## Ma 311 Linear Algebra & Course Schedule and Assignments & Fall 2025

This assignment sheet is a tentative schedule. We may get ahead or behind; adjust as necessary.

Date	Discussion	Assessment	Suggested Exercises	
	The 8th edition of	of Larson, Elementary Linear Alge	bra, is required.	
	• Exercises in parenthesis () are for the purpose of reviewing what you should already know from prior math experience.			
	Do only what you need to refresh your knowledge.			
	• Exercises not in parenthesis represent potentially new material. Pay attention to these.			
			uild or reinforce theory. Neglect these at your own peril.	
		atrices, and Determinants		
Wk 1	§ 1.1-1.3		1.1 #(1-66), 69, 70, 71, 72, 77, 78, 79, 81, 83, 85, <b>91, 92,</b> 93	
			1.2 #3, 7, 11, 13, 15, 17, 19-21, 22-24, 33, 35, 37, 39, 41, 43, <b>50, 52, 59, 60, 63, 68</b>	
8/27			1.3 curve fitting: #3, 7, 11, 13, 14, 15, 37	
8/29			network analysis: #21, 23, 25	
			partial fraction decomposition: #31, 33	
			polynomial zeros # <b>39, 40</b>	
Wk 2	§ 2.1-2.4 (2.5-2.6		2.1 #7, 11, 15, 17, 21, 23, 29, 31, 33, 35, 41, 43, 47, 49, 51, <b>55, 57, 59</b> ,	
0/4	TBD)  Labor Day		61, 63, 65, 67, 68, 69, 70, 73, 85, 86 2.2 #7, 13, 15, 27, 29, 37, 38, 41, 45, 49, 51, 53, 55, 56, 59, 69, 70, 71,	
9/1	Labui Day	no class Monday	2.2 #7, 15, 15, 27, 29, 57, 56, 41, 45, 49, 51, 53, 53, 56, 59, 69, 70, 71,	
9/3			2.3 #5, 7, 13, 15, 25, 27, 41, 45, 47, <b>53, 55, 57, 59, 69, 71, 72, 74, 75</b>	
9/5			2.4 #1-11 odd, 15, 17, 19, 21, <b>23</b> , 25, 31, 33, 35, <b>41, 42,</b> 53	
			2.5 (TBD) stochastic matrices, Markov chains, steady states	
			2.6 (TBD) cryptography #1, 3, 5, 7, 9	
\A/I <sub>2</sub> 2			2 1 #1 5 0 15 17 10 27 20 21 20 41 42 44 45 47 51 67 69	
Wk 3 9/8	§ 3.1-3.4		3.1 #1, 5, 9, 15, 17, 19, 27, 29, 31, 39, 41, <b>43, 44,</b> 45, 47, 51, 67, 68 3.2 #1-15 odd, 21, 23, 25, 27, 31, 35, <b>37, 38</b> , 39, 41, 45	
9/10	3 3.1 3.4		3.3 #3, 5, 13, 17, 21, 23, 25, 33, <b>37, 39, 41,</b> 47, 57, <b>59, 60,</b> 65, <b>71, 72,</b>	
9/10			75, 78	
Wk 4			3.4 adjoint #1, 5, 7	
9/15		Test 1	Cramer's Rule #9, 13, 17, 21, <b>27</b>	
-	l /ector Spaces	1636 1		
9/17	§ 4.1-4.8		4.1 #1, 5, 9, 13, 15, 17, 21, 23, 27, 31, 33, 37, 39, <b>57, 58</b>	
9/19	3 4.1 4.0		4.2 #1-12 all, 13, 17, 21, 25, 29, 31, 33, 35, 37, 41, <b>49, 50</b>	
Wk 5			4.3 #3, 4, 7, 9, 11, 17, 23, 27, 29, 33, 37, 39, <b>43, 44, 54, 55</b>	
9/22		Project 1 due	4.4 #1, 3, 5, 9, 13, 17, 19, 23, 25, 31, 33, 35, 37, 41, 49, 53, 55, <b>57, 63,</b>	
9/24	REACH	No classes Wednesday	64, 74, 76	
9/26		,	4.5 #1, 3, 5, 7, 13, 15, 17, 21, 25, 27, 31, 33, 35, 37, 38, 39, 43, 45, 49, 53, 59, 61, 63, 65, <b>79</b> , <b>80</b> , <b>81</b> , <b>83</b>	
Wk 6			4.6 #5, 7, 9, 15, 17, 21, 23, 25, 33, 39, 41, 43, 47, 51, 53, 57, 59, <b>67,</b>	
9/29			71, 73, 74, 75, 76	
10/1			4.7 #7, 9, 13, 15, 17, 19, 21, 23, 27, 31, 33, 39, 41, 45, 49, <b>55, 56, 57</b>	
10/3			4.8 LDE Wronskian #9, 13, 17, 23, 27, 29, 31, 35, 39	
Wk 7				
10/6				
10/8				
10/10				
Wk 8				
10/13		Test 2		
,	<u> </u>		1	

