

# CS280: Deep Learning

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## Schedule and Syllabus

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- Lecture hours: 15:00pm - 16:45pm Mon, 15:00pm - 16:45pm Wed
- Location: Teaching Center 201
- Discussion sessions: TBA

Event	Date	Description	Course Materials	Assignments Quizzes
Lecture 1	Monday 13/09 Week 1	<b>Course Introduction</b> Deep learning overview Course logistics Machine Learning Basics	See Piazza	
Lecture 2	Wednesday 15/09 Week 1	<b>Basic Neural Networks</b> Single-layer networks		<b>Quiz 1</b>
Lecture 3	Monday 18/09 Week 2	<b>Basic Neural Networks</b> Multi-layer Perceptrons Forward and Backpropagation		
Lecture 4	Wednesday 22/09 Week 2	<b>Convolutional Neural Networks - I</b> Convolution and pooling Equivariance		<b>A1 Out</b>
Lecture 5	Monday 27/09 Week 3	<b>Convolutional Neural Networks - II</b> Network Training Optimization		<b>Quiz 2</b>

Event	Date	Description	Course Materials	Assignments Quizzes
Lecture 6	Wednesday 29/09 Week 3	<b>Convolutional Neural Networks - III</b> Network Training Regularization		
National Days	Monday 04/10 Week 4	NO CLASS		
National Days	Wednesday 06/10 Week 4	NO CLASS		
Lecture 7	Monday 11/10 Week 5	<b>Convolutional Neural Networks - IV</b> CNN architectures		Quiz 3
Lecture 8	Wednesday 13/10 Week 5	<b>CNN in Vision - I</b> Semantic segmentation		A1 Due
Lecture 9	Monday 18/10 Week 6	<b>CNN in Vision - II</b> Object detection Object Segmentation		Quiz 4 A2 Out
Lecture 10	Wednesday 20/10 Week 6	<b>CNN in Vision - III</b> Visualizing and Understanding Interpretation		
Lecture 11	Monday 25/10 Week 7	<b>CNN in Vision - IV</b> Style Transfer Adversarial examples		Quiz 5
Lecture 12	Wednesday 27/10 Week 7	<b>Recurrent Neural networks - I</b> Sequence modeling, RNN BP Through Time		

Event	Date	Description	Course Materials	Assignments Quizzes
Lecture 13	Monday 01/11 Week 8	<b>Recurrent Neural networks - II</b> LSTM, GRU Attention		<b>Quiz 6</b> <b>A2 Due</b>
Lecture 14	Wednesday 03/11 Week 8	<b>Recurrent Neural Network - III</b> Neural MT Image caption		<b>Project Out</b> <b>A3 Out</b>
CVPR	Monday 8/11 Week 9	NO CLASS		
CVPR	Wednesday 10/11 Week 9	NO CLASS		
CVPR	Monday 15/11 Week 10	NO CLASS		
-	Wednesday 17/11 Week 10	<b>Project Proposal</b>		
Lecture 15	Monday 22/11 Week 11	<b>Attention Model and Transformer</b>		<b>Quiz 7</b> <b>A3 Due</b>
Lecture 16	Wednesday 24/11 Week 11	<b>Generative Models - I</b> Unsupervised learning Latent variable models, EM Autoencoder		<b>A4 Out</b>
Lecture 17	Monday 29/11 Week 12	<b>Generative Models - II</b> Autoencoder, VAE		<b>Quiz 8</b>

Event	Date	Description	Course Materials	Assignments Quizzes
Lecture 18	Wednesday 01/12 Week 12	<b>Generative Models - III</b> VAE & GAN I: Basics		<b>Proposal Due</b>
Lecture 19	Monday 06/12 Week 13	<b>Generative Models - IV</b> GAN II: GAN in vision		<b>Quiz 9</b>
Lecture 20	Wednesday 08/12 Week 13	<b>Generative Models - V</b> GAN III: Improving GAN		
Lecture 21	Monday 13/12 Week 14	<b>Generative Models - VI</b> Autoregressive models, PixelRNN		<b>A4 Due Quiz 10</b>
Lecture 22	Wednesday 15/12 Week 14	<b>Recent Progress in Deep Learning - I</b>		
Lecture 23	Monday 20/12 Week 15	<b>Recent Progress in Deep Learning - II</b>		<b>Project Milestone</b>
-	Wednesday 22/12 Week 15	Project		
-	Monday 27/12 Week 16	Project		
-	Wednesday 29/12 Week 16	Project		

Event	Date	Description	Course Materials	Assignments Quizzes
-	Monday 03/01 Week 17	Project		
-	Wednesday 05/01 Week 17	Project		
-	Week 18	<b>Project Presentations</b> Subject to Exam Schedule		<b>Project Due</b>