

# Course Syllabus

Fall 2018

**AT 401 – CADD Structural Drafting**

**CRN # 10170**

**2211 Science & Technology Center**

**3 credit hours**

**Tuesday & Thursday 9:25 – 10:40 a.m.**

**Instructor:** Dan Trent  
1153 Science & Technology Center

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## Catalog Description:

**AT 401 – CAD Structural Drafting** – This course stresses further development of details, plan elevations, and sections for heavy construction commercial buildings. It also makes information immediately available on standards and practices, materials and assemblies, details and specifications.

**Prerequisite:** AT 303 – Introduction to CADD  
Lecture 3 hours, Total 3 hours per week.

**Purpose of this Course:** This course leaves the familiar architecture format and delves into structural study. Strength of materials, static and dynamic load calculations, stress, strain, tension and compression will be examined. Hands on stress models will be built and tested to explore differences in construction methods and materials. Virtual models will be constructed and tested to determine yield strength and to identify weak spots.

**Textbook:** No textbook is required. Handouts will be provided

**Student Learning Outcomes:** As a result of this course students will:

- Become familiar with terms and nomenclature used in structural engineering
- Define common terms related to structural integrity and construction
- Analyze stresses in building components using engineering software
- Create assembly drawings of structures (buildings, bridges, buildings, etc.) identifying weaknesses in the design
- Build scale test models
- Calculate static and dynamic loads
- Determine the proper size of a given structural member based on span and load
- Conduct frequency, buckling, and thermal analyses
- Make professional presentations

## Course Requirements for AT 401:

A variety of instructional strategies are used in this course including lecture, collaboration, discovery learning, instructional technology, and individual instruction. Students are encouraged to use critical thinking, problem solving, and reflection to develop an understanding of the material covered. Course requirements include:

- Complete all required assignments/presentations by the due date.
- Present information to peers by teaching a lesson concerning structural engineering/drafting

- Complete a writing assignment
- Build and test a physical scale model.
- Successfully complete the mid-term examination.
- Successfully complete the final examination.

**Office Hours and Responses to Email and Telephone Inquiries:** Office hours are posted on the instructor’s office door. Other hours may be arranged with the instructor by sending an email message to Dan.Trent@mvsu.edu or calling (662) 254-3414.

**Grade Standards and Weights for AT 401:** All assignments and quizzes must be submitted for grading by the due date. The course is divided into 8 **ENGINEERING ACTIVITY PACKETS** (EAP’s) worth 100 points each. Each EAP details a breakdown of activities and assignments with the point value included for each item. Elements may include attendance, quizzes, writing assignments, outside readings, drawings, etc.

**Writing Assignment.** In an effort to support the University in addressing a national trend toward poor student performance in writing, a writing assignment has been added to all courses in the Department of Applied Technology. This writing assignment will be included in one of your Engineering Activity Packets.

**Mid-Term Examination.** A comprehensive mid-term examination will be given half way through the semester. It will consist of questions concerning material covered in class lectures as well as a drawing exercise that will test your knowledge and skill in architectural nomenclature, print reading/interpretation.

**Final Examination.** A comprehensive final examination will be presented at the end of the course that will consist of questions concerning material covered in class lectures as well as a drawing exercise that will test your knowledge and skill in architectural nomenclature, print reading and interpretation.

Assessment item	Points
Engineering Activity Packets 8 @ worth 100 points	800
Mid-term examination	100
Final examination	100
Total points possible	1000

Letter Grade	Points	Numeric Grade
A	910-1000	91 – 100
B	810-909	81 – 90
C	710-809	71 – 80
D	610-709	61 – 70
F	Below 609	Below 61

**Use of Technology:** THIS IS A WEB ENHANCED COURSE. The course web site ([www.mvsuat.wordpress.com](http://www.mvsuat.wordpress.com)) will be the primary means of communication outside of class. The website contains a wealth of information including contact information for the professor, PowerPoint presentations used in class, handouts, assignments, due dates and more. Visit the website BEFORE CLASS to see what will be covered. Visit the website AFTER CLASS to see what was covered in the previous class.

