

The following is a tentative schedule and subject to change.

Date	Lecture	Topic	Book Chapters	Session	Assignment/Exam
1/19/2021	1	Intro, supervised and unsupervised learning	ISLR Ch1-2	1	-
1/21/2021	2	Curse of dimensionality, assessing model accuracy	ISLR Ch2	1	-
1/26/2021	3	K nearest neighbors, bias and variance trade-off	ISLR Ch2	1	-
1/28/2021	4	Linear Regression	ISLR Ch3	2	Homework 1 due
2/2/2021	5	Logistic Regression	ISLR Ch4.3	2	-
2/4/2021	6	Linear/quadratic discriminant analysis	ISLR Ch4.4	2	Homework 2 due
2/9/2021	7	Naive Bayes, ROC curve	Murphy Ch3.5	2	Article Eval 1 due
2/11/2021	8	Nonlinearity: polynomial regression	ISLR Ch7	3	Homework 3 due
2/16/2021	9	Wellness Day: Lecture Canceled	-	-	-
2/18/2021	10	Bootstrap and Cross-validation	ISLR Ch5	4	
2/23/2021	11	Subset/stepwise selection, AIC, BIC, Adjusted R-squared	ISLR Ch6	5	
2/25/2021	12	Shrinkage methods, ridge and lasso regression	ISLR Ch6	5	Homework 4 due
3/2/2021	13	Principal component regression, partial least squares	ISLR Ch6	5	Midterm assigned Article Eval 2 due
3/4/2021	14	Decision Trees	ISLR Ch8	6	-
3/9/2021	15	Bagging, boosting, random forest	ISLR Ch8	6	-
3/11/2021	16	Wellness Day: Lecture Canceled	-	-	-
3/16/2021	17	Support vector classifier, kernel methods	ISLR Ch9	7	Midterm due
3/18/2021	18	Support vector machine	ISLR Ch9	7	Homework 5 due
3/23/2021	19	Unsupervised learning, dimension reduction	ISLR Ch10	8	Article Eval 3 due
3/25/2021	20	K-means/hierarchical learning methods	ISLR Ch10	8	Homework 6 due
3/30/2021	21	Gaussian mixture methods, EM algorithm	Bishop Ch9	8	
4/1/2021	22	Review of classification methods, project guidelines	-	-	Homework 7 due
4/6/2021	23	Gradient descent, forward and backward propagation	CASI Ch18; Goodfellow Ch6-8	9	-
4/8/2021	24	Deep learning theory	CASI Ch18; Goodfellow Ch6-8	9	Homework 8 due
4/13/2021	25	Intro to Python and TensorFlow	TBD	9	Article Eval 4 due
4/15/2021	26	Deep learning with Python	TBD	9	-
4/20/2021	27	Reinforcement learning	TBD	9	-
4/22/2021	28	Signal Processing	-	-	-
4/27/2021	29	TBD	TBD	-	Article Eval 5 due
4/29/2021	30	Group project presentation I	-	-	-
5/4/2021	31	Group project presentation II	-	-	-