

## ESC 201 (Section 1) – STATICS – (Spring 2021)

### Course Information

- Class Hours: **Remote Delivery – 10:15 AM to 11:05 AM** on **Monday, Wednesday, and Friday**
- Instructor: Kai J. Kwon, PhD, PE (Office: FH 242)
- Email: k.j.kwon@csuohio.edu
- Office Hours: Tuesday and Thursday; 2:00 PM - 4:00 PM (Online only via email or Zoom meeting)

### Textbook (Required)

- Engineering Mechanics: STATICS (*14<sup>th</sup> Edition*); R. C. Hibbeler (by Pearson)

### Course Description

- Prerequisites: MTH 181, PHY 241 or 243. Mechanics of forces and force systems; static equilibrium, forces in structures and machines, friction, centroids, moments of inertia, radii of gyration, and virtual work.

### Grading Distribution

- Attendance: 10% (29 lectures + 9 review/practice sessions + 2 exam review sessions) × 0.25%
- Homework: 30% (3 homework × 10%) Not graded for late submission
- Exams: 60% (2 mid-exams × 15% + final exam × 30%) Available only in scheduled hours

### Grading Scale

A	94% – 100%	B+	87% – 89%	C+	75% – 79%	D	60% – 69%
A–	90% – 93%	B	83% – 86%	C	70% – 74%	F	0% – 59%
		B–	80% – 82%				

### Course Delivery and Evaluation

- All classes in Spring 2021 will be provided remotely on **Zoom meetings** in the regular class hours. The link to Zoom meeting is in the course menu on the left in Blackboard.
- All course information will be posted on Blackboard; such as announcements, syllabus, lecture slides and videos, assignments, exams, and grades. Students are expected to check Blackboard regularly.
- Lecture slides will be posted according to the course schedule. Lecture videos also will be posted in the folder of **Panopto Video** on Blackboard for students to review the contents.
- Homework and exams also will be posted on Blackboard with the detail information.
- **Two midterm exams** will be scheduled with 60 minutes from **10:10 AM to 11:10 AM** for sufficient testing time.
- **Final exam** will be scheduled with 120 minutes from **10:15 AM to 12:15 PM** in the final exam week.
- Office hours are available with a prior appointment via email, then the instructor will invite the student to a Zoom meeting. Students may contact the instructor using the email tool on the left menu in Blackboard.

## Course Schedule

- The course is designed to cover the following chapters in the textbook:

Chapter 1: General Principles	Chapter 6: Structural Analysis
Chapter 2: Force Vectors	Chapter 7: Internal Forces
Chapter 3: Equilibrium of a Particle	Chapter 8: Friction
Chapter 4: Force System Resultants	Chapter 9: Center of Gravity and Centroid
Chapter 5: Equilibrium of a Rigid Body	Chapter 10: Moments of Inertia

Week	Date	Topic
1	01/18 (Monday)	Martin Luther King Day (No Class)
	01/20 (Wednesday)	Lecture #00. Introduction
	01/22 (Friday)	Lecture #01. Chapter 1 (Sections 1.1-1.6)
2	01/25 (Monday)	Lecture #02. Chapter 2 (Sections 2.1-2.4)
	01/27 (Wednesday)	Lecture #03. Chapter 2 (Sections 2.5-2.6)
	01/29 (Friday)	Lecture #04. Chapter 2 (Sections 2.7-2.8)
3	02/01 (Monday)	Lecture #05. Chapter 2 (Section 2.9)
	02/03 (Wednesday)	Review & Practice (Chapter 2)
	02/05 (Friday)	Lecture #06. Chapter 3 (Sections 3.1-3.3)
4	02/08 (Monday)	Lecture #07. Chapter 3 (Section 3.4)
	02/10 (Wednesday)	Review & Practice (Chapter 3)
	02/12 (Friday)	Lecture #08. Chapter 4 (Sections 4.1-4.4)
5	02/15 (Monday)	Presidents' Day (No Class)
	02/17 (Wednesday)	Lecture #09. Chapter 4 (Section 4.5)
	02/19 (Friday)	Lecture #10. Chapter 4 (Section 4.6)
6	02/22 (Monday)	Lecture #11. Chapter 4 (Sections 4.7-4.8)
	02/24 (Wednesday)	Lecture #12. Chapter 4 (Section 4.9)
	02/26 (Friday)	Review & Practice (Chapter 4)
7	03/01 (Monday)	Mid-Exam 1 (Chapters 1 to 4) 10:10 AM – 11:10 AM
	03/03 (Wednesday)	Review of Mid-Exam 1
	03/05 (Friday)	Lecture #13. Chapter 5 (Sections 5.1-5.2)
8	03/08 (Monday)	Lecture #14. Chapter 5 (Sections 5.3-5.4)
	03/10 (Wednesday)	Reading Day (No Class)
	03/12 (Friday)	Lecture #15. Chapter 5 (Sections 5.5-5.7)
9	03/15 (Monday)	Review & Practice (Chapter 5)
	03/17 (Wednesday)	Lecture #16. Chapter 6 (Sections 6.1-6.3)
	03/19 (Friday)	Lecture #17. Chapter 6 (Section 6.4)
10	03/22 (Monday)	Lecture #18. Chapter 6 (Section 6.6)
	03/24 (Wednesday)	Review & Practice (Chapter 6)
	03/26 (Friday)	Lecture #19. Chapter 7 (Section 7.1)
11	03/29 (Monday)	Lecture #20. Chapter 7 (Section 7.2)
	03/31 (Wednesday)	Lecture #21. Chapter 7 (Section 7.3)
	04/02 (Friday)	Review & Practice (Chapter 7)
12	04/05 (Monday)	Mid-Exam 2 (Chapters 5 to 7) 10:10 AM – 11:10 AM
	04/07 (Wednesday)	Review of Mid-Exam 2
	04/09 (Friday)	Lecture #22. Chapter 8 (Sections 8.1-8.2)
13	04/12 (Monday)	Lecture #23. Chapter 8 (Sections 8.3, 8.5)
	04/14 (Wednesday)	Review & Practice (Chapter 8)
	04/16 (Friday)	Lecture #24. Chapter 9 (Section 9.1)
14	04/19 (Monday)	Lecture #25. Chapter 9 (Section 9.2)
	04/21 (Wednesday)	Review & Practice (Chapter 9)
	04/23 (Friday)	Lecture #26. Chapter 10 (Section 10.1)
15	04/26 (Monday)	Lecture #27. Chapter 10 (Sections 10.2-10.4)
	04/28 (Wednesday)	Lecture #28. Chapter 10 (Section 10.8)
	04/30 (Friday)	Review & Practice (Chapter 10)
16	05/03 (Monday)	Final Exam (Chapters 1 to 10) 10:15 AM – 12:15 PM

### **Academic Misconduct**

- Cheating or copying on any exam or assignment will give you a zero score and will be reported to the University. For details see the CSU policy on academic misconduct at <https://www.csuohio.edu/sites/default/files/3344-21-02.pdf>

### **Disability Accommodation**

- Educational access is the provision of classroom accommodations, auxiliary aids and services to ensure equal educational opportunities for all students regardless of their disability. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Disability Services at (216) 687-2015. The office locates in Rhodes West 210. Accommodations need to be requested in advance and will not be granted retroactively.