This is a valuable resource. USE IT! [www.mvsuat.wordpress.com](http://www.mvsuat.wordpress.com)

## Class Policies

The following class policies are in effect throughout this course to ensure that a positive and equitable learning environment exists for all class members. Failure to follow these class policies may result in sanctions per the student handbook. Policies for class include:

**Attendance:** **Students are expected to attend class.** Attendance will be taken every day. Good work habits (including attendance and punctuality) reflect positively on you as a potential employee. To assist in motivating you to develop a strong work ethic, **your grade WILL be affected by your attendance.** Any absentees will have a negative effect upon your final course grade. Attendance and class preparation are included in all EAP's. In the event of your absence for any reason you are still responsible for all readings, information presented in lectures, and any modifications to and assignments presented in class. A written excuse from your ROTC Commander or other University Office **does not relive you of your course responsibilities.** If a student misses a class, he or she is responsible for the material missed – even if a valid excuse is presented. ALL work must be submitted for evaluation BY THE DUE DATE regardless of attendance. Note for athletes (and others) – You know about certain absences (scheduled trips to “away” games, etc.). You should WORK AHEAD. In other words, complete assignments due on days you will be absent BEFORE you leave.

**Make-up Work:** Assignments will only be accepted as called for by the instructor, on the date due. If a student misses a class, he or she is responsible for the material missed. Emergencies do occur. In the event of an emergency such as illness, family responsibilities, or death in the immediate family, documentation of the situation may be requested. Upon receipt/approval of the excuse, the instructor **MAY**, at his discretion, schedule a date to complete the assignment. Rescheduled assignments or tests may contain different, but similar, material and/or numbers of questions. The same material content will be covered. **IF** an assignment is accepted late (and this is extremely rare) a grading **penalty of up to 20% may apply.**

**Punctuality:** Every student is expected to practice professional time management skills and report to class on time. Students who arrive late are expected to enter quietly and sit down without disturbing the class. In order to preserve the learning environment for all students, individual students who exhibit a pattern of habitual tardiness may be refused entrance to the class until the lecture portion of the class is complete to reduce class disruptions. If the classroom door is closed, no entry is permitted.

**Professional Language/Respect:** Professional language, conduct, and respect for peers, the instructor, and the learning process are a basic requirement. ET-401 is rated “G”.

**Disruptive Behavior:** Effective learning environments require the attention and positive contribution of both student and teacher. Sidebar or loud conversations, jokes, laughter, pranks, etc., between and among students in the classroom while class is in session are disruptive to the learning environment. Students disrupting the class/learning environment in such a manner are subject removal from the class and/or grading sanctions.

**Others Attending Class:** Those who are not registered for the course are not permitted to attend. This includes, but is not limited to, boyfriends/girlfriends, children, siblings, spouses, etc.

**Electronic Devices:** All cell phones, I-pods and other electronic devices are to be turned off and put away prior to entering the class. Any student wearing headphones, ear buds, etc. or who sends or receives texts during class or whose phone rings or vibrates during class will be penalized. Your grade will be reduced. Habitual failure to follow the rule regarding cell phones, iPods, or other electronic devices may result in a student being asked to leave class.

**Honor Code:** Any work submitted is expected to be yours any yours alone. Dishonesty (cheating) in any form will not be tolerated and will be handled by your instructor following the “*Policy and Procedures on Cheating and Plagiarism*” as published in the Mississippi Valley State University Undergraduate Catalog. Penalties may range from assigning a grade of zero for the assignment to ejecting the student from the course and assigning a final grade of “F” for the course.

**Other:** All other student conduct policies are in full effect as outlined in the Mississippi Valley State University Undergraduate Catalog.

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**Accommodating Special Needs Students:** Students with learning or physical disabilities admitted to this class will be expected to perform the same level of work at the same proficiency as students without disabilities. However, where necessary, alternative methods will be used to accommodate any learning or physical condition if it is made known to the instructor in advance. No student will be turned away from this class because of a disabling condition.

Mississippi Valley State University is committed to providing reasonable accommodations for students with a documented disability. If you feel you are eligible to receive accommodations for a covered disability (medical, physical, psychiatric, learning, vision, hearing, etc.) and would like to request it for this course, you must be registered with the Services for Students with Disabilities (SSD) program administered by University College. It is recommended that you visit the Disabilities Office located in the Social Science Building, Office 104 to register for the program at the beginning of each semester. If you are determined to be eligible after your confidential consultation, you will be provided with a Memo of Accommodations that must be submitted to each of your instructors.

For more information or to schedule an appointment, please contact Mr. Billy Benson, Jr. via phone or email at 662-254-3005 or [billy.benson@mvsu.edu](mailto:billy.benson@mvsu.edu).

**Withdrawals and Incompletes:** A syllabus constitutes a contract between the student and the course instructor. Participation in this course indicates your acceptance of its teaching focus, requirements, and policies. Please review the syllabus and the course requirements as soon as possible. If you believe that the nature of this course does not meet your interests, needs or expectations, if you are not prepared for the amount of work involved or if you anticipate that the class meetings, assignment deadlines or abiding by the course policies will constitute an unacceptable hardship for you, you should drop the class by the drop/add deadline. **Incompletes will not be offered in this course.**