### Course Syllabus

**Instructor:** Megan Schoessler  
**Office:** 16C  
**Time:** 10:30 a.m. – 11:20 a.m. daily  
**Office Hours:** 1:30 p.m. – 2:30 p.m. daily  
**Room:** 207  
**Office Phone:** 509-527-4617  
**Website:** web.wwcc.edu/meganschoessler  
**Email:** megan.schoessler@wwcc.edu

**Course Description and Objectives**

MATH 152 is the second in a sequence of four courses for students who are planning to major in engineering, mathematics, or the sciences. Topics include definite integral, integration techniques and applications of integration.

**Prerequisites and Class Policy**

MATH 152 has a prerequisite grade of C- or higher in MATH 151 or permission of the Mathematics Department. (Formerly MATH 125, Calculus with Analytic Geometry II.)

**Office Hours**

Monday through Friday, 1:30 p.m. to 2:30 p.m.. In addition to my scheduled office hour, you may stop by at any time or make an appointment with me. You may also contact me by email or phone. You are responsible for all course material; if you do not understand a concept or problem please don’t hesitate to ask a classmate, a tutor, or me.

**Textbook**

*Calculus for Scientists and Engineers: Early Transcendentals*, by Briggs, Cochran, Gillett, and Schulz. A MyMathLab access code is required for the course. You may choose to purchase only the MyMathLab access code and use the electronic version of the textbook, or you may choose to purchase a hardcopy of the book to use along with the access code. This book is used for MATH& 151, 152, 153, and 254. If you purchased a MyMathLab code for MATH 151/152 within the last two years, you will not have to purchase a new access code. It is your responsibility to watch the videos provided, read the material, and study each of the sections of the book that we cover.

**Technology**

In addition to MyMathLab we will use the mathematical software *Mathematica*. This software is installed on the computers in our classroom and in the Tutoring and Learning Center. WWCC has a site license that will allow students with a valid WWCC email address the use of *Mathematica* at home. Non-calculus computer activity as well as cell phone use are prohibited during class.

**Attendance**

Daily, punctual attendance at every class session is expected. If you should miss a class, you are responsible for all announcements made concerning the course, for the material discussed in class, and for the homework assignment due the following day. Your cell phone is not a necessity for class and therefore will not be used during class. If this is an issue, you may be asked to leave.
**Homework**
Assignments are to be completed in MyMathLab. Due dates are listed in MyMathLab. There will be two assignments per section covered. The first assignment is for “Practice” and will include several problems from the section so that you may practice your skills. The second assignment is a “Skills Check” assignment. The “Skills Check” assignment will include only a few problems and will check to see that you have mastered the material. For the “Skills Check” assignments you will not be allow access to the “View an Example” and “Help Me Solve This” tools. Please attempt assignments by the following class period so that you may ask questions before they are due. You have the opportunity to earn 50% on any problems that were not completed prior to the due date, but this opportunity expires one week after the original due date.

**Quizzes**
Quizzes will be given frequently throughout the quarter. If you are absent on a day that a quiz is given, you will receive a zero score and will not be allowed to make up the quiz.

**Exams**
There will be three mid-term exams. You are required to provide a scientific calculator for each exam. Cell phones, headphones, computers, and sharing calculators are prohibited during exams. Formula sheets for each exam will be provided. It is rare to be allowed to take an exam late and such permission is at my discretion. Every late exam will receive a minimum 20% reduction in score.

**Final Exam**
The Final Exam covers all course material for the quarter. The Final Exam will be given Thursday, March 20th in room 207 from 10:30 a.m. to 12:30 a.m. You may begin the exam as early as 9:30 a.m.

