Marshall University
MTH 140: Applied Calculus

Semester and Year	Spring 2017
Course Title	Applied Calculus
Course Number	MTH 140
Section Number	203
CRN	4128
Days and Time	Tuesday, Thursday: 11:00am – 12:15pm
Location	Smith Hall 514
Credit Hours	3
Prerequisites	ACT Math 24; C or better in MTH 127 / 130

Professor	Dr. Anna Mummert
Office	Smith Hall 719
Phone	304 696 3041
E-mail	mummerta@marshall.edu
Office Hours	Monday and Wednesday 9:30 - 10:30am;
	Tuesday and Thursday 2:00 - 3:30pm;
	other hours by appointment

University Policies

By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to

http://www.marshall.edu/academic-affairs/policies/

Academic Dishonesty, Excused Absence Policy for Undergraduates, Computing Services Acceptable Use, Inclement Weather, Dead Week, Students with Disabilities, Academic Forgiveness, Academic Probation and Suspension, Academic Rights and Responsibilities of Students, Affirmative Action, and Sexual Harassment.

Course Description

MTH 140 - Applied Calculus. A brief survey of calculus including both differentiation and integration with applications. Not to be substituted for MTH 229. 3 hours.

Course Learning Outcomes

Student Learning Outcomes for this course	How students will practice each outcome in this course	How student achievement of each outcome will be assessed in this course
Students will identify and use functions appropriately.	In class activities, Homework	Exams
Students will describe the main ideas of Calculus: derivative and integral.	In class activities, Homework	Exams, Projects
Students will compute derivatives and integrals given a table, graph, or equation.	In class activities, Homework	Exams, Projects
Students will use derivatives and integrals to solve real world problems and interpret the results.	In class activities, Homework	Exams, Projects

Recommended Text

Stewart and Day. 2015. *Biocalculus: Calculus for the Life Sciences.* Cengage Learning.

The topics covered in this class correspond to Chapters 1, 2, 3, 4, 5, and 6. Trigonometry will not be covered in this class.

A copy of the textbook is available for short-term borrowing at the front desk of Drinko Library.

Homework

Homework will be due once each week. Homework problems will be done using the on-line program WebWork.

Go to http://webwork.marshall.edu/webwork2. Select S17-Math-140-Mummert. Use your Marshall username and password to login.

You can work with other students on homework, though each person must enter their own solutions. Every class day will begin with time to discuss problems you are having with the homework questions.

Projects

Three projects will be done throughout the semester. We will start each project during class and students will complete the project outside of class. Late projects will only be accepted with an Excused Absence. The start and due dates of each project are as follows.

Start Tuesday	Due Tuesday
January 31	February 7
February 28	March 7
April 4	April 11

Exams

Three in-class exams will be given during the semester. Exam questions will be similar to in-class and homework questions.

1. Thursday, February 2
2. Thursday, March 2
3. Thursday, April 6

Final Exam

There will be a comprehensive final exam in Smith Hall 514 on

- Thursday, May 4, 10:15am - 12:15pm

Final exam questions will be similar to in-class, homework, and exam questions.

Late Assignments

Late assignments will only be accepted with an Excused Absence – university-sponsored activity, student illness, immediate family emergency, short-term military obligation, jury duty or court appearance, religious holiday. Students must provide evidence to justify a University Excused Absence on the first day you return to class.

Late assignment must be turned in within 1 week after you return to class.

Grading Policy

Any student caught cheating will receive a 0 on the assignment and Academic Affairs will be notified.

Homework: 15%
Exams: 40% total, equally weighted
Projects: 30% total, equally weighted
Final Exam: 15%

Percentage ranges for final grades are as follows:

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

Attendance Policy

Attendance is mandatory. Attendance will be taken every day. Students who arrive late will be considered absent and will not be given extra time on exams.

If you are absent with an Excused Absence, then please provide evidence to justify a University Excused Absence on the first day you return to class.

If you are absent for any reason, then it is your responsibility to make up any missed material.

Calculators and Other Technology

You may use a calculator on all work and assignments in this class. A graphing calculator (e.g. TI-84) is not required. You may not use your phone, iPad, laptop, etc. as a calculator on any quiz or exam.

No other technology may be used in class without permission.

Course Webpage

All important course information will be posted on our class MUOnline page.

Tutoring

There a several opportunities for you to get help with any material in this class.

1. Dr. Mummert's office hours.
   - Smith Hall 719: Monday, Wednesday 9:30 - 10:30am; Tuesday, Thursday 2:00 - 3:30pm; other hours by appointment
2. Math department tutoring lab (http://www.marshall.edu/math/tutoringlab.asp).
   - Smith Music 115: Monday - Thursday 10am - 4pm; Friday 10am - 12noon
   - Smith Hall 620: Monday - Thursday 5:00pm - 6:30pm
3. University College Tutoring Center (http://www.marshall.edu/uc/tutoring-services/).

Tentative Course Schedule

Date	Material / Topic Covered
Week 1	Linear functions
Week 2	Exponential functions, logarithm
Week 3	Inverse, composition, logistic growth
Week 4	Project 1, Exam 1
Week 5	Limits, secant and tangent lines, difference quotient
Week 6	Basic and advanced differentiation rules
Week 7	Derivatives from graphs, derivatives from tables
Week 8	Project 2, Exam 2
Week 9	Increasing, decreasing
Week 10	Concave up, concave down
Week 11	Tangent lines, linear approximations
Week 12	Project 3, Exam 3
Week 13	Antiderivatives, indefinite integrals, definite integrals
Week 14	Integration from graphs, integration from tables
Week 15	Word problems
Finals Week	Thursday, May 4, 10:15am - 12:15pm

University Schedule

The complete university schedule can be found at

www.marshall.edu/calendar/academic/spring2017.asp