ENGINEERING MECHANICS: STATICS

1. **COURSE TITLE**
   - Statics 20-011   (86-87 2nd Semester)

2. **INSTRUCTORS**
   - Lecturer: M. Ghaemian, Room 417, Ext. 4240
   - Teaching assistant: M. Sohrabi, Ph.D. Candidate

3. **COURSE OUTLINE**
   Introduction to Statics
   Force Systems
   Equilibrium
   Structures
   Distributed Forces
   Friction
   Virtual Work

4. **CLASS-HOURS**
   Three (3) hours of lectures per week (Sunday and Tuesday 9:00-10:30)
   One (1) hour of tutorial per week

5. **OBJECTIVE AND SCOPE**
   The main objective of the course is to enable students to perceive, and visualize problems related to Engineering Mechanics, Statics. We will be concerned with the development of principles of mechanics and their application, which are rigorously expressed by mathematics.
   Newton's first law contains the principle of the equilibrium of forces, which is the main topic of concern is Statics. This law is the consequence of the second law of Newton that will be discussed in course titled as Dynamics.

6. **RELATION OF THE COURSE TO PAST AND FUTURE STUDIES**
   Mathematic(I) is prerequisite of Statics. The course is the first course for students with interest in structural engineering.

7. **TEXT**
   The material covered in the course follows closely the treatment presented in the following textbook:

   Engineering Mechanics, Statics, 6th Edition
     By: J.L. Meriam & L.G. Kraige

8. EVALUATION

The course is consisted of 6 set of **assignments**, **two mid term** examinations which would be held during the term and a **final** examination.

The evaluation scheme is as follows: Points
-Assignments   10
-Midterm examinations   30
-Final examination   60
-Total   100

Assignments have equal weights and each is marked out of (100).

Two midterm examinations will be held on Sunday 26th of Esfand and Sunday 29th of Ordibehesht. The first midterm examination is out of chapters 1, 2 and 3. The second midterm examination consists of chapters 4, 5 and 6. Students need to pass the final exam in order to credit the course.

LIST OF ASSIGNMENTS

Numbering is the same as appears in the text book.

Month/day	Chapters	Sub Chapters	Problems
11/21	Introduction		
11/23	Chapter 1	1.1→1.5	1-2-6-9
11/28		1.6→1.8	
11/30	Chapter 2	2.1→2.3	2-6-7-20-27
12/5		2.4→2.6	30-44-63-71-85-91-98
12/7		2.7→2.9	104-108-126-134-140-148-152-173
12/12	Chapter 3	3.1→3.2	A-B-C
12/14		3.3	8-17-20-54
12/19		3.4	70-89-94-96-118
12/21		First Midterm Preparation- Questions and Answers	
12/26	First Midterm – Chapters 1, 2 and 3		
1/18	Chapter 4	4.1→4.3	6-7-15-18-24-28
1/20		4.4	34-38-48-51
1/25		4.5	57-61-64
1/27		4.6	73-82-83-121
2/1	Chapter 5	5.1→5.3	3-7-11-14-22-25-33-44
2/3		5.4→5.5	46-50-53-55-69-78-79-94
2/8		5.6→5.7	105-107-111-114-122-136-142
2/10		5.8	146-151-155-169-172
2/15	Chapter 6	6.1→6.3	1-5-8-10-16-22-47
2/17		6.4→6.5	58-65
2/22		6.8→6.9	99-110-113
2/24		Second Midterm Preparation- Questions and Answers	
2/29	Second Midterm - Chapters 4, 5 and 6		
2/31	Chapter 7	7.1→7.3	1-8-19-22-24
3/5		7.4	36-39-43-50-53
3/7	Q&A		
3/12	Q&A		