|  |  |
| --- | --- |
| **School or Division** | School of Pure and Applied Sciences |
| **Program or Certificate or** | Associate in Arts |
| **New degree or certificate program** | N/A |
| **Proposed by (faculty only)** | Dr. Elizabeth Schott |
| **Presenter (faculty only)** | Dr. Elizabeth Schott |
| Note that the presenter (faculty) listed above must be present at the Curriculum Committee meeting or the proposal will be returned to the School or Division and must be submitted for a later date. | |
| **Submission date** | 1/28/2016 |
| **Course prefix, number, and title** | EGN 2312, ENGINEERING MECHANICS - STATICS (WITH VECTORS) |

**Section I, New Course Information (must complete all items)**

|  |  |
| --- | --- |
| **List School or Division** | School of Pure and Applied Sciences |
| **List course prerequisite(s) and minimum grade(s) (must include minimum grade if higher than a “D”)** | MAC2311 and PHY2048 both with a “C” or higher. |
| **Will students be taking any of the prerequisites listed for this course in different parts of the same term (ex. Term A and Term B)** | No |
| **List course corequisites** | N/A |
| **Is any corequisite for this course listed as a corequisite on its paired course?**  (Ex. CHM 2032 is a corequisite for CHM 2032L, and CHM 2032L is a corequisite for CHM 2032) | No  N/A |
| **Course credits or clock hours** | 3 credit hours |
| **Contact hours (faculty load)** | 3 credit hours |
| **Select grade mode** | Standard Grading (A, B, C, D, F) |
| **Credit type** | College Credit |
| **Course description** (provide below) | |
| THIS IS A FOUNDATION COURSE IN ENGINEERING MECHANICS. STUDENTS WILL LEARN THE BASIC PRINCIPLES OF STATICS COVERING RESULTANTS, EQUILIBRIUM, TRUSSES, FRAMES, FRICTION, CENTROIDS AND MOMENTS OF INERTIA WITH VECTOR NOTATION AND CALCULUS. THE CONTENT PREPARES STUDENTS FOR FURTHER STUDY IN ENGINEERING DYNAMICS. | |
| **General topic outline** (type in outline below) | |
| * Statics of Particles * Rigid Bodies: Equivalent Systems of Forces * Equilibrium of Rigid Bodies * Distributed Forces: Centroids and Centers of Gravity * Analysis of Structures * Forces in Beams and Cables * Friction * Distributed Forces: Moments of Inertia * Method of Virtual Work | |

**Learning Outcomes:** For information purposes only. Type in all learning outcomes, assessments, and general education competencies as they should be displayed in the syllabus. More rows can be added if necessary.

|  |  |  |
| --- | --- | --- |
| **Learning Outcomes** | **Assessments** | **General Education Competencies** |
| Solve engineering problems utilizing a methodical problem solving approach. | Homework and/or problem sets and/or quizzes and/or tests and/or labs |  |
| Apply equations of equilibrium to conduct slip or tip analysis and calculate external support reactions, internal pin reactions, and internal member forces for determinate 2D rigid bodies (i.e. trusses, frames, machines, and beams). | Homework and/or problem sets and/or quizzes and/or tests and/or labs | Evaluate and utilize mathematical principles, technology, scientific and quantitative data |
| Develop, explain, and use a material’s stress-strain curve and associated material properties. | Homework and/or problem sets and/or quizzes and/or tests and/or labs | Evaluate and utilize mathematical principles, technology, scientific and quantitative data; |
| Analyze and design axial members, beams, and circular shafts based upon applicable criteria (i.e. normal or shear stress, critical buckling load, and deformation.) | Homework and/or problem sets and/or quizzes and/or tests and/or labs | Evaluate and utilize mathematical principles, technology, scientific and quantitative data |
| Communicate technical information clearly through writing and drawing. | Homework and/or problem sets and/or quizzes and/or tests and/or labs |  |

|  |  |
| --- | --- |
| **ICS code for this course** | POSTSECONDARY VOCATIONAL (PSV) - 1.26.01 - INDUSTRIAL |
| **Should any major restriction(s) be listed on this course? If so, select "yes" and list the appropriate major restriction code(s) or select "no".** | No  N/A |
| **Is the course an “International or Diversity Focus” course?** | No, not International or Diversity Focus |
| **Is the course a General Education course?** | No |
| **Is the course a Writing Intensive course?** | No |
| **Is the course repeatable\*?**  (A repeatable course may be taken more than one time for additional credits. For example, MUT 2641, a 3 credit hour course can be repeated 1 time and a student can earn a maximum of 6 credits).  \*Not the same as Multiple Attempts or Grade Forgiveness | No  N/A |
| **Do you expect to offer this course three times or less (experimental)?** | No |

|  |  |
| --- | --- |
| **Impact of Course Proposal** | |
| **Will this new course proposal impact other courses, programs, departments, or budgets?** | No |
| **If the answer to the question above is “yes”, list the impact on other courses, programs, or budgets?** | N/A |
| **Have you discussed this proposal with anyone (from other departments, programs, or institutions) regarding the impact? Were any agreements made? Provide detail information below.** | |
| N/A | |

**Section II, Justification for proposal**

|  |
| --- |
| **Provide justification (below) for this proposed curriculum action** |
| The addition of this course will broaden the optional STEM courses offered at FSW and provide a wider variety of courses to help prepare students to be successful in follow-on engineering coursework. |

**Section III, Important Dates and Endorsements Required**

|  |
| --- |
| **List all faculty endorsements below. (Note that proposals will be returned to the School or Division if faculty endorsements are not provided).** |
| Sabine Eggleston  iVAN mELENDEZ  Laurice Garrett  Bert Lawrence  Karen Buonocore |

**nOTE:** Changes for the Fall 2016 term must be submitted to the Dropbox by the February 5, 2016 deadline and approved no later than the March 4, 2016 Curriculum Committee meeting. Changes during mid-school year are NOT permitted. Extreme circumstances will require approval from the appropriate Dean or Associate Vice President as well as the Provost and Vice President of Academic Affairs to begin in either the Spring 2016 or Summer 2016 term.

|  |  |
| --- | --- |
| **Term in which approved action will take place** | Fall 2016 |

|  |  |  |
| --- | --- | --- |
| **Required Endorsements** | **Type in Name** | **Select Date** |
| **Department Chair or Program Coordinator/Director** | Sabine Eggleston | 1/28/2016 |
| **Academic Dean** | Martin McClinton | 1/29/2016 |

|  |  |
| --- | --- |
| **Select Curriculum Committee Meeting Date** | March 4, 2016 |

Completed curriculum proposals must be uploaded to Dropbox by the deadline. Please refer to the *Curriculum Committee Calendar* document available in the document manager in the FSW Portal:

* Document Manager
* VP Academic Affairs
* Curriculum Process Documents

**Important Note to Faculty, Department Chairs or Program Coordinators, and Deans or an Associate Vice President:**

Incomplete proposals or proposals requiring corrections will be returned to the School or Division. If a proposal is incomplete or requires multiple corrections, the proposal will need to be completed or corrected and **resubmitted to the Dropbox for the next Curriculum Committee meeting**. All Curriculum proposals require approval of the Provost and Vice President of Academic Affairs. Final approval or denial of a proposal is reflected on the completed and signed Summary Report.