

Syllabus of CS 667 - Digital Geometry Processing

Department: Computer Engineering

Credits: Bilkent 3, ECTS 5

Course Coordinator: Yusuf Sahillioglu

Semester: 2026-2027 Fall

Section: 001

Instructor(s): Yusuf Sahillioglu

Office & Office Hours:

Course Schedule:

	Mon.	Tue	Wed	Thu	Fri	Sat	Sun
08:30 09:20	EE-04 (S)						
09:30 10:20	EE-04						
10:30 11:20							
11:30 12:20							
12:30 13:20							
13:30 14:20			EE-04				
14:30 15:20			EE-04				
15:30 16:20							
16:30 17:20							
17:30 18:20							
18:30 19:20							
19:30 20:20							
20:30 21:20							
21:30 22:20							

Contact Hours: 3 hours of lecture per week

Textbook and Other Required Material:

- Recommended - Textbook: Polygon Mesh Processing, Botsch et al., 2010, CRC Press
- Recommended - Textbook: A Sampler of Useful Computational Tools for Applied Geometry, Cohen-Or et al., 2015, CRC Press

Catalog Description:

Prerequisite(s): None

GenAI Policy: -

Assessment Methods:

	Type	Label	Count	Total Contribution
1	Homework	Homework	2	40
2	Term project	Project	1	30
3	Final:Essay/written	Final Exam	1	30

Minimum Requirements to Qualify for the Final Exam:

None.

Course Learning Outcomes:

Course Learning Outcome	Assessment
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Weekly Syllabus:

1. Introduction
2. Mesh Comparison (Distances, Descriptors, Sampling)
3. Mesh Data Structures and 3D Graphics Programming
4. 3D Shape Generation
5. Remeshing
6. Mesh Parameterization
7. 3D Point Cloud Registration
8. Mesh Deformation
9. Laplacian Mesh Processing
10. Geometric Least-Squares Systems and Solutions
11. 3D Printing
12. Inter-surface Mapping
13. Mesh Segmentation
14. Term Project Presentations