Nashville State Community College
(STEM)
(Architectural, Civil and Construction Engineering Technology)

2018 Master Course Syllabus

(ENGR 2110 STATICS)

(This master course syllabus template is a general guide for providing an overview of each course offered at Nashville State. Each instructor will further clarify specific criteria for grading, classroom procedures, attendance, exams and dates, etc. on his/her individual course syllabus. Prompts for individual adaptations are italicized and in parentheses; faculty should remove or replace these prompts when creating master syllabi and their own individual syllabi if they have not been removed previously.)

Course Information:

Course Title: STATICS
Credits: 3 Credits
Class Hours: 3 Class Hours

Course Description:

An introductory course on structural mechanics. Topics include components and resultants of forces; equilibrium equations; reactions for beams, frames, and trusses; centroids; moments of inertia; shear and moment diagrams; and analysis of trusses. Students analyze structures with both calculators and computers.

Prerequisite(s): MATH 1920

Name:
Email:
Office Phone:
Office Location:
Office Hours:

Required Textbook(s) & Other Materials:

ISBN: 978-0-13-291554-0

Once enrolled, all students should verify that they have the correct textbook and materials information by consulting the D2L/NS Online shell for the course. If you are registered with the Access Center and require an alternate format for the textbook and other course materials, please contact the Access Center at 615-353-3721, 615-353-3741, or accesscenter@nscc.edu.
Course Outcomes:
Upon successful completion of this course, students should be able to:

1. Understand and apply vector analysis to engineering problems in three dimensions.
2. Describe an engineering problem using a free-body diagram with applied loads and resultant reactions.
3. Determine conditions for equilibrium for an object.
4. Analyze a truss using Method of Joints and Method of Sections.
5. Determine shear forces and bending moments along a beam. Calculate the centroid and moment of inertia of an object about various axes.
6. Determine the frictional forces acting on objects.

Topics to Be Covered:
COURSE OUTLINE:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Structural Engineering, Units Types of Loads, Calculation of Dead / Live Loads</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Force Systems, Resultants/Components, Equilibrium 3-D Forces, Position Vector, Dot Product</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Moments &amp; Couples, Ideal Support Conditions Free Body Diagrams, Reactions</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Two Force Members, Cross Product, Simple Machines (Lever) TEST 1 (Resultants, Components) Simple Machines (Wheel &amp; Axle, Inclined Plane)</td>
<td>4,5</td>
</tr>
<tr>
<td>5</td>
<td>Trusses – Method of Joints, Trusses - Method of Section</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Shear and Moment Diagrams</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Shear and Moment Diagrams, Cables</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>TEST 2 (Reactions, Trusses, Shear &amp; Moment)</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>Centroid</td>
<td>9</td>
</tr>
</tbody>
</table>
Course Assessments:
The following performance assessments will be used to demonstrate students’ understanding, knowledge, and skills: *(include type and point/percentage breakdown here)*

Grading Policy:
Tests 4 40%
Homework 40%
Presentation 10%
Attendance and Participation (see below) 10%
Total 100%

Late Work Policy & Make-up Procedures for Missed Assignments and Work:
*(Each instructor will provide policy)*

Attendance Policy
Students are expected to attend all scheduled classes and laboratories. Absences in a course may affect a student’s final grade. The student is responsible for all assigned work in the course regardless of excused or unexcused absences. Tardiness may also affect a student’s final grade.

In online courses, attendance is signaled by logging on to the D2L/NS Online shell, participating as prompted (e.g., responding to an instructor’s email, posting to a discussion board) and/or completing and submitting assignments. Campus closures do not affect attendance and assignment completion in online courses.

*(Each instructor will provide policy, especially how attendance influences student assessment and grading.)*

Grading Scale:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B</td>
<td>80-90</td>
</tr>
<tr>
<td>C</td>
<td>70-80</td>
</tr>
<tr>
<td>D</td>
<td>60-70</td>
</tr>
</tbody>
</table>
According to NSCC policy, if a student fails a course, but has not officially withdrawn from the course, and her/his last date of attendance is before the last date to withdraw (use date appropriate to your section), the student will receive a grade of FA (i.e., “Failure for Attendance Reasons”).

