



**COLUMBIA UNIVERSITY  
ELECTRICAL ENGINEERING DEPARTMENT**

**ELECTRICAL ENGINEERING MASTER OF SCIENCE  
PROGRAM CHECKLIST**

STUDENT: \_\_\_\_\_ UNI: \_\_\_\_\_  
(Please print)

**This form serves as an unofficial checklist for the requirements of  
the M.S. Program in Electrical Engineering**

| Courses      | Pts. |
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| Total points |      |

**M.S.E.E. Degree requirements:**

1. \_\_\_ 30 points of credit, all 4000-level or above and taken for a letter grade (i.e., no P or R grades).
2. \_\_\_ 15 points at or above 6000 level.
3. \_\_\_ 15 points in EE (including joint courses). 12 of these should be taken within the first 24.
4. \_\_\_ No more than 6 points research (e.g., ELEN E4998, ELEN E6001, ELEN E6002).
5. \_\_\_ No more than 3 points total for APPROVED courses that are:
  - a. Outside of SEAS and the Math & Science departments (e.g., Economics or Business courses).
  - Or
  - b. Non-technical courses within SEAS and the Math & Science departments (e.g., IEOR E4702 Human Factors).
6. \_\_\_ No credit for Math & Science courses covering traditional undergraduate engineering topics (e.g., STAT W4105 Probability).
7. \_\_\_ 2.5 GPA minimum.
8. \_\_\_ Completion within 5 years.

**Important Notes:**

- 1.) All courses from outside the standard list on the next page must be approved.
- 2.) Each student has the responsibility to ensure that their selected courses satisfy all requirements, especially if he or she is constrained by a deadline such as that imposed by a student visa.
- 3.) Last updated August 2015.



### List of standard MSEE Courses as of 2015-2016:

- 1) Any EE Dept. graduate course except EEHS E4900. Joint courses are included.
- 2) Any CS Dept. graduate course except COMS W4910 and those covering non-technical topics such as Writing, Presentation, Computers & Society, or Ethics. Joint courses are included.
- 3) Any regular, technical graduate-level ME Dept. course. This does not include courses such as IEME E4310 or MECE E4999.
- 4) Any regular, technical graduate-level MSAE Program course. This does not include topics or project courses with significant non-technical content, or MSAE E4999.
- 5) The following courses in Applied Math (APMA): 4001, 4101, 4150, 4200, 4204, 4300, 4301, 4400, 6209, 6301, 6302, 6304, 8308.
- 6) The following courses in Applied Physics (APPH, CHAP): 4008, 4010, 4090, 4100, 4110, 4112, 4120, 4130, 4200, 4210, 4300, 4301, 6081, 6082, 6085, 6091, 6101, 6102, 6110.
- 7) The following courses from the BME Dept.: 4150, 4210, 4300, 4301, 4305, 4310, 4320, 4321, 4340, 4410, 4420, 4430, 4439, 4440, 4450, 4500, 4501, 4502, 4510, 4540, 4560, 4570, 4590, 4601, 4702, 4703, 4737, 4738, 4750, 4761, 4810, 4840, 4894, 4898, 6003, 6301, 6310, 6311, 6400, 6420, 6500, 6505. Note that courses offered jointly with EE are included in item one.
- 8) Any regular, technical 4000- or 6000-level IEOR Dept. course from areas 1 (Analytics) or 9 (Optimization), or 6000-level course from area 10 (Applied Probability) (see [www.ieor.columbia.edu](http://www.ieor.columbia.edu) for classifications). In addition, IEOR E4404 & IEOR E4530 are included.
- 9) Any regular, technical graduate-level Chemical Engineering Dept. course beyond CHEN E4001 & E4002. This does not include courses such as CHEN E4501 and CHEN E4690.
- 10) Any regular, technical graduate-level course in Engineering Mechanics (ENME).
- 11) The following courses from the Civil Engineering Dept.: 4226, 4232, 4233, 4234, 4241, 4242, 4253, 6232, 6246, 6248.
- 12) The following courses from the Earth & Environmental Engineering Dept.: 4050, 4101, 4163, E4EE 4200, 4210, 4250, CHEE E4252, 4255, 4257, 4304, 4530, 4901, 4950, 6132, 6150, 6151, 6200, 6201, 6208, 6210, 6212, 6228, 6240, 6252.
- 13) The following courses from the Statistics Dept.: STAT W4240, W4315, W4400, W4413, W4635, G6104.
- 14) The following courses from the Math Dept.: W4007, W4041, W4042, W4043, W4044, W4045, W4051, W4053, W4061, W4062, G4175, G4176, G4261, G4307, G4308, G4343, G4344, W4392, G4402, G4403, G4657, G6200, G6255, G6429, G6440.
- 15) The following courses from the Biology Dept.: W4001, W4004, W4005, W4008, W4022, W4031, W4034, W4037, W4041, W4073, G4075, W4082, W4193, W4400, BIOC W4501, W4510, BIOC W4512, W4799.
- 16) The following courses from the Physics Dept.: W4003, W4011, W4012, W4018, W4019, W4021, W4022, W4023, W4040, W4050, G6010, G6011, G6024, G6036, G6037, G6038, G6040, G6047, G6050, G6060, G6080, G6082, G6083, G6092, G6094, G6099, G8012, G8036, G8040, G8041, G8048, G8049, G8050, G8066, G8069, G8080, G8083.
- 17) Any regular, technical graduate Chemistry Dept. course under the categories “Organic Chemistry”, “Inorganic Chemistry”, “Physical & Theoretical Chemistry”, & “Biophysical Chemistry” (see [www.columbia.edu/cu/chemistry](http://www.columbia.edu/cu/chemistry) under “All Graduate Chemistry Courses” for lists).

Note: There are likely other courses that would be acceptable to use as technical MSEE courses but do not yet appear in this list. For others that you would like considered, please send an email to [elsa@ee.columbia.edu](mailto:elsa@ee.columbia.edu) with the subject “MSEE Course Approval Request” that contains your UNI, the full number and title of the course, and links (or attachments) for the description and syllabus (if available).