

ENG 022 - ENGINEERING MECHANICS

الميكانيكا الهندسية

أ.م.د. محمود حشمت

دكتوراه في الهندسة الصناعية وإدارة النظم

أستاذ مساعد بقسم التصميم الميكانيكي والإنتاج

المشرف العام على ورش كلية الهندسة

رئيس قسم البيئة ومعالجة التلوث بكلية تكنولوجيا صناعة السكر والصناعات التكاملية

Course Bylaw

Hours/Week		
Lecture	Exercise	Total
2	3	5

Lectures Link

Textbooks:

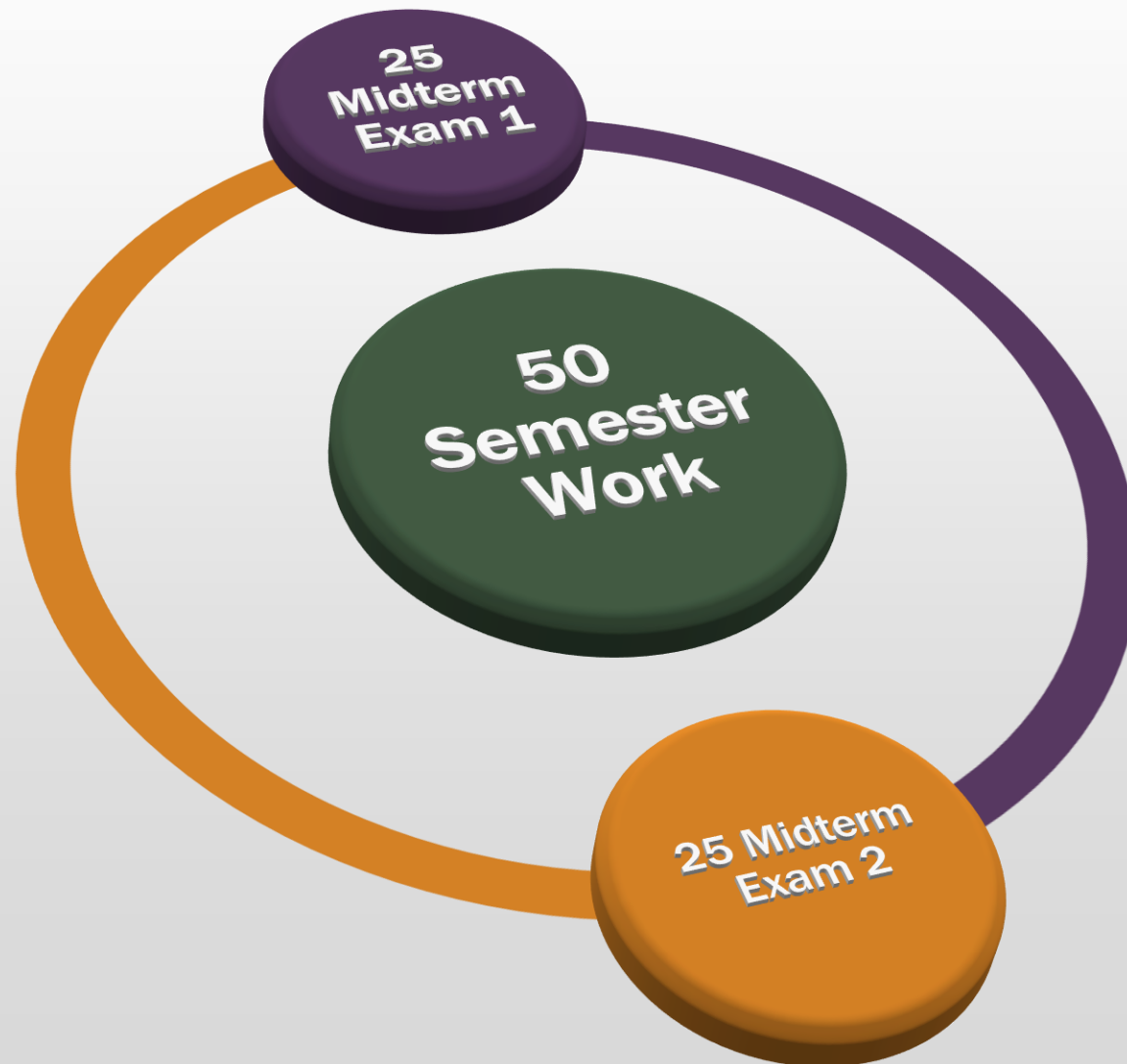
1. Vector Mechanics for Engineers, Beer Johnson, and Cornwell
2. Engineering Mechanics, Hibbeler

Course Layout

Lecture Number	Title	Remarks
1	General Principles -Force Vectors	
2	Equilibrium of a Particle	
3	Forces and equilibrium of a particle in space	
4	Equilibrium of Rigid bodies: Moments and couples	
5	Equilibrium of rigid bodies in three dimensions	
6	Simple Trusses and Frames	Midterm Exam 1
7	Center of Gravity, Center of Mass, and the Centroid of a Body	
8	Moments of inertia	
9	Kinematics of a Particle in rectangular components Rectilinear Motion	
10	Kinematics of a Particle in rectangular components CURvilinear motion	
11	Kinematics of a Particle : Curvilinear Motion (Nonrectangular Components: Normal and Tangential Components) + relative motion	
12	Kinetics of a Particle Force and Acceleration	Midterm Exam 2
13	Kinetics of a Particle Work and Energy	
14	Kinetics of a Particle Impulse and Momentum	

Evaluation Criteria

Total (150) = Final Written Exam (100) + Semester Work (50)



- ☐ **Be on time**
- ☐ **Feel confident**
- ☐ **Focus on the issues**

Please