Environmental Engineering Program – example of a curriculum path – 2014-2015

FRESHMAN
Fall
GEN ENG 205/215-1 (a)
MATH 220
CHEM 101 or 171 (b)
GEN CMN 102 or 103

Winter
GEN ENG 205/215-2 (a)
MATH 224
CHEM 102 or 172 (b)

Spring
GEN ENG 205/215-3 (a)
MATH 230
CHEM 103 (c)

Sophomore
Fall
GEN ENG 205/215-4 (a)
MATH 234
CHEM 203

Winter
MAT SCI 201 (d)
PHYSICS 135-2
DSGN/ENG (a) 106-1

Spring
MECH ENG 241
CIV ENV 201
DSGN/ENG (a) 106-2

Junior
Fall
CIV ENV 363
CIV ENV 361-1
CIV ENV 306 (e)

Winter
CIV ENV 364
BMD ENG 250
Elective (f)

Spring
CIV ENV 340
Elective (f)

Senior
Fall
Technical Elective (h)
CIV ENV 367
CIV ENV 368 (h)

Winter
CIV ENV 365
CIV ENV 398-1 (h)
Elective (f)

Spring
CIV ENV 382 (senior)
CIV ENV 398-2 (h)
Elective (f)

Notes:

a. Must register both courses concurrently.
b. Completion of CHEM 171 & 172 meets the req’t of CHEM 101, 102, & 103. Completion of CHEM 101 & 171 meets the req’t of CHEM 101 & 102.
c. If satisfactorily completed CHEM 171 & 172, take CIV ENV 201
d. May be substituted by MAT SCI 301.
e. May choose from Basic Engineering Probability, Statistics, and Quality Control list.
f. May choose from any course offered for credit by the University.
g. Courses must be selected to meet the Social Science-Humanities requirement.
h. Choose courses from the approved list: at least 3 must carry 100% engineering topics; CIV ENV 368 is recommended.
Environmental Engineering Program 2014-2015

Social Science-Humanities Requirement

Seven courses chosen according to either of the following two options:

**Option A:** At least two courses must be chosen in each of three areas:
- Social and Behavioral Science (SBS)
- Historical Studies and Values (HSV)
- Fine Arts, Language and Literature (FAL)

Of the seven courses, only three 100-level introductory courses may be presented and three courses must be thematically related to provide depth.

**Option B:** Five of the seven courses must clearly have a thematic relatedness. For breadth, no more than five courses may come from a single area.

The courses taken by for a student’s Social Science-Humanities Requirement must be approved in advance by the McCormick Humanities Panel. Foreign language study can be incorporated into the program, but should be started as early as possible, preferably in the freshman year. Complete theme requirement information is available at the McCormick Undergraduate Engineering Office web site, [http://www.mccormick.northwestern.edu/academics/undergraduate/core-curriculum/social-science-humanities-theme-requirement.html](http://www.mccormick.northwestern.edu/academics/undergraduate/core-curriculum/social-science-humanities-theme-requirement.html).

Technical Electives (TE) – choose four courses

At least two(2) courses must be from the list below. A minimum of three(3) of these electives must carry 100% engineering topics[^1], only one (1) CIV ENV 399 can be counted towards a technical elective.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CHEM 210-2</td>
<td>Organic Chemistry II</td>
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<tr>
<td>BIOL SCI 215, 216</td>
<td>Genetics and Molecular Biochemistry, Cell Biology</td>
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<tr>
<td>CHEM ENG 395</td>
<td>Life Cycle Analysis – also as MECH ENG 395 -</td>
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<tr>
<td>CIV ENV 314</td>
<td>Organic Geochemistry</td>
</tr>
<tr>
<td>CIV ENV 303</td>
<td>Environmental Law and Policy</td>
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<tr>
<td>CIV ENV 355</td>
<td>Engineering Aspects of Groundwater Flow</td>
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<tr>
<td>CIV ENV 361-2</td>
<td>Public and Environmental Health</td>
</tr>
<tr>
<td>CIV ENV 368</td>
<td>Sustainability: Issues and Actions, Near and Future</td>
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<tr>
<td>CIV ENV 370</td>
<td>Environmental Organic Chemistry</td>
</tr>
<tr>
<td>CIV ENV 398-1,2</td>
<td>Community-Based Design</td>
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<tr>
<td>CIV ENV 442[^3]</td>
<td>Processes in Environmental Biotechnology</td>
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<tr>
<td>CIV ENV 444[^3]</td>
<td>Physical/Chemical Processes in Environmental Control</td>
</tr>
<tr>
<td>CIV ENV 468[^3]</td>
<td>Chemical Speciation</td>
</tr>
</tbody>
</table>

[^1]: Any engineering or WCAS (math or science) course 200-level and above not in curriculum requirement.

[^2]: Not classified as engineering courses

[^3]: Requires instructor permission and a permission number from the CIV ENV office.