**Purdue Northwest Curriculum Document Coversheet**

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| **Document No:**  (According to [Instruction](http://faculty.pnw.edu/blog/curriculum-document-approval-procedures/)s[[1]](#footnote-1)) | COT 18-39 NEW COURSE MET 21101 | **Approval by Faculty Senate:**  (Leave Blank) | 5-8-19 |
| **Proposed Effective Date** | Fall 2019 | **Date Reviewed by Senate Curriculum**  **Committee:**  (Leave blank) | 4-12-19 |
| **Submitting Department:**  (Name of both Dept & College/School ) | Engineering Technology/College of Technology | **Name(s) of Library Staff Consulted:**  (NA if not required) |  |
| **Date Reviewed by Department** | 3/22/19 |  |  |
| **Submission Date:**  (Date sent to College/School Curr Comm after Dept Review) | 3/22/19 | **Will New Library**  **Resources Used?** | **Yes** **No**  Double-click to check Yes / No. |
| **Date Reviewed by College/School Curriculum Committee** | 3/22/19 | **Form 40 Needed?**  (Double-click one box.)  Registrar will complete Form 40 **after** Senate approval of document. | **Yes** New courses or any course change, check **YES**  **No** For **all other** curriculum matters, check **NO**. |
| **Contact Person(s):**  (Name & Title) | Susan Scachitti Professor of IET |  |  |

Unless marked “Leave blank” all parts of this form must be filled in **before** sending to Secretary of the Faculty Senate.

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| **Task (check all that apply and fill out sections appropriate for each change).**  Program/Concentration Change or New Program/Concentration Proposal: Complete Section I, III, & IV  Minor Change or New Minor Proposal: Complete Section I (delete sections III & IV)  Certificate Change or New Certificate Proposal: Complete Section I (delete sections III & IV)  Course Change or New Course Proposal: Complete Section II (delete sections III & IV) |
| **Program name**. Mechanical Engineering Technology |
| **Degree name(s).** (If applicable.)  B.S. |

## Section I: This section is for changes in programs, minors and certificates

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| **List the major changes in each program of study, minor or certificate.** |
| **Impact on Students.** (State “N/A” if proposal will not greatly affect students.) |
| **Impact on University Resources.** (State “N/A” if proposal will not require new resources, faculty or funds.) |
| **Impact on other Academic Units.** (State “N/A” if proposal will not affect other units.)(Include name of person in affected area discussed with) |

## Section II: This section is for changes in courses only

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| **Subject.** (Brief description of proposed change, addition or deletion.)  New MET 21101 lecture only course is being created. |
| **Justification.** (Briefly list main reasons for proposed change, addition or deletion.)  The current course MET 21100 is not a variable credit course. The MET program at PNW currently offers it as a 4 credit hour course with both lecture and lab components as a 3-2-4 pattern. The course is being split into a separate lab course and lecture course MET 21101 will run as a 3-0-3 lecture only course with the lab being taken as a separate co-requisite. This administrative change to the course structure will not affect the curriculum content. |

Use the **Current** and **Proposed** spaces below for course changes only. Otherwise, mark “N/A”

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| **Current:** (Course changes: include entire present catalog information. Leave blank if new course) | | **Proposed:** (Course changes: include entire new catalog information.)  **MET 21101**  **Title:**Applied Strength Of Materials  **College:** College of Technology T  **Division:**  **Department:** Engineering Technology-PNW 5530  **Hours:** Credit Hours: 3  Lecture:3 Lab:0  **Course Pattern**  3-0-3  **Course Description**  Credit Hours: 3.00. This course covers principles of applied strength of materials primarily with reference to stress-strain relationships, shear and bending moment diagrams, stresses and deflections of beams, axial loads, and other applied problems in the field of structural/mechanical design. This will include the use of computers to perform simulations and solve design problems. Typically offered Fall Spring. Catalog Prerequisites  | **And/Or** |  | **Test** | **Score** | **Subject** | **Course Number** | **Level** | **Grade** |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | ( |  |  | MET-Mechanical Engr Tech | 11800 | Undergraduate | D- |  | | Or |  |  |  | MET-Mechanical Engr Tech | 11100 | Undergraduate | D- | ) | | And |  |  |  | MA-Mathematics | 16019 | Undergraduate | D- |  | |
| **Is this course also:** | **General Education** | **Currently Designated ExL (see** [**instructions[[2]](#footnote-2)**](http://faculty.pnw.edu/blog/curriculum-document-approval-procedures/)**)** |

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| **Course Objectives / Learning Outcomes.** (New courses only. List main outcomes. If lengthy, attach separate page.)   1. Demonstrate an understanding of the basic principles of Strength of Materials and describe its function in the field. 2. Apply previous analytical skills from mathematics and MET prerequisite courses to new areas of application. Therefore, demonstrate proficiency in performing strength of materials calculations, regarding stress-strain relationships, mechanical properties of materials, and section property information, including centroids, center of gravity, moments of inertia of composite areas, radius of gyration and polar moments of inertia. 3. Demonstrate the ability to solve problems related to Strength of Materials in an accurate, organized and neat manner. 4. Understand and be able to solve problems related to "Torsion", "Bending", "Transverse Shear", and "Combined Loading". 5. Show understanding of "Stress and Strain Transformation" and be able to perform basic beam design. 6. Demonstrate proficiency in determination of Combined Stresses, including eccentrically loaded members. |
| **Impact on Students.** (State “N/A” if proposal will not greatly affect students.) By providing a lab course separate from the lecture of MET 21101, students will be provided more flexibility when taking this course. Some transfer students will have the option of taking the lab only which is often a component missing for transfer students. With the current offering, they need to take both lecture and lab even if they have previously taken the lecture. This also allows students to re-take the lecture or lab portion only if needed. |
| **Impact on University Resources.** (State “N/A” if proposal will not require new resources, faculty or funds.) N/A |
| **Impact on other Academic Units.** (State “N/A” if proposal will not affect other units.) (Include name of person in affected area this was discussed with.)  The CEMT program offers an equivalent lecture portion of the current MET 21100 course but CEMT students do not require a lab component. The separation of lecture from lab will allow the MET 21101 lecture course to be cross listed with the equivalent CMET lecture course. |

(Boxes will expand and spill over onto next page to accommodate your typing.)

1. <http://faculty.pnw.edu/blog/curriculum-document-approval-procedures/> [↑](#footnote-ref-1)
2. <http://faculty.pnw.edu/blog/curriculum-document-approval-procedures/> [↑](#footnote-ref-2)