

**UCC/UGC/ECCC**

Proposal for Course Change

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| **FAST TRACK (Select if this will** **be a fast track item. Refer to**  [***Fast Track Policy***](http://www4.nau.edu/avpaa/UCCPolicy/Agenda_FastTrack_Consent.docx) **for eligibility)** |

# *If the changes included in this proposal are significant, attach copies of original and proposed syllabi in* [*approved university format*](http://www4.nau.edu/avpaa/UCCForms/syllabus.doc)*.*

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| 1. Course subject and number: | **CENE 280** | 2. Units: | **3** |

[**See upper and lower division undergraduate course definitions**](http://www4.nau.edu/avpaa/UCCPolicy/Uplow.doc).

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| 3. College: | CEFNS | 4. Academic Unit: | CECMEE |

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| 5. Current Student Learning Outcomes of the course.   1. Comprehend key chemical, physical and biological concepts and problem-solving processes in environmental engineering. (A) 2. Apply material balances and mathematical modeling of chemical, physical and biological concepts to problem-solving processes in environmental engineering. (E,K) | Show the proposed changes in this column (if applicable). Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted. *(*[*Resources & Examples for Developing Course Learning Outcomes*](http://www4.nau.edu/avpaa/Assessment/CourseLearningOutcomesPDF_090712.pdf)*)*  **UNCHANGED** |

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| 6. Current **title,** **description** and **units**. Cut and paste, in its entirety,from the current on-line academic catalog\* [**http://catalog.nau.edu/Catalog/**](http://catalog.nau.edu/Catalog/).  **CENE 280 ENVIRONMENTAL ENGINEERING FUNDAMENTALS (3)**  Description: A course in environmental engineering fundamentals that applies biological, chemical, and mathematical principles to solve environmental engineering problems using the mass balance approach. Letter grade only. Course fee required.  Units: 3  Prerequisite: CENE 150, CENE 150L, CHM 152, and MAT 136 with a grade of C or better | Show the proposed changes in this column **Bold** the proposed changes in this column to differentiate from what is not changing, and **~~Bold with strikethrough~~**what is being deleted.  **CENE 280 ENVIRONMENTAL ENGINEERING FUNDAMENTALS (3)**  Description: A course in environmental engineering fundamentals that applies biological, chemical, and mathematical principles to solve environmental engineering problems using the mass balance approach. Letter grade only. Course fee required.  Units: 3  Prerequisite: **(BIO 100 or BIO 181),** CENE 150, CENE 150L, CHM 152, and MAT 136 with a grade of C or better |

\*if there has been a previously approved UCC/UGC/ECCC change since the last catalog year, please copy the approved text from the proposal form into this field.

7. Justification for course change.

**BIO was a previous course prereq but was dropped when the EnE program of study changed (eliminated the BIO requirement); we are reinstituting the BIO requirement in the EnE program and therefore want to assure that students have the BIO course prior to taking this course.**

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| 8. Effective **BEGINNING** of what term and year? | **Fall 2014** |
| [**See effective dates calendar**](http://www4.nau.edu/avpaa/timelines/1314Effective.xls). |  |

**IN THE FOLLOWING SECTION, COMPLETE ONLY WHAT IS CHANGING**

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| **CURRENT** | **PROPOSED** |
| Current course subject and number: | Proposed course subject and number: |
| Current number of units: | Proposed number of units: |
| Current short course title: | Proposed short course title (max 30 characters): |
| Current long course title: | Proposed long course title (max 100 characters): |
| Current grading option:  letter grade  pass/fail  or both | Proposed grading option:  letter grade  pass/fail  or both |
| Current repeat for additional units: | Proposed repeat for additional units: |
| Current max number of units: | Proposed max number of units: |
| Current prerequisite:  CENE 150, CENE 150L, CHM 152, and MAT 136 with a grade of C or better | Proposed prerequisite (include rationale in the justification):  **(BIO 100 or BIO 181), CENE 150, CENE 150L, CHM 152, and MAT 136 with a grade of C or better** |
| Current co-requisite: | Proposed co-requisite (include rationale in the justification): |
| Current co-convene with: | Proposed co-convene with: |
| Current cross list with: | Proposed cross list with: |

9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes  No

If yes, describe the impact. If applicable, include evidence of notification to and/or response

from each impacted academic unit.

