

The Engineering and Public Policy additional major degree is intended to complement the technical nature of the traditional engineering degree with a set of courses focused on the connection between technical issues and society/policy. The EPP additional major curriculum is designed to be completed in the usual 8-semester time frame of an undergraduate degree. The columns on the left show the course requirements for the traditional major, while the columns on the right show the corresponding course requirements for the traditional major with the EPP additional major.

**Civil Engineering****Civil Engineering and Engineering and Public Policy**

| <b>Engineering Courses</b>      |                                                      |              | <b>Engineering Courses</b>      |                                                      |              |
|---------------------------------|------------------------------------------------------|--------------|---------------------------------|------------------------------------------------------|--------------|
|                                 |                                                      | <b>Units</b> |                                 |                                                      | <b>Units</b> |
| 12-100                          | Exploring CEE: Infra. & Env't in a Changing World    | 12           | 12-100                          | same                                                 | 12           |
| xx-xxx                          | Other Introductory Engineering Elective              | 12           | 19-101                          | <i>Introduction to Engineering and Public Policy</i> | 12           |
| xx-xxx                          | restricted CEE science elective                      | 9            | xx-xxx                          | same                                                 | 9            |
| 12-200                          | CEE Challenges: Design in a Changing World           | 9            | 12-200                          | same                                                 | 9            |
| 12-212                          | Statics                                              | 9            | 12-212                          | same                                                 | 9            |
| 12-231                          | Solid Mechanics                                      | 9            | 12-231                          | same                                                 | 9            |
| 12-233                          | CEE Infrastructure Systems in Action                 | 2            | 12-233                          | same                                                 | 2            |
| 12-234                          | Sensing and Data Acquisition for Engineering Systems | 4            | 12-234                          | same                                                 | 4            |
| 12-271                          | Computation and Data Science for CEE                 | 9            | 12-271                          | same                                                 | 9            |
| 12-301                          | CEE Projects                                         | 9            | 12-301                          | same                                                 | 9            |
| 12-333                          | Experimental and Sensing Design and Computation      | 4            | 12-333                          | same                                                 | 4            |
| 12-335                          | Soil Mechanics                                       | 9            | 12-335                          | same                                                 | 9            |
| 12-355                          | Fluid Mechanics                                      | 9            | 12-355                          | same                                                 | 9            |
| 12-356                          | Fluid Mechanics Lab                                  | 2            | 12-356                          | same                                                 | 2            |
| 12-351                          | Environmental Engineering                            | 9            | 12-351                          | same                                                 | 9            |
| 12-371                          | Adv. Computing and Problem Solving in CEE            | 9            | 12-371                          | same                                                 | 9            |
| 27-357                          | Introduction to Materials Selection                  | 6            | 27-357                          | same                                                 | 6            |
| 12-401                          | CEE Design                                           | 12           | 12-401                          | same                                                 | 12           |
| 12-411                          | Project Management                                   | 9            | 12-411                          | same                                                 | 9            |
| 12-6xx                          | Restricted CEE Elective                              | 9            | 12-6xx                          | same                                                 | 9            |
| <b>Math and Science Courses</b> |                                                      |              | <b>Math and Science Courses</b> |                                                      |              |
|                                 |                                                      | <b>Units</b> |                                 |                                                      | <b>Units</b> |
| 21-120                          | Differential and Integral Calculus                   | 10           | 21-120                          | same                                                 | 10           |
| 21-122                          | Integration and Approximation                        | 10           | 21-122                          | same                                                 | 10           |
| 21-25x                          | Linear Algebra & Vector Calculus or Calc-3D          | 9            | 21-25x                          | same                                                 | 9            |
| 21-260                          | Differential Equations                               | 9            | 21-260                          | same                                                 | 9            |
| 33-141                          | Physics I for Engineering Students                   | 12           | 33-141                          | same                                                 | 12           |

|        |                                                     |    |        |                                                   |    |
|--------|-----------------------------------------------------|----|--------|---------------------------------------------------|----|
| 33-142 | Physics II for Engineering Students                 | 12 | 33-142 | same                                              | 12 |
| 15-110 | Principles of Computing                             | 10 | 15-110 | same                                              | 10 |
| 09-101 | Intro to Experimental Chemistry                     | 3  | 09-101 | same                                              | 3  |
| 09-1xx | Modern Chemistry I / Nanolegos: Chem Building Block | 9  | 09-1xx | same                                              | 9  |
| 36-220 | Engineering Statistics and Quality Control          | 9  | 36-220 | <i>Engineering Statistics and Quality Control</i> | 9  |

| CIT General Education Courses |                                           | Units | CIT/EPP Non-technical courses |                                                       | Units |
|-------------------------------|-------------------------------------------|-------|-------------------------------|-------------------------------------------------------|-------|
| 99-101                        | Core @ Carnegie Mellon                    | 3     | 99-101                        | same                                                  | 3     |
| 39-210                        | Experiential Learning I                   | 0     | 39-210                        | same                                                  | 0     |
| 39-220                        | Experiential Learning II                  | 0     | 39-220                        | same                                                  | 0     |
| 39-310                        | Experiential Learning III                 | 0     | 39-310                        | same                                                  | 0     |
| 76-10x                        | First-Year Writing Requirement            | 9     | 76-10x                        | same                                                  | 9     |
|                               | Social Analysis and Decision Making (SDM) | 9     |                               | <i>EPP-approved Decision Science course</i>           | 9     |
|                               | Writing and Expression (W&E)              | 9     |                               | <i>EPP-approved Writing and Communications course</i> | 9     |
|                               | Innovation & Internationalization (I&I)   | 9     |                               | same                                                  | 9     |
|                               | Peoples, Places, and Cultures (PPC)       | 9     |                               | same                                                  | 9     |
|                               | General Education Elective [1]            | 9     |                               | same                                                  | 9     |
|                               | General Education Elective [2]            | 9     |                               | <i>EPP-approved Economics course</i>                  | 9     |
|                               | General Education Elective [3]            | 9     | 19-351                        | <i>Applied Methods for Technology-Policy Analysis</i> | 9     |

| Free Electives |  | Units | Free Electives |                                                                                  | Units |
|----------------|--|-------|----------------|----------------------------------------------------------------------------------|-------|
|                |  | 54    | 19-201         | <i>Professional Issues in Engineering, Science, Technology and Public Policy</i> | 1     |
|                |  |       |                | <i>EPP Technology-Policy Elective [1]</i>                                        | var   |
|                |  |       |                | <i>EPP Technology-Policy Elective [2]</i>                                        | var   |
|                |  |       |                | <i>EPP Technology-Policy Elective [3]</i>                                        | var   |
|                |  |       | 19-451         | <i>EPP Projects I</i>                                                            | 12    |
|                |  |       | 19-452         | <i>EPP Projects II</i>                                                           | 12    |
|                |  |       |                | free elective units to meet 54 unit minimum                                      | var   |

Total Units (minimum)

384

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384

EPP Technology-Policy Electives are courses that address the connections between technology and society. Students work with their advisors to select approved courses appropriate to their interests. Research credits, in EPP or another department, can be used for EPP Technology-Policy Elective credits with prior approval. EPP Technology-Policy Electives may fulfill General Education requirements.