ELECTRICAL ENGINEERING CURRICULUM CHECKLIST   June 2012

Name: _____ Date: _____ Approval: _____

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

1.   First & Second Year Program Requirements - Technical (up to **43.5 pts.**)

   (for details, see `http://www.engineering.columbia.edu/bulletin`)

COURSE	GRADE	COURSE	GRADE
MATH V1101 Calculus I (if needed)	_____	MATH V1102 Calculus II (if needed)	_____
MATH V1201 Calculus III	_____	MATH V1202 Calculus IV	_____
PHYS C1401 (or alternates)	_____	PHYS C1402 (or alternates)	_____
PHYS C1403 (or alternates)	_____	PHYS C1494 (or alternates)	_____
CHEM C1403 (or alternates)	_____	COMS W1007 (or alternates)	_____
ENGI E1102 Gateway Lab	_____	ELEN E1201 Intro. to EE	_____

APMA E2101 **or** {MATH E1210 **and** (APMA E3101 or MATH V2010)} (circle which taken)   _____/_____

2.   Core Required EE Courses & Labs (37.5 pts.)

COURSE	GRADE	COURSE	GRADE
E3801/E3084 Signals & Systems / Lab	_____/_____	CSEE W3827/E3082 Digital 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 E313x Data Structures	_____	ELEN E3399 EE Practice	_____

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

With special permission, oversight, & a more extensive project, one of the following alternate courses can be used: ELEN E4350 VLSI Design Lab, EECS E4340 Computer Hardware Design, CSEE W4840 Embedded System Design, or ELEN E3998 Projects in Electrical Engineering.   Must be taken near end of program.

ALTERNATE COURSE: _____   Approval: _____

4.   Depth Technical Electives (6 pts.)

   Two courses from a single one of the following four areas, not including courses used for #1-3 above.

a. *Photonics, Solid State Devices, and Electromagnetics*
E4301, E4401, E4405, E4411, E4420, E4501, E4503, E4944, E4488.

b. *Circuits and Electronics*
E4215, E4312, E4314, E4321, EECS E4340 (if not used for capstone), E4350 (if not used for capstone)

c. *Signals & Systems*
E4810, E4815, E4830, E4896, EEME E3601, EEME E4601

d. *Communications & Networking*
E3701 (if not used for core), CSEE W4119 (if not used for core), E4702, E4703, COMS W4180

COURSE 1:   _____   COURSE 2:   _____

5.   Breadth Technical Electives (6 pts.)

   Two 3000+ level engineering courses clearly outside the depth area selected above. Eligible courses are as follows:

   - EE Dept. listed courses (except E3000, E3488, E3900, E4900, EEJR E4901, and other courses used for #1-5, or those with significant overlap). Note: E3998/4998 projects used here must be outside depth area.
   - CS Dept. listed courses (except for COMS W313X, COMS W3203, COMS W3101, COMS W4400, and COMS E4405 and other courses used for #1-5, or those with significant overlap).
   - ELEN E3488, ELEN E4193, APPH E4100, APPH 4110, APPH E4112 if not using depth area **a**.
   - Engineering courses from any other engineering departments may be acceptable, as long as they do not 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 MATH E1210 & APMA E3101 are taken instead of APMA E2101)
   Eligible courses include any 3000+ level engineering, math or science courses that do not overlap with other courses used for #1-6. Note: students who do not take or receive transfer credit for ELEN E1201 need at least one course here to be engineering. Please get advisor approval in advance.

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

7.   Non-Technical Course Requirement   (27 pts.)   _____
   (administered by Advising Center, details in bulletin at `http://www.engineering.columbia.edu`)

8.   General Requirements (Total ≥128 pts., ≥ 60 pts. at Columbia, 2 pts. Phys. Ed., GPA ≥ 2.0)   _____