**Civil Engineering; B.S.E. (elective), Environmental Engineering; B.S.E., Environmental Engineering Minor, Geology BS-Environmental Geology Emphasis (elective), Microbiology BS (elective).**

10. Is there a related plan or sub plan change proposal being submitted? Yes  No

If no, explain.

**A plan change proposal for the Environmental Engineering BSE is being submitted concurrently. See attached notification to SESES.**

11. Does this course include combined lecture and lab components?                  Yes  No

If yes, include the units specific to each component in the course description above.

**Answer 12-15 for UCC/ECCC only:**

12. Is this course an approved Liberal Studies or Diversity course?                    Yes  No         If yes, select all that apply.   Liberal Studies    Diversity    Both

13. Do you want to remove the Liberal Studies or Diversity designation?            Yes  No

If yes, select all that apply.   Liberal Studies    Diversity     Both

14. Is this course listed in the [**Course Equivalency Guide**](https://aztransmac2.asu.edu/cgi-bin/WebObjects/Admin_CEG.woa/wa/ByInst?inst=NAU)?                               Yes  No

15. Is this course a [**Shared Unique Numbering**](https://aztransmac1.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/SUNList?S=X) (SUN) course?                            Yes  No

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| **FLAGSTAFF MOUNTAIN CAMPUS** |  |
| **Scott Galland** | **1/28/2014** |
| Reviewed by Curriculum Process Associate | Date |
|  |  |
| **Approvals**: |  |
| Bridget Bero 1-29-14 |  |
| Department Chair/Unit Head (if appropriate) | Date |
|  |  |
| Chair of college curriculum committee | Date |
|  |  |
| Dean of college | Date |
|  |  |
| **For Committee use only:** |  |
|  |  |
| UCC/UGC Approval | Date |

Approved as submitted: Yes  No

Approved as modified: Yes  No

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| **EXTENDED CAMPUSES** |  |
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| Reviewed by Curriculum Process Associate | Date |
|  |  |
| **Approvals:** |  |
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| Academic Unit Head | Date |
|  | |
| Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning) | Date |
|  | |
| Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning) | Date |
|  | |
| Faculty Chair of Extended Campuses Curriculum Committee (Yuma, Yavapai, or Personalized Learning) | Date |
|  | |
| Chief Academic Officer; Extended Campuses (or Designee) | Date |
|  |  |

Approved as submitted: Yes  No

Approved as modified: Yes  No

**From:** Paul Umhoefer   
**Sent:** Monday, January 27, 2014 5:54 PM  
**To:** Stuart S Galland  
**Subject:** Re: CENE 280

We are very likely to be eliminating the ENV Geology emphasis in the near future so no problem.

Paul

Paul Umhoefer  
Director and Professor of Geology  
School of Earth Sciences & Environmental Sustainability  
625 S. Knoles Drive  
Flagstaff, AZ  86011-0001  
928-523-1637 (Director office - call first)  
928-523-6464 (research office)

**From:** Stuart S Galland   
**Sent:** Monday, January 27, 2014 3:42 PM  
**To:** Paul Umhoefer  
**Subject:** CENE 280

Hi Paul,

This is to notify you that the CECMEE department is proposing to add (BIO 100 or BIO 181) as additional prerequisites for CENE 280.

CENE 280 is an option for the Environmental Geology Emphasis (Geology BS).   Please let me know if you need to make any changes to your plan.

Thanks!

Scott Galland

Curriculum Process Associate

Office of Curriculum, Learning Design, and Academic Assessment

928-523-1753

928-699-9147 (cell)

[scott.galland@nau.edu](mailto:scott.galland@nau.edu)