## VSA Course Assignment Sheet

Course Name: Calculus I



## Quarter 1

Day	Class Dates	Daily Learning Objectives Students will learn:	Assignment to be Completed by Class Start Unless Otherwise Indicated
1	Wed 9/9/2020	<ul> <li>How to create graphs, models, and determine fixed rates of change.</li> </ul>	□ Read: Sections 1.1 and 1.2, pp 2-7 and pp 10-15. □ Come to class with microphone and webcam ready to use.
2	Fri 9/11/2020	<ul> <li>How to recognize functions and their graphs and fit models to data.</li> </ul>	<ul> <li>□ Read: Sections 1.3 and 1.4, pp 19-26, 31-37.</li> <li>□ Upload homework: Section 1.1, questions 3-6, 15, 29, 37, 43, 53, 57, 63, 75-78, pp 8-9.</li> <li>□ Upload homework: Section 1.2, questions 3-6, 26, 31, 43, 63, pp 16-17.</li> </ul>
3	Mon 9/14/2020	<ul> <li>How to find inverse functions and work with trigonometric, exponential and logarithmic functions.</li> </ul>	<ul> <li>□ Read: Sections 1.5 and 1.6, pp 41-47, 52-56.</li> <li>□ Upload homework: Section 1.3, questions 17, 27a-b, 41, 57a-c, 61a-b, 67, 75, 103-106, pp 27-30.</li> <li>□ Upload homework: Section 1.4, questions 5, 7, 9, 11, 15, 17, 21, 29, 33, 35, 37, 55, 57, 70, 71, pp 38-40.</li> </ul>
4	Wed 9/16/2020	<ul> <li>That calculus is the mathematics of change and is based on the limit process.</li> </ul>	<ul> <li>Read: Sections 2.1, pp 66-70.</li> <li>Upload homework: Section 1.5, questions 5-8, 9a, 11a, 31a-d, 69, 95, 99, pp 48-51.</li> <li>Upload homework: Section 1.6, questions 5a-d, 7a-d, 11, 15, 19, 47-50, 57-60, 69, 81, 87a-d, pp 57-59.</li> <li>Submit Quiz 1-1 (covers sections 1.1 through 1.6). Due Saturday 9/19/2020 at 11:55 pm ET.</li> </ul>
5	Mon 9/21/2020	<ul> <li>To develop an understanding of the definition of a limit.</li> <li>How to find limits graphically and numerically.</li> </ul>	□ Read: Section 2.2, pp 72-78. □ Upload homework: Section 2.1, questions 3, 5, 7, 9, p 71.
6	Wed 9/23/2020	<ul> <li>How to evaluate limits analytically and understand and use the Squeeze Theorem.</li> </ul>	□ Read: Section 2.3, pp 83-90. □ Upload homework: Section 2.2, questions 5, 7, 23, 25, 27, 29, 31a-d, 37, 61, 75-79, pp 79-82.
7	Mon 9/28/2020	<ul> <li>About continuity as it relates to limits and how to evaluate one-sided limits.</li> </ul>	□ Read: Section 2.4, pp 94-102. □ Upload homework: Section 2.3, questions 9, 11, 17, 19a-c, 25, 31, 35, 37a-d, 41, 55, 65, 67, pp 91-93.

8	Wed 9/30/2020	<ul> <li>How to determine infinite limits find vertical asymptotes.</li> </ul>	<ul> <li>Read: Section 2.5, pp 107-111.</li> <li>Upload homework: Section 2.4, questions 7-17(odd), 21, 27, 31, 33, 35, 39, 41, 47, 83, 87, pp 103-106.</li> <li>Submit Quiz 2-1 (covers sections 2.1 through 2.3). Due Saturday 10/3/2020 at 11:55 pm ET.</li> </ul>
9	Mon 10/5/2020	<ul> <li>To become more proficient working with limits and their properties.</li> </ul>	<ul> <li>Read: Section 3.1, pp 120-126.</li> <li>Upload homework: Section 2.5, questions 3, 9, 13, 17, 21, 33, 41, 63, pp 112-114.</li> <li>Upload homework: "Exploration", p 120 (graphing practice).</li> </ul>
10	Wed 10/7/2020	<ul> <li>To find the slope of a tangent line using the limit definition of the derivative.</li> </ul>	<ul><li>□ Upload homework: chap 2 Study Guide.</li><li>□ Submit chap 2 Test. Due Saturday 10/10/2020 at 11:55 pm ET.</li></ul>
11	Mon 10/12/2020	<ul> <li>How to use differentiation rules and how to find rates of change.</li> </ul>	<ul> <li>Read: Section 3.2, pp 130-138.</li> <li>Upload homework: Section 3.1, questions 5, 7, 9, 11, 15, 17, 21, 23, 25, 29, 37, 67, 77-80, 85, pp 127-129.</li> </ul>
12	Wed 10/14/2020	<ul> <li>How to use the product and quotient rules to differentiate and how to find higher-order derivatives.</li> </ul>	<ul> <li>Read: Section 3.3, pp 143-149.</li> <li>Upload homework: Section 3.2, questions 5-29 (odd), 33, 37, 39, 43, 45, 49, 51, 53, 57, 65, 69, 75, 77, 80, pp 139-142.</li> </ul>
13	Mon 10/19/2020	<ul> <li>How to use the chain rule and the general power rule for derivatives and how to find derivatives of natural log functions.</li> </ul>	<ul> <li>Read: Section 3.4, pp 154-163.</li> <li>Upload homework: Section 3.3, questions 5, 9, 13-27 (odd), 31, 35, 37, 41, 43, 59, 89, 92, 99, 101, 103, pp 150-153.</li> </ul>
14	Wed 10/21/2020	<ul> <li>How to find derivatives         using implicit         differentiation and         derivatives using         logarithmic         differentiation.</li> </ul>	<ul> <li>Read: Section 3.5, pp 169-174.</li> <li>Upload homework: Section 3.4, questions 5, 7, 8, 9-23 (odd), 33, 89, 95, 97, 99, pp 164-168.</li> <li>Submit Quiz 3-1 (covers sections 3.1 through 3.3). Due Saturday 10/24/2020 at 11:55 pm ET.</li> </ul>
15	Mon 10/26/2020	<ul> <li>How to find derivatives of inverse functions and how and when to apply various differentiation rules.</li> </ul>	<ul> <li>Read: Section 3.6, pp 178-181.</li> <li>Upload homework: Section 3.5, questions 5, 7, 9, 15, 19, 21, 23, 27, 31, 37, 51, 59, 69, 75, pp 175-177.</li> </ul>
16	Wed 10/28/2020	<ul> <li>How to solve real-life problems using related rates.</li> </ul>	<ul> <li>Read: Section 3.7, pp 185-189.</li> <li>Upload homework: Section 3.6, questions 3-9(odd), 13, 15, 17, 19, 21, 73, pp 182-184.</li> <li>Submit Quiz 3-2 (covers sections 3.4 through 3.6). Due Saturday 10/31/2020 at 11:55 pm ET.</li> </ul>