

16-889: Learning for 3D Vision

Spring 2022

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This schedule is preliminary and subject to change as the term evolves.

Lecture	Date	Topic	Course Materials	Assignments
WEEK 1				
1	Tue 01/18/2022	Introduction		
2	Thu 01/20/2022	3D Representations		
WEEK 2				
3	Tue 01/25/2022	3D Representations (Conversions)		
4	Thu 01/27/2022	Image Formation		Assignment 1 Out
Office Hour	TBD	PyTorch3D Tutorial		
WEEK 3				
5	Tue 02/01/2022	Single-view 3D: History + 2.5D		
6	Thu 02/03/2022	Single-view 3D: Objects		
WEEK 4				
7	Tue 02/08/2022	Single-view 3D: Scenes		
8	Thu 02/10/2022	Single-view 3D: Parametric Models		Assignment 1 Due Assignment 2 Out
WEEK 5				
9	Tue 02/15/2022	Learning 3D Prediction via Photometric Consistency		
10	Thu 02/17/2022	Volume Rendering and NeRF		
WEEK 6				
11	Tue 02/22/2022	Volume Rendering and NeRF (continued)		
12	Thu 02/24/2022	Project Proposal: Selection and Writing		Assignment 2 Due Assignment 3 Out
WEEK 7				
13	Tue 03/01/2022	Rendering SDFs		
14	Thu 03/03/2022	Neural Surface Rendering		Project Proposal Due Assignment 4 Out
WEEK 8 - Spring Break				
WEEK 9				
15	Tue 03/15/2022	Learning to Render		
16	Thu 03/17/2022	Generalizable Radiance Fields		Assignment 3 Due
WEEK 10				
17	Tue 03/22/2022	Processing Point Clouds		
18	Thu 03/24/2022	Processing Meshes		Assignment 4 Due Assignment 5 Out
WEEK 11				
19	Tue 03/29/2022	Generative Models I		
20	Thu 03/31/2022	Generative Models II		
WEEK 12				
21	Tue 04/05/2022	Shape Parsing		
22	Thu 04/07/2022	No Class		Assignment 5 Due
WEEK 13				
23	Tue 04/12/2022	Modeling 3D in Time		
24	Thu 04/14/2022	Applications: Graphics, Robotics, and Beyond		
WEEK 14				
25	Tue 04/19/2022	Past, Present, and Future		
26	Thu 04/21/2022	Project Presentations: I		
WEEK 15				
27	Tue 04/26/2022	Project Presentations: II		
28	Thu 04/28/2022	Project Presentations: III		