

**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: | **EGR 286** | 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: | General Engineering |

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| 5. Current Student Learning Outcomes of the course.  At the conclusion of the course it is expected that each student will be able to (ABET learning outcomes are in parenthesis):   1. Describe the design process steps and the activities and results that are typical of each step. Apply the design process, recognizing broader constraints and impacts of the design (c) 2. Perform independent learning activities relating to engineering applications and describe the impacts of historical and contemporary engineering advances on human culture and the environment. (h,I,j) 3. Recognize team conflicts and satisfactorily resolve them. (g,j) 4. Have a greater understanding of discipline specific design skills (manufacturing, microprocessors). (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/).  **EGR 286 – ENGINEERING DESIGN: THE PROCESS (3)**  **Description: The process of engineering design, mechanisms and controls, computer and programming skills, teamwork and project management, written and oral communications. Letter grade only. Course fee required.**  **Units: 3**  **Prerequisite: EGR 186 Pre- or Co requisite: EE 188 or ME 180 or CENE 180. Must have earned grades of C or better in all prerequisite courses.** | 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.  **EGR 286 – ENGINEERING DESIGN: THE PROCESS (3)**  **Description: The process of engineering design, mechanisms and controls, computer and programming skills, teamwork and project management, written and oral communications. Letter grade only. Course fee required.**  **Units: 3**  **Prerequisite: EGR 186, CS 122, and (EE 188 for Electrical Engineering Majors) or (ME 180 for Mechanical Engineering Majors). Must have earned grades of C or better in all prerequisite courses.**  **~~Pre- or~~ Co requisite: (EE 188 for Mechanical Engineering Majors) ~~or ME 180 or CENE 180.~~** |

\*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.

**In EGR 286 it is expected that students will use their continuing toolset of engineering skills to pursue design projects. Students have been entering EGR 286 with no enhanced skill set than what they had in EGR 186. This has made it difficult to advance the design curriculum. In EGR 286, mechanical engineering students are expected to employ their CAD skills, and we have found that taking ME 180 as a co-requisite means that they cannot use their CAD skills in EGR 286. EGR 286 also has a mechatronics component. Mechanical engineers are required to take EE 188 as part of the course requirements, and we are making it a co-requisite for EGR 286 so that students will have the opportunity to use those skills in EGR 286. This does not affect their degree progression.**

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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:  **EGR 186 Pre- or Co requisite: EE 188 or ME 180 or CENE 180. Must have earned grades of C or better in all prerequisite courses.** | Proposed prerequisite (include rationale in the justification):  **EGR 186, CS 122, and (EE 188 for Electrical Engineering Majors) or (ME 180 for Mechanical Engineering Majors). Must have earned grades of C or better in all prerequisite courses.** |
| Current co-requisite:  **EE 188 or ME 180 or CENE 180** | Proposed co-requisite (include rationale in the justification):  **(EE 188 for Mechanical Engineering Majors)** |
| 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.

**Electrical Engineering BSE, Mechanical Engineering BSE, Mechanical Engineering Minor. The change will have no impact.**

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

If no, explain.

**These changes will not require any related plan change proposals**.

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** | **10/22/2013** |
| Reviewed by Curriculum Process Associate | Date |
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| **Approvals**: |  |
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| Department Chair/Unit Head (if appropriate) | Date |
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| Chair of college curriculum committee | Date |
|  |  |
| Dean of college | Date |
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| **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 |
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| **Approvals:** |  |
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| Academic Unit Head | Date |
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| Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning) | Date |
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| Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning) | Date |
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| 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