

**ACADEMIC SENATE PROPOSAL TRACKING SHEET**  
**(Document To Be Originated By the Academic Senate Secretary On Canary Color Paper)**

OCT 23 2011

|                         |   |
|-------------------------|---|
| <b>Proposal # 18-11</b> | <b>Title: BS In Engineering Tech : Civil Engineering Technology</b> |
|-------------------------|---|

(Proposal explanation, submitter and college dean signatures on attached program/degree or course revision form.)

**All proposals MUST have their originating college faculty body (Ex. Arts & Sciences, Education and Nursing; Technical Sciences) approval and must be signed by the submitter and the college dean before being submitted to the Academic Senate Secretary.**

1. Submit all proposals (using the appropriate Academic Senate program/degree and/or course revision forms or General Education Inclusion form) to the Academic Senate Secretary. **NOTE: Level 1 or Level 2 forms must be submitted concurrent with this proposal where applicable. For Education proposals, PEU approval must be received prior to forwarding the proposal to the Senate.**
2. The Academic Senate Secretary logs and numbers items and forwards them to the appropriate Academic Senate subcommittee(s): General Education (if applicable), or Curriculum. A transmittal e-mail will be sent to the Recording Secretary of the receiving committee, cc Provost's Administrative Assistant, by the Academic Senate Secretary. A digital copy of the proposal will be linked on the Academic Senate Proposal page by the Academic Senate Secretary.
3. The Academic Senate subcommittee(s) consider(s) the proposal. If approved, the proposal is returned to the Academic Senate Secretary for forwarding to the next committee. If a committee disapproves the proposal, the originator may request that the item be forwarded to the next body for consideration. The committee will provide written rationale to the originator, via the Academic Senate, when a proposal is disapproved and the proposal is returned to the originator. Upon completion of committee action, the proposal will be returned to the Academic Senate Secretary, and a transmittal e-mail sent by the Committee Recorder to the Senate Secretary, cc Provost's Administrative Assistant.
4. The Academic Senate considers the proposal and recommends approval or disapproval. If approved, the proposal is forwarded to the Provost for consideration. If the Academic Senate disapproves the proposal, the originator may request that the item be forwarded to the Full Faculty for consideration, utilizing the procedures set forth in the Senate Bylaws. The Academic Senate will provide written rationale to the originator when proposals are disapproved and the proposal is returned to the originator.
5. Approved proposals will be forwarded to the Provost. The Provost approves or disapproves the proposal. If approved, the proposal is then forwarded to the Chancellor. From this point forward, the Provost's Administrative Assistant will update the Proposal page on the website by contacting the webmaster.
7. The Chancellor approves or disapproves the proposal.
8. The proposal will then either be implemented or referred to MSU for further action. The tracking page on the Provost site will be updated as required.

Subcommittee and Academic Senate college representatives will notify their respective colleges' of the progress of submitted proposals or the proposal may be tracked via the web page -- <http://www.msun.edu/admin/provost/senate/proposals.htm>

Documentation and forms for the curriculum process is also available on the web page:  
<http://www.msun.edu/admin/provost/forms.htm>

\*\*\*\*\***(If a proposal is disapproved at any level, it is returned through the Academic Senate secretary and the Senate President, to the Dean of the submitting college who then notifies the originator.**



|   | Date     | Action Taken   | Signature           | Date     | Comments/Reason for Disapproval | Sent to    | Date     | Transmittal E-mail sent |
|---|----------|--|---------------------|----------|---------------------------------|------------|----------|-------------------------|
| *Abstract received by Senate Secretary      |          | Copy to Senate President. Forward to Provost.  |                     |          |                                 |            |          |                         |
| *Provost                                    |          | <input type="checkbox"/> Abstract Approved<br><input type="checkbox"/> Disapproved   |                     |          |                                 |            |          |                         |
| Received by Senate Secretary                | 10/23/18 | Tracking form initiated  | <i>D Bradley</i>    |          | forward                         | Gr. Surrow | 10/23/18 | Inner office            |
| General Education Committee (if applicable) | 11/14/18 | <input checked="" type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved | <i>Gary D Swear</i> | 11/14/18 | forward                         | Jr. Todd   | 11/19/18 | Inner office            |
| Curriculum Committee (if applicable)        | 11/20/18 | <input checked="" type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved | <i>Jay P</i>        |          | forward                         | M. Seffert | 12/10/18 | Inner office            |
| Academic Senate                             | 12/11/18 | <input checked="" type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved | <i>Seffert</i>      |          | forward                         | Bond       | 12/19/18 | Inner office            |
| Full Faculty (if necessary)                 |          | <input type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved            |                     |          |                                 |            |          |                         |
| Provost                                     |          | <input type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved            |                     |          |                                 |            |          |                         |
| Chancellor                                  |          | <input type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved            |                     |          |                                 |            |          |                         |
| MSU   |          | <input type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved            |                     |          |                                 |            |          |                         |
| BOR   |          | <input type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved            |                     |          |                                 |            |          |                         |
| NWCCU                                       |          | <input type="checkbox"/> Approved<br><input type="checkbox"/> Disapproved            |                     |          |                                 |            |          |                         |
| Provost                                     |          | Advise originating college and Academic Senate of status. Update Web page.           |                     |          |                                 |            |          |                         |
| Registrar                                   |          | Catalog/Policy Manual Update   |                     |          |                                 |            |          |                         |

**NOTE:** The secretary of the Academic Senate will update the Academic Senate Proposal web page from initial receipt until the proposal reaches the Provost. The Provost's Administrative Assistant will ensure that the current status of each proposal is maintained on the Academic Senate Proposal web page from that point forward.

