

SUBJECT: COE 2001 Course Policy and Administrative Letter (Summer '2020)

1. **Introduction:** Welcome to COE 2001, Statics! My email address, office location, and phone number are shown below:

**Dr. Wayne E. Whiteman**  
**Room: MRDC 3102**  
**Office Phone: 404-894-3204**  
**E-mail: [wayne.whiteman@me.gatech.edu](mailto:wayne.whiteman@me.gatech.edu)**

**Office Hours:**

**Wed, 9:15 am to 10:30 am**

2. **GTAs/Graders:** We will have 3 Graders in the course:

Joe Yu, [joesyu779@outlook.com](mailto:joesyu779@outlook.com)  
Office Hours: Fridays, 10-11 at 4<sup>th</sup> floor atrium MRDC

Oliver Park, [oliverjpark@gatech.edu](mailto:oliverjpark@gatech.edu)  
Office Hours: Monday 12-1 in the mrdc atrium 4th floor.

Gianna Guido, [gguido3@gatech.edu](mailto:gguido3@gatech.edu)  
Office Hours: Wednesdays from 2-3 in the GTMI 4th floor atrium

Lily Englander, [lilyenglander@gatech.edu](mailto:lilyenglander@gatech.edu)  
Office Hours: Thursday from 4-5 in the MRDC atrium

Shell Tutors: 6-8pm, Tuesday and Thursday, 4<sup>th</sup> floor atrium

3. **Purpose:** This course will give you the opportunity to learn and apply the principles required to solve engineering mechanics problems. The course applies concepts from courses you have taken in math, physics, and basic science. The first course addresses the modeling and analysis of static equilibrium problems.

4. **Educational Objectives:**

To give the students an introduction to engineering mechanics with an emphasis on engineering problem solving and the synthesis of calculus and physics.

5. **Course Outcomes:**

Outcome 1: Students will understand the basic principles underlying the equilibrium of rigid bodies in planar and 3D spaces.

- 1.1 Students will demonstrate an ability to apply fundamental rigid-body mechanics concepts to set up and solve engineering mechanics problems such as equilibrium and force-balance problems for single and assemblies of rigid bodies.

Outcome 2: Students will learn to identify, formulate, and solve engineering problems in rigid-body statics.

- 2.1 Students will demonstrate the ability to isolate rigid bodies and to draw clear and appropriate free body diagrams.

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- 2.2 Students will demonstrate an ability to apply skills in mathematics and physics to solve engineering mechanics problems.
- 2.3 Students will demonstrate an ability to identify appropriate supports and static knowns and unknowns, in both 2D and 3D structures.
- 2.4 Students will demonstrate that they can apply the appropriate principles referred to in Objective 1 to the solution of problems.

**Topics Covered:**

1. Introduction
2. Force and particle equilibrium
3. Moments and resultants
  - a) Moments and couples
  - b) Moments about a line
4. Equilibrium of rigid bodies
  - a) Free-body diagrams
  - b) Equilibrium in 2D and 3D
5. Centroids and distributed forces
  - a) Centroids of composite parts
  - b) Distributed loads
6. 2D structural applications
  - a) Plane trusses
  - b) Frames
7. Internal forces in beams
8. Friction

6. **Grade Plan:**

A.

<b>GRADED EVENT</b>	<b>POINTS</b>	<b>PERCENT</b>
Problem Sets (8 ea.@25pt)	200	20
Exams (2 ea.@225pt)	450	45
Final Exam	350	35
<b>TOTAL</b>	<b>1000</b>	<b>100</b>

B. The following grades are guaranteed:

90.0% +	A
80.0% +	B
70.0% +	C
65.0% +	D
< 65%	F

7. **Exam dates:** See the COE 2001 course syllabus (Encl 1). For each exam, students are allowed to bring in one (1) 8 ½ X 11 piece of paper with notes written on both sides in their own handwriting. These sheets are cumulative. For the first exam, 1 sheet is allowed. For the 2<sup>nd</sup> exam, you may bring in the original sheet from Exam #1 and a new sheet. For the final exam, you may bring in the sheets from Exams #1 and 2, along with a new sheet, for a total of 3 sheets. The only other authorized reference for exams is a calculator.

