ELECTRICAL ENGINEERING CURRICULUM CHECKLIST May 2018

Name: _____ Date: _____ Approval: _____

Note: All courses have an ELEN designator unless otherwise specified.

1. First & Second Year Program Requirements - Technical (up to **42.5 pts.)**

(for details, see http://bulletin.engineering.columbia.edu/electrical-engineering.

COURSE	GRADE	COURSE	GRADE
MATH V1101 Calculus I (if needed)	_____	MATH V1102 Calculus II (if needed)	_____
APMA E2000 Multivariable Calculus	_____		
PHYS C1401 (or alternates)	_____	PHYS C1402 (or alternates)	_____
PHYS C1403 (or alternates)	_____	PHYS C1494 (or alternates)	_____
CHEM C1403 (or alternates)	_____	ENGI E1006 / COMS W1003/4/7	_____
ENGI E1102 Gateway Lab	_____	ELEN E1201 Intro. to EE	_____
APMA E2101 **or** {MATH V2030 **and** (APMA E3101 or MATH V2010)} (circle which taken)			_____/_____

2. Core Required EE Courses & Labs (up to 38.5 pts.) (See bulletin for comments and alternatives.)

COURSE	GRADE	COURSE	GRADE
E3801/E3084 Signals & Systems / Lab	_____/_____	CSEE W3827/E3082 Comp. Sys. / Lab	_____/_____
E3201/E3081 Circuit Analysis / Lab	_____/_____	E3331/E3083 Electronic Circuits / Lab	_____/_____
E3106 Solid State	_____	E3401 Electromagnetics	_____
E3043 Sol. State, Mwave, & F.Optics Lab	_____	E3701 Intro. Comm. Sys. or	
IEOR E3658 Probability (or alternate)	_____	CSEE W4119 Computer Networks	_____
COMS E313* Data Structures	_____	ELEN E3399 EE Practice	_____

3. Capstone Design Project Course - E3390 Electronic Circuit Design Lab (3pts.) _____

With permission arranged in ELEN E3399, requiring a more extensive project, one of the following may be substituted: ELEN E4350, EECS E4340, CSEE W4840, or ELEN E3998/E4998. **Must** be taken near the end of the program.

ALTERNATE COURSE: _____ Approval: _____

4. Depth Technical Electives (6 pts.) Two courses from a single one of the following four areas not used for #1-3.

a. *Photonics, Solid State Devices, and Electromagnetics*
E4193, E4301, E4401, E4411, E4420, E4944, E4488.

b. *Circuits and Electronics*
E4215, E4312, E4314, EECS E4321, EECS E4340, E4350, E4361.

c. *Signals & Systems*
E4511, E4810, E4815, E4830, E4835, E4896, EEME E3601, EEME E4601, EEOR E4650.

d. *Communications & Networking*
E3701, CSEE W4119, CSEE W4140, E4702, E4703, COMS W4180.

COURSE 1: _____ COURSE 2: _____

5. Breadth Technical Electives (6 pts.) Two 3000+ level courses with mostly engineering content from outside the selected depth area (a-d):

- Other EE-listed courses (except not sufficiently technical ones such as E3900/4900 ~~& EEJR E4901~~, other courses used for #1-5 or those with significant overlap, or project course such as E3998/4998 unless documented as being outside the depth area.)
- Other CS-listed courses (except for, COMS W3203, COMS W3101 & 3102, not sufficiently technical courses covering topics such as ethics or business, and other courses used for #1-5 or those with significant overlap, or project courses unless documented as outside depth area).
- APPH E4100, APPH 4110, APPH E4112 allowed if not using depth area **a**.
- Courses with mostly engineering content from any other SEAS department may be acceptable as long as they do not significantly overlap with other courses used for #1-5. Please get advisor approval in advance.

COURSE 1: _____ COURSE 2: _____

6. Additional Technical Electives (6 pts., or 3 pts. if full O.D.E. & Linear Alg. courses taken instead of APMA E2101)
Eligible courses include any 3000+ level technical (including math or science) courses that do not overlap with other courses used for #1-6. Note: transfer or combined-plan students who do not take ELEN E1201 for a grade or receive official transfer credit for ELEN E1201 need at least one course (3 pts.) here to have mostly engineering content. Please get advisor approval in advance. Music Dept. courses are not allowed.

COURSE 1: _____ COURSE 2 (if needed): _____

7. Non-Technical Course Requirement (27 pts.) (Administered by the Center for Student Advising. For details see http://bulletin.engineering.columbia.edu/first-yearsophomore-program.) _____