SUBJECT: COE 2001 Course Policy and Administrative Letter (Summer '15)

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

Office Hours:

Wed, 9:15 am to 10:30 am

2. **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.

3. **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.

4. **Course Outcomes:**

A. Describe forces and moments in terms of vector components in two and three dimensions.
B. Determine moment of a force about a point, moment of a force about a line/axis, and moment due to a couple.
C. Express the static equilibrium equations in two and three dimensions
D. Describe and implement the conditions for two systems to be considered equivalent systems.
E. Calculate the resultant for various force systems, including distributed force systems.
F. Define and locate the centroid of an area and a volume.
G. Appy the method of composite parts to calculate the location and magnitude of a resultant force.
H. Employ the rules for drawing a Free Body Diagram (FBD) and sketch a FBD for a body.
I. Formulate static equilibrium equations for a rigid body and evaluate member forces in trusses, frames, machines, and cables.
J. Calculate internal forces and moments in bodies and sketch shear force and bending moment diagrams.
K. Apply Coulomb's dry friction laws to static equilibrium engineering problems.

5. **Grade Plan:**

A.

GRADED EVENT	POINTS	PERCENT
Problem Sets (8 ea.@25pt)	200	20
Exams (2 ea.@200pt)	400	40
Final Exam	400	40
TOTAL	**1000**	**100**

B. The following grades are guaranteed:

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

Those students that score $\leq$ 50% on the final exam, regardless of their average in the course, will be considered for possible failure of the course.

6. **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 2nd 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.

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

8. **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

9. **SOUP/Distance Learning Students:** The due date for all graded requirements for distance learning students is one week after the published due date for on-campus students. All other policies and procedures remain the same.

10. **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 using the following guidelines:

    • For a first violation, the grade penalty of a "zero" on the assignment in question and a period of probation are clear and consistent penalties.

    • A student's second violation of academic misconduct has a minimum penalty of "F" in the course and a minimum one-semester suspension from Georgia Tech.

    • If a student has violated policy more than twice, expulsion will be considered and a one-year suspension will be adhered to as the minimum.

    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.

11. **Reference:** The course text for this course is **Engineering Mechanics: Statics, 7th Ed.** by Meriam and Kraige.

12. **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
Senior Academic Professional
Director of the Office of Student Services

Enclosure 1: Course Syllabus (Summer '15)

LSN	DATE	SUBJECT	ISSUE.....DUE	Reading Assignment
1	May 11	Introduction	PS1	pp. 3-21
		Complete Modules 1, 2, 3 & 4 prior to LSN 2		
2	May 13	2-D and 3-D Forces		pp. 23-37; 66-73
		Complete Modules 5 & 6 prior to LSN 3		
3	May 18	Particle Equilibrium	PS2 PS1	
		Complete Modules 8, 9, 10, 11 & 12 prior to LSN 4		
4	May 20	Cross Product; Moment of Force about a Point; about a line/axis and Couples	PS3 PS2	pp. 38-57; 74-87
		Complete Modules 13 & 14 prior to LSN 5		
5	May 27	Equilibrium Equations & Equivalent Systems		pp. 58-65
		Complete Modules 16, 17, 18 & 19 prior to LSN 6		
6	Jun 1	Resultants; Distributed Forces; Centroids	PS4 PS3	pp. 88-106; 233-263
		Complete Modules 20 & 22 prior to LSN 7		
7	Jun 3	Method-Composite Parts; Forces Distributed over Surfaces	PS4	pp. 233-263
8	Jun 8	EXAM #1		
		Complete Module 23, 24, & 25 prior to LSN 9		
9	Jun 10	Free Body Diagrams; 2-D Equilibrium	PS5	pp. 109-144
		Complete Module 26 & 27 prior to LSN 10		
10	Jun 15	2-D Equilibrium Examples		pp. 109-144
		Complete Module 28 prior to LSN 11		
11	Jun 17	3-D FBD and 3-D Equilibrium	PS6 PS5	pp. 145-171
		Complete Modules2-3, 2-4,&2-5 prior to LN12		
12	Jun 22	Frames/Machines		pp. 204-231
		Complete Module 2-6 & 2-7 prior to LSN 13		
13	Jun 24	Trusses 1 (DROP DAY-Jun 28)	PS7 PS6	pp. 173-187
		Complete Modules 2-8, 2-9,&2-10 prior to L14		
14	Jun 29	Trusses 2		pp. 188-196
		Complete Modules 2-11, 2-12,&2-13 prior to LSN 15		
15	Jul 1	Trusses 3	PS7	pp. 197-203
16	Jul 6	EXAM #2		
		Complete Modules 2-14, 2-15, 2-16 & 2-17 prior to LSN 17		
17	Jul 8	Shear Force & Bending Moment Diagrams	PS8	pp. 272-290
		Complete Modules 2-18, 2-19, 2-22 for LSN 18		
18	Jul 13	Cables		pp. 291-305
		Complete Modules 2-23,2-24,&2-25 for LSN19		
19	Jul 15	Friction 1		pp. 335-356
		Complete Module 2-28 prior to LSN 20		
20	Jul 20	Friction 2	PS8	pp. 377-394
21	Jul 22	Course Review		
	Jul 27	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.

Attendance Policy (IMPORTANT):

It is expected that you attend class on scheduled class days. You grade will suffer significantly if you miss many of the unannounced in-class quizzes at the beginning of the lecture.

We all want to take advantage of travel opportunities while we are in Europe (including me), but there are more than many ample opportunities built in to the class schedule for long weekends.

Please do attend every class and make this a positive learning experience for all!