**Notebooks**
You must keep a notebook for our class. The content in your notebook must be neat and organized by section. Your notebook must include:
- worked out solutions to Practice problems
- worked out solutions to Skills Check problems
- all quizzes
- all exams and exam solutions
- all handouts

**Grading Procedure**
Your grade will have the following four categories:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework/Notebook</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm Exams</td>
<td>45%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Grading Procedure**
Assignment of letter grades for the course will be based on the following percentages:

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>93% -- 100%</td>
<td>A</td>
</tr>
<tr>
<td>90% -- 93%</td>
<td>A-</td>
</tr>
<tr>
<td>87% -- 90%</td>
<td>B+</td>
</tr>
<tr>
<td>83% -- 87%</td>
<td>B</td>
</tr>
<tr>
<td>80% -- 83%</td>
<td>B-</td>
</tr>
<tr>
<td>77% -- 80%</td>
<td>C+</td>
</tr>
<tr>
<td>70% -- 77%</td>
<td>C</td>
</tr>
<tr>
<td>67% -- 70%</td>
<td>D+</td>
</tr>
<tr>
<td>60% -- 67%</td>
<td>D</td>
</tr>
<tr>
<td>0% -- 60%</td>
<td>F</td>
</tr>
</tbody>
</table>
Academic Integrity
Academic dishonesty (cheating) is not tolerated and will result in a 0 grade.

Accommodations
A student with a documented disability may request accommodations by contacting Claudia Angus, Coordinator of Disability Support Services, by phone at 527-4262 or by email at claudia.angus@wwcc.edu.

Notes
Plan to spend at least two hours outside of class each day reading the textbook, watching videos, studying, and doing math. Here are some essential resources.

• The TEXTBOOK needs to be your first resource.
• WWCC TLC (Open M-Th from 7:30 a.m. to 6:30 pm and Fri. from 7:30 a.m. to 4:30 p.m.)
• Class notes and recordings posted in MyMathLab.
• Contact me via email/phone or asking questions during the office hour.

Ultimately, YOU are in charge of your own success.

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To Register in MyMathLab
1) Go to this website: www.pearsonmylab.com
2) Under “Register” click on “Student”.
3) Enter the Course ID: **schoessler48134**, and then click “Continue”.
4) If you **have** already used MyMathLab previously for any other course, enter in your username and password now. If you **have not** used MyMathLab previously, click “Create” to create a username and password.
5) Now you will be asked to either purchase an access code online or enter in the access code that you have already purchased.
6) You are now registered in MyMathLab and can begin reading through the textbook, completing homework assignments, etc.
Intended Learning Outcomes

• Analyze the following families of functions. Special attention should be given to each function’s individuality: the shape of its graph, characteristic properties, comparative growth rates, and general uses.
  a. Linear functions.
  b. Power and root functions.
  c. Exponential and logarithmic functions.
  d. General polynomial functions.
  e. Rational functions.
  f. Trigonometric functions.
  g. Inverse functions.

• Successfully apply the following actions to functions from each family listed above.
  a. Read graphs and think graphically.
  b. Read tables and think numerically.
  c. Algebraic skills.
  d. Modeling the real world.

• Successfully apply the following actions to functions from each family listed above both in an algebraic context as well as graphical context.
  a. The arithmetic operations addition, subtraction, multiplication, and division.
  b. Function composition.
  c. Transformations and translations of the type $A \cdot f(b \cdot x + C) + D$ where $f$ is a function from the families listed above and $A, B, C,$ & $D$ are real numbers.

• Successfully apply the concept of a derivative to each of the families of functions listed above.
  a. Find derivatives numerically (by taking arbitrarily find difference quotients).
  b. Visualize derivatives graphically as the slope of the graph.
  c. Interpret the meaning of the first and second derivatives in various applications.
  d. Understand local linearity.
  e. Recognize the derivative as a function in its own right.

• Successfully apply the symbolic methods of differentiation to each of the families of functions listed above.
  a. Formulas for derivative functions.
  b. Powers and polynomials.
  c. Product rule.
  d. Quotient rule.
  e. Chain rule.
  f. Implicit differentiation

• Successfully apply the derivative in solving problems.

• "Going backward" from a derivative to the original function, first graphically and numerically, then analytically.

• Technological skills integrated into the course include, but are not limited to, the following: Effectively use computer graphing software or graphing calculators to explore graphs of functions, to analyze their basic characteristic and properties, and to become more successful in problem solving.

• Optional:
  a. Successfully develop a practical understanding of the definite integral
  b. Limit of Riemann sums.
  c. Connection between derivative and the definite integral.
  d. Compute the definition integral numerically.
  e. Properties of the definite integral and its interpretation as area.