

College Document # CCC85UCC Document # 79Review Type:      Edit      Exp X FullCATALOG YEAR ~~2016-2017~~ 2015-2016COLLEGE/SCHOOL: COAS/ Engineering SENG 4380

**Course:** Add: XX Delete:      Delivery:       
 (check all that apply) Change: Number      Title      SCH      Description      Prerequisite       
**Response Required:** New course will be part of major xxx minor      as a required       
 or elective XX course

**Response Required:** New course will introduce XX, reinforce     , or apply      concepts

**Response Required:** Grade Type: Normal (A-F) XX CR/NC      P/F     

**Shortened Course Format: Equivalent Student Learning outcomes verified:**     

If new, provide Course Prefix, Number, Title, **Measurable** Student Learning Outcomes, SCH Value, Description, prerequisite, and lecture/lab hours if applicable. If in current online catalog, provide change and attach text with changes in red and provide a brief justification.

**Program:** Delete:      Add:      Change:      Attach new/changed Program of Study description and 4-year plan. If in current online catalog, provide change and attach text with changes in red.

**Program Learning Outcomes (PLOs):** Add:      Change:      Attach listing of PLOs.

**Minor:** Add:      Delete:      Change:      Attach new/changed minor. If in current online catalog, provide change and attach text with changes in red.

**College Introductory Pages:** Add information:      Change information:       
 Attach new/changed information. If in current online catalog, provide change and attach text with changes in red.

**Other:** Add information:      Change information:      Attach new/changed information. If in current online catalog, provide change and attach text with changes in red.

Approvals:

Signature

Date

Chair  
 Department Curriculum Committee

Muhammad Zafrul Hasan

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October 30, 2015

Chair  
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October 30, 2015

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Provost

2015

11/20/15

## **SENG 4380**

### ***Systems Engineering in Oil and Gas Industry.***

Three semester hours.

Introduction to the interdisciplinary approach between two different engineering disciplines: Petroleum Engineering and Systems Engineering.

**Prerequisite:** Senior standing

### **Student Learning Outcomes**

Upon successful completion of this course, the student will be able to:

- Identify the upstream part of the oil and gas industry and recognize its importance from the standpoint of systems engineering.
- Describe interdisciplinary work between petroleum and systems engineering.
- Collaborate in multidisciplinary teams.
- Apply the concepts of interdisciplinary engineering.
- Demonstrate the importance of innovation and creativity in engineering.

**Rationale:** The School of Engineering is developing a new interdisciplinary degree with emphasis in Petroleum Engineering & Systems Engineering. As the school navigates the various internal and external processes associated with the new degree, we are offering “Systems Engineering in Oil/Gas Industry” as a special topics elective course (SENG 4385) class in the Spring, 2016. Systems engineering students can use this class as an elective within their major. However, we want to go ahead and anticipate that we will be successful with approval for the new degree and we want to ensure students who chose the new major and have taken the course will be able to get credit within their new degree program. If students are not going to pursue the new degree, then the course can be used as an elective towards their systems engineering degree. We respectfully request approval of the new offering with a soft catalog change for Spring 2015. If not approved with the SENG 4380 prefix and number for Spring 2015, then we request approval of the course for the 2016-2017 catalog, as an elective within the systems engineering degree.