All students are expected to attend the examinations in the course. There will not be any make-ahead or make-up exams. If you have a situation that you feel will prohibit your attendance for an exam, e.g. attendance at an immediate family member's wedding, death, etc., please consult with me as soon as possible after the beginning of the academic term to discuss.

8. **Problem Sets:** There are 8 problem sets during the course. You must document them in accordance with paragraph 9 below. Late penalties will be assessed in accordance with the late homework policy (Encl. 2).

9. **Documentation:** You must properly document all written submissions. You must document any assistance that you received from any person or any reference. You may work with each other on the problem sets. Indeed, I encourage you to try to work out the problems separately, then meet in study groups to compare your answers, and to combine forces in trying to solve some of the more difficult problems. However, you are expected to do your own work, and to write up your answers separately after you have met and discussed them. Again, specifically document the assistance that you receive. In addition, when turning in assignments, please attach the following statement:

On my honor, I pledge that I have neither given nor received inappropriate aid in the preparation of this assignment.

\_\_\_\_\_  
Signature

10. **SOUP/Distance Learning Students:** The due date for all graded requirements for distance learning students will be exactly the same as the published due date for on-campus students. All other policies and procedures remain the same.

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11. **Academic Misconduct:** All students are expected to comply with the Georgia Tech Honor Code. Any evidence of cheating or other violations will be referred to the Dean of Students.

Cheating includes, but is not limited to: using unauthorized references or notes; copying directly from any source, including friends, classmates, tutors, or a solutions manual; allowing another person to copy your work; taking an exam or handing in a graded requirement in someone else's name, or having someone else take an exam or hand in a graded requirement in your name; or asking for a re-grade of a paper that has been altered from its original form.

12. **Mental Health & Wellness:** As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, depression, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. GT offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know is experiencing any of the issues noted above, consider utilizing the confidential mental health services available on campus. I encourage you to reach out to GT CARE ([www.care.gatech.edu](http://www.care.gatech.edu), 404-894-3498) or the Counseling Center ([www.counseling.gatech.edu](http://www.counseling.gatech.edu), 404-894-2575) for support. An on-campus counselor or after-hours services are available to assist you.

13. **Reference:** The course text for this course is "Engineering Statics, Meriam, 9<sup>th</sup> Edition, Wiley. This course also has WileyPLUS available. I will also address these topics during the 1<sup>st</sup> day of class if you want to wait until then to decide. Please note that I do not intend to integrate WileyPlus with Canvas in the course. Here is the link to purchase the WileyPLUS material: <https://www.wiley.com/WileyCDA/Section/id-830693.html>

14. **Modules:** The course modules are available at [www.coursera.org](http://www.coursera.org) . The two courses used for this class are:  
Introduction to Engineering Mechanics  
Application in Engineering Mechanics

The modules are also available through Office 365. Click on "Videos" and "Channels."

15. **Conclusion:** We are about to embark on a comprehensive study of static equilibrium engineering problems. This is an exciting subject that has practical applications in a wide variety of engineering disciplines. Hard work combined with a sincere effort to learn will help you master this important subject.

2 ENCL

1. Class Schedule
2. Late Policy Letter
3. Expectations

Dr. Wayne E. Whiteman  
Principal Academic Professional  
Director of the Office of Student Services

Enclosure 1: Course Syllabus (Summer '20)

