2015-2016 Bulletin **Bachelor of Science in Environmental Engineering**

To verify whether or not this document applies to you, go to Trailhead, run a Degree Evaluation and take note of which Catalog Term is specified. This document applies to a Catalog Term of Fall 2015.

LEGEND

Required by the CSM Core Curriculum

Distributed Science Courses



Assessed for ABET Accreditation

‡ indicates a course that applies to the in-major GPA. In addition to a 2.0 minimum overall GPA, students must maintain a 2.0 minimum in-major GPA for graduation.

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MATH 111 Calculus for Scientists and Engineers I

GEGN 101 Earth and Environmental Systems

CHGN 121 Principles of Chemistry I

CSM 101 reshman Success Semina 4.0 hr. **LAIS 100** Nature and Human Values **PAGN 101** Physical Education

MATH 112 Calculus for Scientists and Engineers II Pre-req: C or better in MATH 111

PHGN 100 Physics I - Mechanics

Co-req: MATH 112

CHGN 122 Principles of Chemistry II Pre-req: C- or better in CHGN 121 **EPIC 151** Design (EPICS) I

PAGN 102 Physical Education Pre-req: PAGN 101

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3.0 hr.

MATH 213 Calculus for Scientists and Engineers III Pre-req: C or better in MATH 112

> **MATH 225** Pre-reg: C or better in MATH 112

PHGN 200 Physics II - Electromagnetism & Ontics

Pre-req: C- in PHGN 100; Co-req MATH 213

EBGN 201 Principles of Economics 3.0 hr **CEEN 241**

Pre-rea: PHGN 100 and co-rea: MATH 112

CEEN 311 Pre-reg: CEEN 241

Thermodynamics: CHGN 209 or CBEN 210, or MEGN 361

Pre-rea: VARIES, see bulletin for details,

EPIC 251*

Pre-reg: EPIC 151

EGGN 250

Pre-reg: PHGN 200

MEL II

Pre-req:MEL I; Co-Req:

CEEN 310 & CEEN 311

LAIS 200 Pre-reg: LAIS 100

PAGN 2xx Physical Education Pre-req: PAGN 102

> **PAGN 2xx** Pre-reg: PAGN 102

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Probability and Statistics for Engineers Pre-req: MATH 213 ENV. ELECT.****

Environmental Eng. Elective

MATH 201

CSCI 260 (Fortran), or CSCI 261 (C++)

ENV. ELECT.**** **Environmental Eng. Elective**

CEEN 301[‡] Fund. of Env. Sci. & Eng. I Pre-rea: CHGN 122. PHGN 100. & MATH 213

CEEN 302* Fund. of Env. Sci. & Eng. II

Pre-reg: CHGN 122, PHGN 100, & MATH 213

CEEN 310 Fluid Mechanics for Civil & Env. Eng.

Co-req: CEEN 241

ENV. LAB ELECT. ****

Pre-req: Varies

BIOSCIENCE ELECT. ***

FREE Free Elective

LAIS/EBGN***** **EGGN 350** H&SS Restricted Elective I Co-req: LAIS 200

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3.0 hr. CEEN 330[‡] Environmental Eng. Field Session Pre-req: EPIC 251,

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ENV. ELECT.**** Environmental Eng. Elective

ENV. ELECT.****

Environmental Eng. Elective

3.0 hr. **CEEN 492**[‡]

> **Environmental Law** Pre-req: CEEN 301 or CEEN 302

ENV. ELECT.****

Environmental Eng. Elective

3.0 hr. **EGGN 491** Senior Design I

3.0 hr.

Pre-reg: CEEN 330

EGGN 492 Senior Design II Pre-req: EGGN 491

CEEN 481*

Hydro, and Water Resources Eng. Pre-reg: CEEN 301

3.0 hr. **FREE** Free Elective 3.0 hr **FREE** Free Elective

LAIS/EBGN***** H&SS Restricted Elective III Co-req: LAIS 200

LAIS/EBGN**** H&SS Restricted Elective II Co-reg: LAIS 200

Notes:

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* You may substitute EPIC 261 (GIS) or EPIC 262 (AutoCAD) for EPIC 251. A course substitution form will be required.

** Select either BIOL 110‡ (Biology), CEEN 461‡ (Fundamentals of Ecology), or CHGN 462‡ (Microbiology)

*** Select either CEEN 303‡ (Environmental Eng. Laboratory, taught in the Spring), or CEEN 482‡ (Hydrologic and Water Resources Laboratory, taught in the Fall)

**** The list of courses that can be used as Environmental Engineering Electives is on the reverse side of this document.

***** The list of classes that qualify for this requirement are revised yearly and posted on the CSM website. At least one of the 3 courses must be at the 400-level; at least one must have an LAIS prefix.

134.5 Credit Hours

Environmental Engineering Electives

You must take a minimum of 5 electives from this list.

CEEN 303/482 [‡]	(whichever one was not used for the Env. Lab requirement)
CEEN 461 [‡]	FUNDAMENTALS OF ECOLOGY (if not used for the Biosci. Elect.)
CEEN 470 [‡]	WATER AND WASTEWATER TREATMENT PROCESSES
CEEN 471 [‡]	WATER AND WATERWATER TREATMENT SYSTEMS ANALYSIS & DESIGN
CEEN 472 [‡]	ONSITE WATER RECLAMATION AND REUSE
CEEN 474 [‡]	SOLID WASTE MINIMIZATION AND RECYCLING
CEEN 475 [‡]	SITE REMEDIATION ENGINEERING
CEEN 476 [‡]	POLLUTION PREVENTION: FUNDAMENTALS AND PRACTICE
CEEN 477 [‡]	SUSTAINABLE ENGINEERING DESIGN
CEEN 480 [‡]	CHEMICAL FATE AND TRANSPORT IN THE ENVIRONMENT
CHGN 403 [‡]	INTRODUCTION TO ENVIRONMENTAL CHEMISTRY
GEGN 466 [‡]	GROUNDWATER ENGINEERING
CEEN XXX	"SPECIAL TOPICS" (SEE YOUR ADVISOR FOR DETAILS)

Individual Plan of Study

Sem.	<u>Year</u>	Course Name/Number	Cr. Hr.	<u>Grade</u>

Disclaimer: This document has been created as an advising tool for students and faculty. Please note that it is not an official document. The CSM Bulletin is the official document. Refer to the Bulletin for all graduation requirements.