MTH 252 Integral Calculus Fall 2020

Instructor and class information:

Instructor: Mike Hruschka CRN: 31296

Office: WOH-103 Class time: MTWRF 9-10 AM

Office Hours: MTWR 10-11 Room: WOH 113

Email: hruschm@linnbenton.edu

Prerequisites: MATH 251 or equivalent

Required Materials: MyMathLab Access Code

course name: Math 252 W2020 Hruschka course ID: hruschka35214

Optional Materials:

Calculus Early Transcendentals by Briggs, Cochran, Gillette (We will use the 3rd edition, but any edition will work.)

Course Description:

The second course in the calculus sequence for students majoring in mathematics, science and engineering. Topics include techniques of integration, numerical integration, improper integrals, applications of integration, and an introduction to differential equations.

Course Objectives: Upon completion of the course, the student will be able to

- 1. Calculate, interpret and communicate the concept of the integral.
- 2. Integrate a variety of functions using multiple techniques.
- 3. Recognize when and how to apply calculus tools to solve problems in business, the sciences and engineering.

Grading:

Homework and in-class work 35%

2 Tests 40% (20% each)

Proficiency Test 5% Final Exam 20%

Grading Scale:

A: 90 -100% B: 80 - 89% C: 70 - 79% D: 60 - 69% F: 0 - 59%

Homework and in-class work:

Homework will be done using MyMathLab. I will also collect some in-class activities. The lowest 2 scores in this category will be dropped.

Tests:

There will be 2 tests during the term and a cumulative final exam. There will also be an integrals proficiency test. The proficiency test must be passed at a 95% or higher to receive any credit. You may retake the proficiency test up to 2 times. Please speak to me **BEFOREHAND** if you have to miss a test. One test score may be replaced by the final exam score.

Office hours:

If you have questions, please come see me and ask. I will always be in my office during office hours, and am generally willing to help any other time you find me in my office and by appointment. I am also available for help in the Learning Center.

Learning Center:

The Learning Center, WH226 (above the Library), is an excellent place to study and to get help with your homework. (Please remember to log on and log off the computer with each visit to the Learning Center.) The other LBCC campuses have similar facilities with Math Help available. The Learning Center also offers 3 hours per week of free individual and small group **tutoring**. Also in the Learning Center is the College Skills Zone, which offers help in study skills and test preparation.

Special Circumstances:

LBCC is committed to inclusiveness and equal access to higher education. If you have approved accommodations through the Center for Accessibility Resources (CFAR) and would like to use your accommodations in the class, please talk to your instructor as soon as possible to discuss your needs. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR Website https://www.linnbenton.edu/cfar for steps on how to apply for services or call 541-917-4789.

Academic Honesty:

I assume that you are ethical and honest. However, if there is an incident of academic dishonesty (cheating), you will receive a score of zero for that test/assignment and the incident will be reported to the college administration for possible further disciplinary action. If there is a second offense, you will receive a grade of F for the course and the incident will be reported to the college administration with a recommendation for disciplinary action.

LBCC Comprehensive Statement of Nondiscrimination:

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

Statement of Inclusion:

The LBCC community is enriched by diversity. Each individual has worth and makes contributions to create that diversity at the college. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill. (related to Board Policy #1015)

Register in MyMathLab:

- 1. Go to https://www.pearson.com/mylab.
- 2. Under Register, select Student.
- 3. Confirm you have the information needed, then select OK! Register now.
- 4. Enter your instructor's course ID: hruschka35214, and Continue.
- 5. Enter your existing Pearson account username and password to Sign In.

You have an account if you have ever used a MyLab or Mastering product.

If you don't have an account, select Create and complete the required fields.

6. Select an access option.

Enter the access code that came with your textbook or that you purchased separately from the bookstore.

- 7. From the You're Done! page, select Go To My Courses.
- 8. On the My Courses page, select the course name Math 252 W2020 Hruschka to start your work.

To sign in later:

- 1. Go to https://www.pearson.com/mylab.
- 2. Select Sign In.
- 3. Enter your Pearson account username and password, and Sign In.
- 4. Select the course name Math 252 W2020 Hruschka to start your work.

To upgrade temporary access to full access:

- 1. Go to https://www.pearson.com/mylab.
- 2. Select Sign In.
- 3. Enter your Pearson account username and password, and Sign In.
- 4. Select Upgrade access for Math 252 W2020 Hruschka.
- 5. Enter an access code or buy access with a credit card or PayPal.

Tentative Calendar:

Week	Topics/Sections				
1	4.9 Antiderivatives 5.1 Approximating Areas Under Curves				
2	5.2 Definite Integrals 5.3 The Fundamental Theorem of Calculus, 5.4 Average Value of a Function, 5.5 Substitution Method				
3	5.5 Substitution Method, 6.1 Position, Velocity, and Net Change				
4	6.2 Area Between Curves, 6.3 Volume by Slicing (Disk Method), Test 1				
5	6.3 Volume by Slicing (Washer Method), 6.4 Volume by Shells				
6	6.7 Physical Applications, 8.1 Basic Integration Techniques				
7	8.1 Basic Integration Techniques, 8.5 Partial Fractions				
8	8.2 Integration by Parts, Test 2				
9	8.3 Trig Integrals, 8.6 , 8.7 Other Methods of Integration and Integration Strategies, 8.8 Numerical Integration				
10	8.9 Improper Integrals, 6.5 Lengths of Curves, 6.6 Surface Area				
11	Final Exam Wednesday 10-11:50 WOH-113				

The instructor reserves the right to make changes to the syllabus/calendar at any time.