LSN	DATE	SUBJECT	ISSUE.....DUE	
1	May 11	Introduction	PS1	
		Complete Modules 1, 2, 3 & 4 prior to LSN 2		
2	May 13	2-D and 3-D Forces		
		Complete Modules 5,6, 8, 9&10 prior to LSN 3		
3	May 18	Particle Equilibrium; Cross Product; Moment of Force about a Point	PS2 PS1	
		Complete Modules 11, 12, 13, 14, & 15 prior to LSN 4		
4	May 20	Moment about a line/axis and Couples; Equilibrium Equations & Equivalent Systems	PS3 PS2	
		Complete Modules 16, 17, 18 & 19 prior to LSN 5		
5	May 27	Resultants; Distributed Forces; Centroids		
		Complete Modules 20, 21 & 22 prior to LSN 6		
6	Jun 1	Method-Composite Parts; Forces Distributed over Surfaces	PS4 PS3	
		Complete Module 23, 24, & 25 prior to LSN 7		
7	Jun 3	Free Body Diagrams; 2-D Equilibrium		
		Complete Module 26 & 27 prior to LSN 8		
8	Jun 8	2-D Equilibrium Examples	PS5 PS4	
		Complete Module 28 & 29 prior to LSN 9		
9	Jun 10	3-D FBD and 3-D Equilibrium		
		Complete Module 2-3, 2-4 & 2-5 prior to LSN 10		
10	Jun 15	Frames/Machines		PS5
11	Jun 17	EXAM #1		
		Complete Module 2-6 & 2-7 prior to LSN 12		
12	Jun 22	Trusses 1	PS6	
		Complete Modules 2-8, 2-9,&2-10 prior to L13		
13	Jun 24	Trusses 2 (DROP DAY-Jun 27)		
		Complete Modules 2-11, 2-12,&2-13 prior to LSN 14		
14	Jun 29	Trusses 3	PS7 PS6	
		Complete Modules 2-14, 2-15, 2-16 & 2-17 prior to LSN 15		
15	Jul 1	Shear Force & Bending Moment Diagrams		
		Complete Modules 2-18 thru 2-22 for LSN 17		
16	Jul 6	Cables		PS7
17	Jul 8	EXAM #2		
		Complete Modules 2-23,2-24,&2-25 for LSN18		
18	Jul 13	Friction 1	PS 8	
		Complete Module 2-26 to 2-30 prior to LSN 19		
19	Jul 15	Friction 2		PS8
20	July 20	Review for Final Exam		
	Jul xx	Final Exam – 8:00 – 10:50		

## **Enclosure 2: Late Policy**

- 1. Purpose.** This memorandum explains the penalties that will be administered if you fail to submit a graded requirement in accordance with a stated suspense.
- 2. General.** Problem sets are due at the **start of class** on the date specified.
  - A.** The normal late penalty is 30% of the assigned points per day late for the first two days after the required submission date. After 2 days, you will receive a zero.
  - B.** If cases where there may be a legitimate reason for missing the turn-in date (e.g. hospitalization, emergency vacation, etc.), contact me as soon as possible to coordinate the late submission. If you coordinate a late submission in advance of the required submission date and receive approval, you will not incur a late penalty.

## **Enclosure 3: Expectations**

### **Student and Faculty Expectations**

The students and faculty in the Woodruff School are committed to improving the quality of undergraduate education, including better communications between students and faculty. In this spirit, the Woodruff School Undergraduate Committee, the Woodruff School Student Advisory Committee, and the Woodruff School faculty prepared the following list of expectations.

#### **Faculty Expectations of Students**

- Review prerequisite course materials,
- Read handout materials provided in class,
- Complete out-of-class assignments on time,
- Come prepared for class,
- Participate in the classroom by asking questions and contributing to any discussion,
- Get help/feedback from the professor as needed, and
- Follow the Woodruff School Honor Code.

#### **Student Expectations of Faculty**

- Provide students with written documentation concerning course content and evaluation procedures,
- Set and advertise office hours and be available to students at other times by appointment,
- Put course material in context by relating it to real-world problems and applications, current research, or the content of other courses in the curriculum,
- Respect students and be receptive to their opinions and questions,
- Treat students fairly and equitably,
- Come prepared for class,
- Return graded material in a timely fashion, and
- Set examinations appropriately for the material being tested.