Articulation Agreement
University of North Dakota and Siena Heights University
Adrian, MI

Degree: Bachelor of Science in Mechanical Engineering
Major: MECHANICAL ENGINEERING

The following information was updated according to the 2017-2018 UND CATALOG - Students satisfactorily completing the courses below may transfer them to UND in fulfillment of the corresponding course requirements for this degree. Essential Studies equivalents, courses, and major requirements may change. An official evaluation of transfer credit will be done upon admission to the university. Transfer credits will be evaluated and applied according to the current catalog and the approved Essential Studies list at the first semester of enrollment at UND.

Students planning to transfer to UND are encouraged to have phone or email contact with a UND adviser. Students may call the Advising Office at 1-800-CALL-UND ext. 3411 or 777-3411.

Both MAT 181 and MAT 182 must be successfully completed to receive credit for UND's MATH 165 and MATH 166.
LAS 141 from SHU will fulfill UND's Social Science and United States Diversity requirements.
LAS 241 from SHU will fulfill UND's Humanities requirement.

<table>
<thead>
<tr>
<th>SHU Course/Credits/Title</th>
<th>UND Course/Credits/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Communication - COM</td>
<td></td>
</tr>
<tr>
<td>ENG 101 3 Reading and Writing I</td>
<td>ENGL 110 3 College Composition I</td>
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<tr>
<td>ENG 102 3 Reading and Writing II</td>
<td>ENGL 130 3 College Comp II: Writing for Public Au</td>
</tr>
<tr>
<td>TSC 101 3 Fundamentals of Speech Communication</td>
<td>COMM 110 3 Waiting on equivalency approval</td>
</tr>
<tr>
<td>II. Social Science - SS</td>
<td></td>
</tr>
<tr>
<td>Selective Credit 3</td>
<td>Selective Credit 3</td>
</tr>
<tr>
<td>No Equivalent</td>
<td>ETHICS 3 Ethics</td>
</tr>
<tr>
<td>No Equivalent</td>
<td>ENGR 460 3 Engineering Economics</td>
</tr>
<tr>
<td>III. Arts and Humanities - FA/HUM</td>
<td></td>
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<tr>
<td>Selective Credit 9*</td>
<td>Selective Credit 9*</td>
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<tr>
<td>Must be taken at UND</td>
<td>Must be taken at UND</td>
</tr>
<tr>
<td>*must include 3 credits designated as Fine Arts and 3 credits designated as Humanities</td>
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<tr>
<td>IV. Mathematics, Science &amp; Technology - MST</td>
<td></td>
</tr>
<tr>
<td>CHE 141 4 General Chemistry I</td>
<td>CHEM 121/L 3/1 Fundamentals of Chemistry I</td>
</tr>
<tr>
<td>CHE 142 4 General Chemistry II</td>
<td>CHEM 122/L 3/1 Fundamentals of Chemistry II</td>
</tr>
<tr>
<td>MAT 181 &amp; MAT 182 4 &amp; 4 Calculus with Analytic Geometry I &amp; II</td>
<td>MATH 165 4 Calculus I</td>
</tr>
<tr>
<td>MATH 181 &amp; MAT 1824 &amp; 4 Calculus with Analytic Geometry I &amp; II</td>
<td>MATH 166 4 Calculus II</td>
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<tr>
<td>Other Program Requirements</td>
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</tr>
<tr>
<td>MAT 282 4 Differential Equations</td>
<td>MATH 266 3 Intro to Differential Equations</td>
</tr>
<tr>
<td>MAT 292 4 Multivariable Calculus</td>
<td>MATH 265 4 Calculus III</td>
</tr>
<tr>
<td>Must be taken at UND</td>
<td>PHYS 253/L 4 University Physics III</td>
</tr>
<tr>
<td>Must be taken at UND</td>
<td>MATH 321 3 App. Stat. Methods</td>
</tr>
<tr>
<td>PHY 261 4 Physics I</td>
<td>PHYS 251 4 University Physics I</td>
</tr>
<tr>
<td>PHY 262 4 Physics I</td>
<td>PHYS 252/L 4 University Physics II</td>
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</tbody>
</table>
### Engineering Science

- **No Equivalent**  
  - Must be taken at UND  
  - ENGR 201 3  
  - Statics

- **No Equivalent**  
  - Must be taken at UND  
  - ENGR 200 2  
  - Comp Apps. In Engr

- **No Equivalent**  
  - Must be taken at UND  
  - ENGR 202 3  
  - Dynamics

- **No Equivalent**  
  - Must be taken at UND  
  - ENGR 203 3  
  - Mechanics of Materials

### Other

- **No Equivalent**  
  - Must be taken at UND  
  - EE 206 3  
  - Circuit Analysis/Lab

- **No Equivalent**  
  - Must be taken at UND  
  - Ethics 3  
  - Ethics in Engineering

### Mechanical Engineering

- **No Equivalent**  
  - Must be taken at UND  
  - ME 101 3  
  - Intro to Mechanical Engineering

- **No Equivalent**  
  - Must be taken at UND  
  - ME 341 3  
  - Thermodynamics

- **No Equivalent**  
  - Must be taken at UND  
  - EE 206 3  
  - Circuits

- **No Equivalent**  
  - Must be taken at UND  
  - ME 306 3  
  - Fluid Mechanics

- **No Equivalent**  
  - Must be taken at UND  
  - ME 301 3  
  - Materials Science

- **No Equivalent**  
  - Must be taken at UND  
  - ME 474 3  
  - Fund of Heat and Mass Transfer

- **No Equivalent**  
  - Must be taken at UND  
  - ME 322 3  
  - Design of Machinery

- **No Equivalent**  
  - Must be taken at UND  
  - ME 201 2  
  - Student Design

- **No Equivalent**  
  - Must be taken at UND  
  - ME 418L 1  
  - Manufacturing Processes Lab

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A complete list of approved Essential Studies courses can be found online at [http://und.edu/academics/essential-studies/approved-courses.cfm](http://und.edu/academics/essential-studies/approved-courses.cfm)

When choosing your Essential Studies (General Education) Courses in Communication, Fine Arts and Humanities, Social Science, and Math, Science and Technology, you will need to consider how you will meet the special emphasis requirements. Courses listed above that meet a special emphasis requirement are marked as follows: Oral Communication requirement (O), Social-Cultural Diversity requirement: United States (U), Social-Cultural Diversity requirement: Global (G), Quantitative Reasoning requirement (Q), and Advanced Communication requirement (A). To learn more please go to [http://und.edu/academics/essential-studies](http://und.edu/academics/essential-studies) or check with your adviser.

All students—including transfers—are required to take an Essential Studies upper division Capstone (C) course at UND. Approved Capstone courses are taken in the senior year of a student’s undergraduate program.

Additional classes will be required to earn the above degree; a minimum of 125 credits is required to graduate from UND. A complete listing of program requirements can be found in the [Academic Catalog](http://und.edu/academics/essential-studies) and [Four Year Plans](http://und.edu/academics/essential-studies).

Transfer credit for courses other than those listed above will be evaluated on a course-by-course basis.