NASHVILLE STATE COMMUNITY COLLEGE
Business, Applied Arts & Technologies Division
Civil/Construction Engineering Technology Program

Course Syllabus

CIT 2110 STRUCTURAL MECHANICS
3 Credits
3 Class Hours

The class is an introductory course on structural analysis. Emphasis is on forces and loads acting on structures and how they are resisted by the structural system. Student will gain knowledge about topics including reactions for beams, frames and trusses; centroids, moments of inertia; shear and moment diagrams; and analysis of trusses are topics presented.

Prerequisite: MATH 1710

 Calculator: A TI 83+ calculator is recommended.

COURSE LEARNING OUTCOMES:

Upon successful completion of this course, the student shall be able to:

1. Calculate dead loads of building elements.
2. Calculate components and resultants of forces.
3. Calculate the moment about any point due to forces.
4. Draw a freebody diagram of a structure or structural element.
5. Calculate reactions on simple structures.
6. Analyze two force members.
7. Locate the centroid in a structural shape.
8. Calculate the moment of inertia, section modulus and radius of gyration about an axis.
9. Draw shear and moment diagrams and calculate the significant values.
10. Calculate the internal forces at a section in a structural member.
11. Calculate flexural and shearing stresses in loaded members.
12. Calculate elementary beam deflections.
13. Analyze a simple floor framing system.
14. Use the method of joints and sections in analyzing trusses.
15. Develop a written report and give an oral presentation on a topic related to the history of structural engineers.


Optional but recommended for those having problems with this course – Schaum’s Outline Statics and Strength of Materials – McGraw Hill - $20 at bookstores

Homework and Tests

Problem sets will be handed out on Wednesdays and will be due the following Wednesday at the start of class. Homework will be done on engineering computation paper available in the bookstore or office supply stores. Neatness counts and will be graded for bonus points of deductive points. Diagrams should be done with a straight edge. Homework not turned in on time is subject to a 25% grade reduction. Homework will not be accepted if more than 1 week late. Missing a class is does not extend due dates for
homework. If for any reason you must miss a class call me and leave a message prior to the class and make arrangements to submit homework timely. If you cannot take a test when scheduled you must notify the teacher and make arrangements to take the test prior to the scheduled date.

**Honesty on problem set assignments**

You are welcome to work with fellow students on homework problems. A good way to learn the material is in small groups. Such groups work best if members have attempted the problems individually before meeting as a group. Of course the assignment solution that you turn in should reflect your own understanding, and not that of your fellow students. In other words, do not copy directly from other students. Copying will not be allowed.

**Performance Assessment**

The Course learning outcomes on page 1 will be measured by objective examinations of the theory and principles. The standards expected and the level of quality of meeting those standards is stated with the assignment.

**Grading Policy**

- 3-4 Tests 50%
- Homework 30%

**Grading Scale**

The point total will be converted to percentages applied to the grading scale

A 100-90; B 89-81; C 79-70; D 69-60; F 59 – below

**Lab time**

Additional open lab time will be available as scheduled. Students may also use the lab during other scheduled class times if space is available and with the permission of the instructor present.

**Attendance Policy**

Students are expected to attend all scheduled classes and laboratories. Every student will be permitted two excused absences for the semester. Unexcused absences beyond that will result in the deduction of two (2) percentage points for each class/lab session absence from the student’s final grade. If a student is absent from a class, he/she should give advanced notice via email to the instructor. The student is responsible for all assigned work/tests and/or quizzes in the course for an excused absence. Assigned Work/tests and/or quizzes cannot be made up for an unexcused absence. Tardiness may also affect a student’s final grade. Two (2) times tardy will be counted as one absence. Students missing more than two weeks’ worth of classes will be dropped from the class – NO EXCEPTIONS

Failure to attend class will result in a final course grade of “FA” or “FN” (see explanation below) depending on the individual instructor’s course policy.

FA= failure, attendance-related (unofficial withdrawal) Last recorded date of attendance required.
FN= failure, never attended class (unofficial withdrawal)
Student Communication Channels
It is the student’s responsibility to check NS online (D2L course shell) and MyNSCC email on a regular basis. These are the official communication channels between the college and students. Students are responsible for the information communicated through those channels. D2L contains specific course information and MyNSCC contains information important for other purposes.

Early Warning System
Nashville State Community College has implemented an Early Warning System to notify students via e-mail about academic problems such as poor classroom attendance, poor performance on assignments/tests, poor communication skills, late/missing assignments, and/or lack of classroom participation. Please note that Early Warning Alerts do not affect a student’s academic standing.

ADA Compliance Statement
Nashville State complies with the Americans with Disabilities Act. If you wish to request any special accommodations for any courses in which you are enrolled, contact the Student Disabilities Office at 353.3721.

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 sanctions. Please consult your Student Handbook for more specific details.

The instructor has primary responsibility for control over classroom behavior and maintenance of academic integrity. He/she can order temporary removal or exclusion from the classroom of any student engaged in disruptive conduct or in conduct which violates the general rules and regulations of the College.

Disruptive behavior in the classroom may be defined as, but is not limited to, behavior that obstructs or disrupts the learning environment (e.g., offensive language, harassment of students and professors, repeated outbursts from a student which disrupt the flow of instruction or prevent concentration on the subject taught, failure to cooperate in maintaining classroom decorum, etc.), the continued use of any electronic or other noise or light emitting device which disturbs others (e.g., disturbing noises from beepers, cell phones, palm pilots, lap-top computers, games, etc.). Please be aware that children are not allowed in class or unattended on campus.

Academic Dishonesty (Honor Code)
Any form of academic dishonesty, cheating, plagiarizing, or other academic misconduct is prohibited. “Plagiarism may result from: (1) failing to cite quotations and borrowed ideas, (2) failing to enclose borrowed language in quotation marks, and (3) failing to put summaries and paraphrases in your own words (A Writer’s Reference 331). Academic dishonesty may be defined as, but is not limited to, intentionally trying to deceive by claiming credit for the work of another person, using information from a web page or source without citing the reference, fraudulently using someone else’s work on an exam, paper, or assignment, recycling your own work from another course, purchasing papers or materials from another source and presenting them as your own, attempting to obtain exams/materials/assignments in advance of the date of administration by the instructor, impersonating someone else in a testing situation, providing confidential test information to someone else, submitting the same assignment in two different
classes without requesting both instructor’s permission, allowing someone else to copy or use your work, using someone else’s work to complete your own, altering documents, transcripts or grades, and forging a faculty/staff member’s signature.
In addition to other possible disciplinary sanctions that may be imposed 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.

Inclement Weather Policy
In the event of an inclement weather event, check the Nashville State web site home page at www.nscc.edu for announcements on campus closures. Campus closures will also be announced on local television stations (channels 2, 4, 5, and 17). When classes are cancelled, an online assignment will be posted in NS Online. Check your NS Online email for a message from your instructor regarding your online assignment requirements. Even though classes may be cancelled, some areas, i.e. Testing Center, may be open. However, you should check before commuting to campus.
The Vice President for Academic Affairs and the Director of Security are responsible for cancellation decisions during an inclement weather event for the Nashville State main campus and the Southeast campus. Cookeville, Waverly, and Dickson Campus Directors will make class cancellation decisions based on conditions in their respective areas. Decisions about class cancellations are based on actual conditions, not forecasts. The perspective used for making decisions is that of the college as an employer, not as a K-12 institution. Students should use their own best judgment in determining whether to report to campus during inclement weather when classes are not cancelled.