VSA Course Assignment Sheet

Course Name: Calculus I

veritas
SCHOLARS ACADEMY

Quarter 3

Day	Class Dates	Daily Learning Objectives Students will learn:	Assignment to be Completed by Class Start Unless Otherwise Indicated
33	Mon 1/25/2021	❑ To interpret the definite integral as a limit of a Riemann sum.	❑ Read: Section 5.3, pp 306-312. ❑ Upload homework: Section 5.2, questions 5-25 (odd), 29, 35, 37, 39, pp 303-305.
34	Wed 1/27/2021	❑ About the Fundamental Theorem of Calculus, the Mean Value Theorem for integrals, the Second Fundamental Theorem of Calculus and the Net Change Theorem. ❑ How to find the average value.	❑ Read: Section 5.4, pp 317-327. ❑ Upload homework: Section 5.3, questions 5, 9, 11, 13, 15, 21, 23, 25, 27, 33, 37, 39, 41, 43, 57, 81, pp 313-316. ❑ Submit Quiz 5-1 (covers sections 4.8 and 5.1). Due Saturday 1/30/2021 at 11:55 pm ET.
35	Mon 2/1/2021	❑ How to practice pattern recognition to find an indefinite integral and use u-substitution and change of variables to evaluate a definite integral, and how to evaluate certain definite integrals of even and odd functions. ❑ About slope fields and how to use them.	❑ Read: Section 5.5, pp 332-340. ❑ Upload homework: Section 5.4, questions 9-17 (odd), 21, 25, 27, 29-39(odd), 43, 45, 53, 57, 75, 83, 103, pp 328-331.
36	Wed 2/3/2021	❑ To recognize limits that produce indeterminate forms. ❑ How to apply L'Hopital's Rule to evaluate a limit.	❑ Read: Section 5.6, pp 345-351. ❑ Upload homework: Section 5.5, questions 5-8 (all), 9, 11, 13, 15, 17, 21, 23, 33, 35, 41, 45, 49, 51, 59, 75, 83, 87, 93, 97, 101, 103, pp 341-344. ❑ Submit Quiz 5-2 (covers sections 5.2 through 5.4). Due Saturday 2/6/2021 at 11:55 pm ET.
37	Mon 2/8/2021	❑ How to recognize and/or rewrite and integrate a rational function using the natural log rule for	❑ Read: Section 5.7, pp 356-361. ❑ Upload homework: Section 5.6, questions 7 (a and b), 9 (b), 13 (b), 15, 19, 21, 25, 45 (b), 65, pp 352-355.

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		integration. ❑ To commit trigonometric function integration rules to memory.	
38	Wed 2/10/2021	❑ How to recognize integrals involving inverse trig functions. ❑ How to integrate functions by rewriting using the process of completing the square.	❑ Read: Section 5.8, pp 365-369. ❑ Upload homework: Section 5.7, questions 5-17 (odd), 23, 33-39 (odd), 49, 51-57 (odd), 65, 69, 73, pp 362-364. ❑ Submit Quiz 5-3 (covers sections 5.4 through 5.6). Due Saturday 2/13/2021 at 11:55 pm ET.
39	Mon 2/15 /2021	❑ About hyperbolic functions and how to recognize similarities to the trig functions. ❑ About applications of catenary and tractrix curves and how to integrate inverse hyperbolic functions.	❑ Read: Section 5.9, pp 373-379. ❑ Upload homework: Section 5.8, questions 3-15 (odd), 19, 23, 25, 29, 35, 39, 55, 63, 65, pp 370-372.
40	Wed 2/17/2021	❑ To become more proficient using integration techniques and applications.	❑ Upload homework: Section 5.9, questions 5, 7, 19, 25, 29, 45, 47, 55, pp 380-382. ❑ Submit Quiz 5-4 (covers sections 5.7 and 5.8). Due Saturday 2/20/2021 at 11:55 pm ET.
41	Mon 2/22/2021	❑ To become more proficient using integration techniques and applications.	❑ Upload homework: chap 5 Study Guide, Part A.
42	Wed 2/24/2021	❑ How to sketch a slope field and graph a solution through a point on the slope field. ❑ About the difference between general solutions and particular solutions and how to use Euler's Method to approximate a solution of a differential equation.	❑ Read: Section 6.1, pp 388-392. ❑ Upload homework: chap 5 Study Guide, Part B. ❑ Submit chap 5 Test. Due Saturday 2/27/2021 at 11:55 pm ET.
43	Mon 3/1/2021	❑ How to use separation of variables to solve differential equations and	❑ Read: Section 6.2, pp 397-401. ❑ Upload homework: Section 6.1, questions 5, 7, 9, 13, 17, 19, 25, 27, 31, 39, 51, 53, 55, 57-60, 73, 75, 79, pp 393-396.

		solve problems involving growth and decay using exponential functions.	
44	Wed 3/3/2021	❑ How to become more proficient at using separation of variables and how to apply differential equations to solve real-life problems.. ❑ How to recognize and solve homogeneous differential equations.	❑ Read: Section 6.3, pp. 405-412. ❑ Upload homework: Section 6.2, questions 3, 5, 9, 11, 13, 21, 33, 41, pp 402-404.
45	Mon 3/8/2021	❑ How to solve and analyze logistic differential equations and use them to model and solve applied problems.	❑ Read: Section 6.4, pp 417-421. ❑ Upload homework: Section 6.3, questions 7, 13, 17, 21, 37, 57, 67, 77, pp 413-416.
46	Wed 3/10/2021	❑ How to solve first-order linear differential equations and use them to solve applied problems.	❑ Read: Section 6.5, pp 424-427. ❑ Upload homework: Section 6.4, questions 3-6, 7, 13, 21, 27, 33, pp 422-423.
47	Mon 3/15/2021	❑ To become more proficient at solving problems involving differential equations and their applications.	❑ Upload homework: Section 6.5, questions 7-13(odd), 19, 29, 37, 57, pp 428-430. ❑ Upload homework: chap 6 Study Guide.
48	Wed 3/17/2021	❑ How to find the area of a region between two curves or intersecting curves using integration and viewing this as an accumulation process.	❑ Read: Section 7.1, pp 444-449. ❑ Submit chap 6 Test. Due Saturday 3/20/2021 at 11:55 pm ET.