(While the above statement should appear in all syllabi, faculty are encouraged to make additional statements or provide examples that would clarify the policy for students.)

An FN is awarded to students who never attended class.

Technology Statement
Nashville State’s classes are considered to be web-enhanced. Faculty have an expectation that students will use a computer and the Internet to complete assignments, engage in online discussions, and access various course materials through D2L/NS Online course shells. Computers are available for student use at each campus during campus open hours.

D2L/NS Online and myNSCC
It is students’ responsibility to check D2L/NS Online course shells for all enrolled courses and myNSCC, including student email, on a regular basis. These are the official communication channels between the college and students, who are responsible for the information communicated through those channels. D2L/NS Online contains specific course information and myNSCC contains information important for other purposes.

ADA Compliance Statement
Nashville State complies with the Americans with Disabilities Act (ADA). If you require accommodations for any courses in which you are enrolled, contact the Access Center at 615.353.3741 or 615.353.3721, or e-mail accesscenter@nscc.edu. If you are registered with the Access Center and require an alternate format for the textbook and other course materials, please contact the Access Center.

Classroom Misconduct
Nashville State Community College has a zero-tolerance policy for disruptive conduct in the classroom. Students whose behavior disrupts the classroom will be subject to disciplinary measures. Please review the Nashville State Student Code of Conduct policy. Please be aware that children are not allowed in class or to be left unattended on campus.

Academic Misconduct
Any form of academic dishonesty, cheating, plagiarizing, or other academic misconduct is prohibited. Students are responsible for understanding and abiding by the Academic Misconduct Policy in the Nashville State Student Code of Conduct. In addition to other possible disciplinary measures that may be applied through regular college procedures as a result of academic dishonesty, the instructor has the authority to assign an “F” or a “zero” for the exercise, paper, or examination, or to assign an “F” for the course. Students may appeal through the appropriate college grade appeal procedures.
(Each instructor will outline his/her expectations for academic integrity and provide individualized information about consequences for academic misconduct.)

Academic Early Alert System
Nashville State Community College uses an Early Alert System to let students know of a faculty member’s concern in one or more of these academic areas: lack of attendance, lack of classroom participation, late or missing assignments, and/or poor performance on assignments/tests. *Please note that Early Alerts do not affect a student’s academic standing. If you receive an Early Alert email, please see your instructor and your academic advisor as soon as possible.

RAVE Emergency Alert System
Emergency events can happen at any time and Nashville State Community College wants to be able notify students if and when they occur. For this reason, all students have been enrolled in the free RAVE alert system. If you have not already done so, please log in at https://www.getrave.com/login/nscc to confirm and update your contact information and notification preferences. It is critical that your information be correct so that you will receive any emergency notifications. Your RAVE Username is your NSCC email address. If you’ve never received an email from RAVE with your password, or if you need to reset your password, select “Forgot your password?” and a new password will be emailed to you. Should the RAVE system indicate “user not found”, select Register and create your own RAVE account.

Inclement Weather & Campus Closings
Nashville State will use the RAVE alert system to send a text message to students, staff, and faculty about adjusted hours of operation and/or closings at individual campuses. All students should check the Nashville State web site home page at www.nscc.edu for announcements on campus closures, which may vary from campus to campus. Campus closures will also be announced on local television stations. Students should use their own best judgment in determining whether to report to campus during inclement weather when classes are not cancelled.

Even when campuses are closed, students are still responsible for completing all assigned work. When classes are cancelled, faculty will post online assignments and any additional instructions in the D2L/NS Online course shell. Check D2L/NS Online for a message from your instructor regarding your online assignment requirements. Faculty have discretion over adjusting deadlines or due date for assignments, but students are responsible for completing all assigned work by the due date established by the instructor.

Class Cancellation Policy
If the class is cancelled, the instructor will notify all students by posting in the D2L/NS Online course, e-mailing through D2L/NS Online, and/or by posting a sign on the classroom door. In the event of class cancellation, students must access D2L/NS Online to complete classwork and the assignment that will be posted in the course D2L site.