When/Where. The Final Exam will take place during 9:00 – 12:30 am on Saturday, December 16th, 2017 in the SSS 114.

Directions. You will have 3 hours to complete the Final Exam and 30 minutes to review your work. No electronic devices will be allowed. No notes will be allowed. On all problems, you will have to show your work to get full credit.

Topics covered and practice problems.

- Approximate integration. Midpoint, trapezoid, and Simpson’s rule. Error. Practice problems §7.7 #1–2, 5–18, 19–21 (especially parts (b) and (c)), 22, 29–31, 36–38, 45–48.
- Improper integrals. Practice problems §7.8 #1–3, 5–42, 49–54, 57–59, 63, 76–79.
- Arc length. Practice problems §8.1 #7–10, 12–13, 17–18, 23–26, 35.
• Polar coordinates. Graphing, computing tangent slopes, area, and arc length of polar functions. Practice problems §10.3 #1–48, 49–51, 54–64; §10.4 #1–44.

• Sequences. Practice problems §11.1 #3–56, 64–78.


• Using Taylor’s Inequality to estimate functions by Taylor polynomials. Practice problems §11.11 #3–10 (don’t graph), 13–21 (parts (a),(b)), 23–26, 27–29 (don’t need to check graphically), 31, 33, 37.

• Differential equations. Initial values. General solutions and solutions with specified initial values. Modeling. Practice problems §9.1 #1–5, 6 (parts (a), (c), (d)), 7, 8 (no graphing required), 9–13, 14–15.


• Separable equations. Practice problems §9.3 #1–10, 11–14

• Models for population growth. Exponential model. Logistic model. Logistic model with harvesting. Practice problems §9.4 #1, 2 (parts (a), (b), (e)), 3–10, 15–16, 17 (not part (e)), 18 (not part (a)), 19 (parts (a) and (b)), 20 (don’t worry about precise graphing in part (b)).

True/False practice quizzes.
(Found in the Review section at the end of each chapter.)

• Chapter 5, #1–18.
• Chapter 7, #5–8, 10–14.
• Chapter 9, #1–4, 7.
• Chapter 10, #4–7.
• Chapter 11, #1–22