Marshall University
Math 140H: Applied Calculus Honors (WI)

Semester and Year	Fall 2014
Course Title	Applied Calculus Honors
Course Number	Math 140H
Section Number	101
CRN	4459
Days and Time	Monday, Wednesday, Friday – 12:00pm - 12:50pm
Location	Smith Hall 509
Credit Hours	3
Prerequisites	ACT Math 25; SAT Math 580; C or better in MTH 127; MTH 130E; MTH 130; MTH 130H; MTH 132.
Instructor	Dr. Anna Mummert
Office	Smith Hall 721
Phone	304 696 3041
E-mail	mummerta@marshall.edu
Office Hours	Tuesday, Thursday – 1:00pm - 3:00pm other office 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 140H - Applied Calculus Honors (WI)
A brief survey of calculus including both differentiation and integration with applications. This honors course will also introduce topics from differential equations with applications. 3 hours.

Honors (H)
This course has an honors designator (H) and is limited to students in the Honors College. This course differs from MTH 140 by having an explicit focus on population dynamics and population modeling. To the extent possible, all the concepts in this course will be explored through the lens of changing population size.

Writing Intensive (WI)
This course has a writing intensive designator (WI) and by taking this course you will earn 3 WI credits. During this course you will use graded, ungraded, revised, and unrevised writing during class, and on in-class work, homework, exams, and a project to explore and enhance your understanding of calculus.

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, Project
Students will compute derivatives and integrals given a table, graph, or equation.	In class activities, Homework	Exams, Project
Students will use derivatives and integrals to solve real world problems and interpret the results .	In class activities, Homework	Exams, Project
Students will explain how exponential and logarithmic functions are used in growth and decay models.	In class activities, Homework	Exams
Students will explain how differential equations can be used to describe population dynamics.	In class activities, Homework	Exams
Students will engage actively with the subject matter through various forms of writing, low, medium, and high stakes.	In class activities, Homework, Exams	Project, Final Exam
Students will enhance their writing skills and strategies.	In class activities, Homework, Exams	Project, Final Exam

Required Texts
Larson. 2009. *Applied Calculus for the Life and Social Sciences*. Houghton Mifflin.

The topics covered in this class correspond to Chapters 1, 2, 3, 4, 6, and 10 from the textbook.

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. Please read the university policy on how to secure an Excused Absence. Most excused absences are obtained from the Dean of Student Affairs.

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

Homework: Homework will be done on-line using WebWork:
http://webwork.marshall.edu/webwork2

Your user name and password are the same as your Marshall user name (email) and password. Homework will be due at midnight every Tuesday and Thursday (starting Thu, Aug 28).

At least two problems on each homework will be writing questions, requiring you to answer in complete sentences. These writing questions will be due at the beginning of class the following day.

Please bring any questions that you have about the homework problems to class. We will begin every class with your questions. Additional computational practice problems from the textbook will be listed on our course MUOnline page.

Project: One project will be given during the semester. We will start the project during class after the first exam and students will complete the project outside of class. The due date for the project will be announced the day the project is started.

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

- Friday, October 3
- Friday, November 21

At least two problems on each exam will be writing questions, requiring you to answer in complete sentences.

Final exam: The final exam will be given in Smith Hall 509 on

- Friday, December 12, at 10:15am - 12:15pm

The final exam will be comprehensive. Final exam questions will be writing questions, requiring you to answer in complete sentences.

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

Assignment	Points	Final Grade, Percent	Letter Grade
Homework	200	90 - 100	A
Project	200	80 - 89	B
Exam 1	200	70 - 79	C
Exam 2	200	60 - 69	D
Final Exam	200	0 - 59	F

Attendance Policy
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 secure an Excused Absence immediately.

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 exam.

Cell phones may not be used in class.

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

Tentative Course Schedule

Week 1	1.1, 1.2
Week 2	1.3, 1.4, 1.5, 1.6
Week 3	2.1, 2.2, 2.3
Week 4	2.4, 2.5
Week 5	2.6, 3.1, 3.2
Week 6	3.3, Exam 1
Week 7	Project 1, 3.7
Week 8	4.1, 4.2, 4.3
Week 9	4.4, 4.5, 4.6, logistic growth
Week 10	6.1, 6.4
Week 11	6.4, estimating integrals from tables and graphs
Week 12	differential equations
Week 13	Exam 2
Week 14	differential equations

University Schedule

The complete university schedule can be found at
www.marshall.edu/calendar/academic/fall2014.asp