\*Abstract and pre-approval required for new programs ONLY.

Academic Senate Form 1 (Revised 3/21/2012)

## PROGRAM/DEGREE REVISION FORM

NEW \_\_\_\_\_ DROPPED \_\_\_\_\_ MAJOR REVISION X FOR INFORMATION ONLY \_\_\_\_\_

College COTS Program Area Civil Engineering Technology Date 9/26/18

Submitter Jeremy Siemens Dean Dail E. Knepp Date 10-5-18

Signature

Signature (indicates "college" level approval)

Please provide a brief explanation & rationale for the proposed revision(s).

(1) Require students to take STAT 216: Introduction to Statistics (CAT II) in place of Credits once provided by EET 110: Electronics Survey, which is no longer offered on a regular basis at MSUN. The Study of statistics and probability is an essential research tool and is extensively utilized in industrial civil engineering practice. The FE licensure examination in Civil Engineering covers a significant portion of the general mathematics education with topics related to statistics and probability. In addition the Fundamentals of Engineering exam no longer tests civil engineering students on electricity.

(2) Require students to take CAPP 266: Advanced MS Excel Applications (CAT VII) in place of CAPP 158: MS Access (CAT VII). Engineering professionals and technicians use Excel to evaluate and present data in a variety of applications. The robustness of Excel allows civil engineers to process tremendous amount of data from field samplings and experiments, to analyze data using appropriate statistical techniques, and to organize data into meaningful technical presentations. Additionally, advanced MS Excel is indispensable in research as it covers a wide array of tools, including but not limited to, solver, complex modeling, scripting, and programming.

(3) The number of Math/Science electives is being reduced from 4 to 3 due to the increase in credits (1) for the M121 Algebra required by the Montana Board of Regents. Because of this increase in credits, STAT 216 is used to fulfill the MSU-Northern General Education Requirement and M 121 is used as a program requirement.

Please provide in the space below a "before and after" picture of the program with the changes in the program noted. Attach appropriate Course Revision Forms. Please indicate changes by shading the appropriate cells.

PROPOSAL TITLE Bachelor of Science in Engineering Tech: Civil Engineering Technology

## Current Program listed in 2017-2018 Catalog

| Course Prefix | #   | Course Title  | Credits    |
|---------------|-----|---|------------|
| WRIT          | 101 | College Writing I (CAT I)   | 3          |
| COMX          | 111 | Fundamentals of Speech (CAT I)  | 3          |
| M             | 121 | College Algebra (CAT II)  | 3          |
| PHSX          | 205 | College Physics I (CAT III)   | 3          |
| PHSX          | 206 | College Physics I Laboratory (CAT III)                                  | 1          |
| CHMY          | 121 | Introduction to General Chemistry (CAT III)                             | 3          |
| CHMY          | 122 | Introduction to General Chemistry Lab (CAT III)                         | 1          |
|               |     | Category IV (CAT IV) –Social Sciences/History                           | 6          |
|               |     | Category V (CAT V) –Cultural Diversity                                  | 3          |
|               |     | Category VI (CAT VI) -Humanities/Fine Arts                              | 6          |
| IT            | 100 | Introduction to Technology (CAT VII)                                    | 3          |
|               |     | <b>Total General Education Credits</b>                                  | <b>35</b>  |
| CAPP          | 120 | Introduction to Computers   | 3          |
| CAPP          | 158 | MS Access   | 3          |
| ETCC          | 173 | Architectural Construction and Materials                                | 3          |
| SRVY          | 230 | Introduction to Surveying for Engineers                                 | 3          |
|               |     | Construction Management and Bid Estimation                              | 3          |
| ECIV          | 230 | Applied Mechanics   | 3          |
| EGEN          | 203 | Applied Strength of Materials   | 3          |
| EGEN          | 208 | Applied Strength of Materials   | 3          |
| EGEN          | 325 | Engineering Economic Analysis   | 3          |
| ETCC          | 307 | Structural Analysis   | 3          |
| ETCC          | 302 | Soil and Foundations  | 4          |
| ETCC          | 361 | Design and Details of Steel Buildings                                   | 4          |
| ETCC          | 375 | Applied Mechanics of Fluids   | 3          |
| ETCC          | 385 | Highway Design and Construction   | 4          |
| ETCC          | 411 | Reinforced Concrete Design/Details                                      | 4          |
| CIS           | 410 | Enterprise Resource Planning  | 3          |
| DDSN          | 119 | Technical Graphics I  | 3          |
| DDSN          | 114 | Introduction to CAD   | 3          |
|               |     | Topographic Mapping and GIS Applications                                | 3          |
| EET           | 110 | Electronics Survey I  | 3          |
| ETCC          | 489 | Senior Project I  | 1          |
| ETCC          | 499 | Capstone: Senior Project II   | 2          |
| IT            | 111 | Industrial Safety/Waste Management                                      | 2          |
| M             | 112 | Trigonometry and Complex Numbers  | 2          |
| M             | 162 | Applied Calculus  | 3          |
| M             | 171 | Calculus I  | 5          |
| MCH           | 457 | Quality Assurance   | 3          |
| WRIT          | 350 | Technical Editing   | 3          |
|               |     | Advisor Approved Electives: Science - 3 credits (ABET Requirement)      | 3          |
|               |     | Advisor Approved Electives: Math/Science - 4 credits (ABET Requirement) | 4          |
|               |     | <b>Total</b>  | <b>124</b> |

