

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		<b>Wellness Day: Lecture Canceled</b>	-	-	
2/18/2021		<b>Condition 2: Lecture Canceled</b>	-	-	
2/23/2021	8/9	Nonlinearity (continued) and cross validation	ISLR Ch7	3	
2/25/2021	9	Cross validation	ISLR Ch5	4	Homework 4 due
3/2/2021	10	Bootstrap, model selection	ISLR Ch5, 6	4, 5	Article Eval 2 due
3/4/2021	11	Shrinkage methods, ridge and lasso regression	ISLR Ch6	5	Homework 5 due Midterm assigned (Friday)
3/9/2021	12	Principal component regression, partial least squares	ISLR Ch6	5	
3/11/2021		<b>Wellness Day: Lecture Canceled</b>	-	-	
3/16/2021	13	Midterm review	-	6	
3/18/2021	14	Decision tress	ISLR Ch8	6	Midterm due (Monday)
3/23/2021	15	Bagging, boosting, random forest	ISLR Ch8	6	
3/25/2021	16	Random forest and support vector machine	ISLR Ch8, Ch9	6, 7	
3/30/2021	17	Support vector machine, kernal methods	ISLR Ch9	7	Article Eval 3 due
4/1/2021	18	Advanced R programming and data visualization	-	-	Homework 6 due (Friday)
4/6/2021	19	Supervised learning with imbalanced data	-	-	
4/8/2021	20	Unsupervised learning, dimension reduction	ISLR Ch10	8	Homework 7 due (Saturday)
4/13/2021	21	K-means/hierarchical learning methods	ISLR Ch10	8	
4/15/2021	22	Gaussian mixture methods, EM algorithm	Bishop Ch9	8	
4/20/2021	23	Gradient descent, forward and backward propagation	CASI Ch18; Goodfellow Ch 6-8	9	Article Eval 4 due
4/22/2021	24	Deep learning theory	CASI Ch18; Goodfellow Ch 6-8	9	Homework 8 due (Friday)
4/27/2021	25	Deep learning with Python	-	9	
4/29/2021	26	Reinforcement learning	-	9	
5/4/2021	27	Group project presentation I	-	-	Final project due