE 241 (4) Computer Hardware Concepts
- SS (3)

Sophomore

Fall (18)
- SS (3)
- MATH 253 (4) Calc III
- EE 203/L (4) Fund. EE
- EE A261 (3) Matlab for EE
- PHYS 211/L/R (4) Gen. Phys I

Spring (18)
- PHIL A305 (3) Prof Ethics
- MATH 302 (3) ODE
- EE 353/L (4) Circuit Theory
- EE A333 (4) Electronic Devices
- PHYS 212/L/R (4) Gen. Phys. II

Junior

Fall (18)
- ES 209 (3) Statics
- ES 302 (3) Data Analysis
- EE 354 (3) Signal Analysis
- EE 307 (3) Intro to Power Systems
- AKNT (3)
- EE 314 (3) EM Theory I

Spring (16)
- ES 210 (3) Dynamics
- EE 465 (3) Telecom
- EE 308 (3) Inst. & Meas.
- CSCE 248 (3) Comp. Org.
- EE 324/L (4) EM Theory II

Senior

Fall (15)
- ESM 450 (3) Economic Analysis and Operation
- EE 471 (3) Automatic Controls
- Advanced Engr. Elective (3)
- Advanced Engr. Elective (3)
- Advanced Math Elective (3)

See your advisor for selection of Advanced Engineering Electives

Spring (12)
- EE 438 Capstone (3) Taken senior year only
- Advanced Engr. Elective (3)
- Advanced Engr. Elective (3)
- FA (3)

Key:

- Prerequisite (solid blue arrow)
- Prerequisite or Concurrent (dashed red arrow)
- Either Class as Prerequisite (dashed black arrow)
- Fulfills UAA GER requirements
- Offered EVERY Semester
- Offered FALL only
- Offered SPRING only

132 Total Credits Required for the Degree

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6/23/2019

BSEE students specializing in Electrical Engineering are required to take 12 credits from the following list of elective courses.   Most courses require prerequisites and faculty advisor approval is required. Students should coordinate the other degree requirements to satisfy any prerequisite requirements.

Course	Description	Credits	Prerequisites
CSCE A365	Computer Networking for Engineers	3	CSCE A311, STAT A253 or STAT A307
CSCE A445	Computer Design & Interfacing	4	CSCE A248, CSCE A311
CSCE A465	Network Security	3	CSCE A365
EE A407	Power Distribution	3	EE A333, EE A353
EE A417	Green Electricity	3	EE A353
EE A441	Integrated Circuit Design	3	CHEM A105, EE A333, EE A353
EE A447	Power Electronics	3	EE A307, EE A333
EE A458	Antenna Theory	3	EE A324 or PHYS A324
EE A462	Communication Systems	3	EE A354
EE A472	Advanced Linear Systems	3	EE A471 or ME A471
PHYS A303	Modern Physics	3	MATH A302, PHYS A212

>>**Other courses may also be taken for Advanced Engineering Electives but must first be approved by your engineering faculty advisor and petitioned.** <<

Advanced Mathematics Electives (3 credits)

BSEE students are required to take 3 credits from the following list of elective courses. Some acceptable electives require additional prerequisite courses. Students are advised to carefully select the elective that best fits their course history and course plan.

Course	Description	Credits	Prerequisites
MATH A310	Numerical Methods	3	MATH A314
MATH A314	Linear Algebra	3	MATH A252
MATH A321	Analysis of Several Variables	3	MATH A253, MATH A314
MATH A371	Stochastic Processes	3	MATH A252, STAT A307
MATH A407	Mathematical Statistics I	3	MATH A252, STAT A307
MATH A410	Introduction to Complex Analysis	3	MATH A253, MATH A265
MATH A422	Partial Differential Equations	3	MATH A302
MATH A423	Advanced Engineering Mathematics	3	MATH A302