## Proposed Program for 2019-2020 Catalog

| Course Prefix | #   | Course Title   | Gen-Ed Credits | Degree Credits |
|---------------|-----|--|----------------|----------------|
| WRIT          | 101 | College Writing I (CAT I)                            | 3              |                |
| COMX          | 111 | Fundamentals of Speech (CAT I)                       | 3              |                |
| STAT          | 216 | Introduction to Statistics (CAT II)                  | 3              |                |
| PHSX          | 205 | College Physics I (CAT III)                          | 3              |                |
| PHSX          | 206 | College Physics I Laboratory (CAT III)               | 1              |                |
| CHMY          | 121 | Introduction to General Chemistry (CAT III)          | 3              |                |
| CHMY          | 122 | Introduction to General Chemistry Lab (CAT III)      | 1              |                |
|               |     | Category IV (CAT IV) –Social Sciences/History        | 6              |                |
|               |     | Category V (CAT V) –Cultural Diversity               | 3              |                |
|               |     | Category VI (CAT VI) -Humanities/Fine Arts           | 6              |                |
| IT            | 100 | Introduction to Technology (CAT VII)                 | 3              |                |
|               |     | <b>Total General Education Credits</b>               | <b>35</b>      |                |
| CAPP          | 120 | Introduction to Computers                            |                | 3              |
| CAPP          | 266 | Advanced MS Excel Applications                       |                | 3              |
| ETCC          | 173 | Architectural Construction and Materials             |                | 3              |
| SRVY          | 230 | Introduction to Surveying for Engineers              |                | 3              |
|               |     | Construction Management and Bid Estimation           |                | 3              |
| ECIV          | 230 | Applied Mechanics                                    |                | 3              |
| EGEN          | 203 | Applied Strength of Materials                        |                | 3              |
| EGEN          | 208 | Applied Strength of Materials                        |                | 3              |
| EGEN          | 325 | Engineering Economic Analysis                        |                | 3              |
| ETCC          | 307 | Structural Analysis                                  |                | 3              |
| ETCC          | 302 | Soil and Foundations                                 |                | 4              |
| ETCC          | 361 | Design and Details of Steel Buildings                |                | 4              |
| ETCC          | 375 | Applied Mechanics of Fluids                          |                | 3              |
| ETCC          | 385 | Highway Design and Construction                      |                | 4              |
| ETCC          | 411 | Reinforced Concrete Design/Details                   |                | 4              |
| CIS           | 410 | Enterprise Resource Planning                         |                | 3              |
| DDSN          | 119 | Technical Graphics I                                 |                | 3              |
| DDSN          | 114 | Introduction to CAD                                  |                | 3              |
|               |     | Topographic Mapping and GIS Applications             |                | 3              |
| M             | 121 | College Algebra <del>(CAT II)</del>                  |                | 4              |
| ETCC          | 489 | Senior Project I                                     |                | 1              |
| ETCC          | 499 | Capstone: Senior Project II                          |                | 2              |
| IT            | 111 | Industrial Safety/Waste Management                   |                | 2              |
| M             | 112 | Trigonometry and Complex Numbers                     |                | 2              |
| M             | 162 | Applied Calculus                                     |                | 3              |
| M             | 171 | Calculus I   |                | 5              |
| MCH           | 457 | Quality Assurance                                    |                | 3              |
| WRIT          | 350 | Technical Editing                                    |                | 3              |
|               |     | Advisor Approved Electives: Science - 3 credits      |                | 3              |
|               |     | Advisor Approved Electives: Math/Science - 3 credits |                | 3              |
|               |     | <b>Total (124)</b>                                   | <b>35</b>      | <b>89</b>      |

**Additional instructional resources needed (including library materials, special equipment, and facilities). Please note: approval does not indicate support for new faculty or additional resources.**

None.