Date	Discussion	Assessment	Suggested Exercises		
Unit 3 Inner-Product Spaces					
Wk 8 10/13 10/15 10/17	§ 5.1-5.5		5.1 #5, 7, 9, 11, 13, 15, 21, 25, 29, 33, 37, 41, 45, 47, 53, 57, 61, 65, <b>73, 74</b> 5.2 #5, 13, 17, 23, 27, 29, 31, 33, 37, 41, 45, 49, 51, 59, 65, 75, 81, <b>85</b> , <b>86</b>		
Wk 9 10/20 10/22 10/24 Wk 10	Fall Break	No classes Monday	5.3 #5, 11, 13, 19, 23, 29, 39, <b>55, 56, 67</b> 5.4 Orthogonal Subspaces #7, 9, 11, 19, 21, <b>43, 44</b> 5.5 Cross Products #7, 11, 13, 15, 19, 23, 35 Geometry # <b>45, 47, 49, 62</b>		
10/27 10/29 10/31 Wk 11 11/3	(start § 6.1-6.4)	Test 3			
-	inear Transforma	tions, Eigenvalues, and Eigen	vectors		
11/5 11/7	§ 6.1-6.4 (6.5 TBD)	,	6.1 #3, 15, 19, 21, 23, 25, 29, 31, 33, 39, 49, 53, <b>65, 67, 68</b> 6.2 #1, 3, 5, 9, 11, 15, 17, 19, 23, 27, 31, 33-36 all, 41-44 all, <b>49, 51, 53, 65, 66</b>		
Wk 12 11/10 11/12 11/14			6.3 #1, 5, 7, 9, 11, 15, 19, 23, 25, 27, 33, 35, 41, 43, <b>52, 53, 54</b> 6.4 #3, 7, 13, 15, 17, 21, <b>25, 41, 42</b> 6.5 (TBD) Shears and Rotations		
Wk 13 11/17 11/19 11/21	§ 7.1-7.3 (7.4 TBD)	Proofs Portfolio due			
11/24 -28	Thanksgiving Break				
Wk 14 12/1			7.1 #1, 3, 5, 9, 11, 15, 19, 23, 27, 33, 51, 53, <b>59, 67, 68</b> , 69, 71, <b>79, 80</b> 7.2 #3, 7, 9, 11, 15, 19, 23, 27, 29, <b>37, 38</b>		
12/3 12/5 Wk 15		Project 2 due Test 4 *Presentations Wk 15	7.3 #9, 13, 17, 23, 27, 35, 41, 45, 49, 51, <b>53, 54</b> 7.4 (TBD) Rotations of Conics (TBD) Constrained Optimization		
12/8 12/10 12/12		Presentations end			
12/17		Final Exam Wed 3:30-4:40	Final exam according to BJU final exam schedule		