

## 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.
- $\label{eq:final_control} \textbf{f.} \qquad \textbf{May choose from any course offered for credit by the University}.$
- 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.

<u>Option B:</u> 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.

## Technical Electives (TE) – choose four courses

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

CHEM 210-2 <sup>(2)</sup>	Organic Chemistry II
BIOL SCI 215, 216 <sup>(2)</sup>	Genetics and Molecular Biochemistry, Cell Biology
CHEM ENG 395	Life Cycle Analysis – also as MECH ENG 395 -
CIV ENV 314 <sup>(2)</sup>	Organic Geochemistry
CIV ENV 303 <sup>(2)</sup>	Environmental Law and Policy
CIV ENV 355	Engineering Aspects of Groundwater Flow
CIV ENV 361-2	Public and Environmental Health
CIV ENV 368	Sustainability: Issues and Actions, Near and Future
CIV ENV 370	Environmental Organic Chemistry
CIV ENV 398-1,2	Community-Based Design
CIV ENV 440 <sup>(3)</sup>	Environmental Transport Processes
CIV ENV 442 <sup>(3)</sup>	Processes in Environmental Biotechnology
CIV ENV 444 <sup>(3)</sup>	Physical/Chemical Processes in Environmental Control
CIV ENV 468 <sup>(3)</sup>	Chemical Speciation
CIV ENV 495 <sup>(3)</sup>	Environmental Organic Chemistry

<sup>&</sup>lt;sup>(1)</sup> Any engineering or WCAS (math or science) course 200-level and above not in curriculum requirement.

<sup>(2)</sup> Not classified as engineering courses

<sup>(3)</sup> Requires instructor permission and a permission number from the CIV ENV office.