

## **Important Notice:**

- Course begins on MUonline & MyMathLab on **January 12** and ends on **May 08 (at Noon)**.
- All exams will be proctored by a third party online proctoring company (via a webcam on your own computer) or in person by the instructor in a campus computer lab. Details later in the syllabus.
- Students will do homework (no quizzes on MUonline) on MyMathLab. Students will buy a special version of the textbook (details below) that comes with an access code to MyMathLab (use the course code: **aluthge73378**). More details below.

Syllabus: MTH 127 Online - Department of Mathematics – Marshall University - Spring 2015

## **MTH 140-Applied Calculus – Section 205 – CRN 4131 – online (3 credits)**

Department of Mathematics, College of Science, Marshall University.

**Instructor:** Dr. Ari Aluthge (A-luth-gay), [aluthge@marshall.edu](mailto:aluthge@marshall.edu), (304) 696 3050.

### Office and Office Hours

#### **Office Hours:**

You can e-mail me with the “*Internal Mail*” tool on MUonline. Since many of my students take face-to-face classes on campus, they can look me up in person. My office is in Morrow Library (old library) room 109. My “on-campus” office hours this semester are: 2:00 pm to 5:00 pm on Tuesday and Thursday. I prefer to communicate through the “Internal Mail” tool on MUonline.



#### About me:

I have been teaching at Marshall University since 1990. My credentials include a Ph.D. from Vanderbilt University where I studied operator theory and other topics in mathematics. I enjoy teaching very much. Lately I have been working with local math teachers on several projects. I also enjoy teaching mental mathematics.

### Course Materials and Online Resources

#### **Required Textbook:**

- A special three-hole-punched, loose-leaf version of the textbook, *Calculus and Its Applications, 10<sup>th</sup> Edition* (by Bittinger) that comes with an access code to MyMathLab® at (<http://www.pearsonmylabandmastering.com/northamerica/>). ISBN: **9780321772060** . More details about MyMathLab® later in the syllabus.
- The book can be ordered online at [The Marshall University Bookstore](#) or directly from Pearson publishing at [www.pearsonhighered.com](http://www.pearsonhighered.com). (At MU Bookstore, the book costs \$148 and it costs \$135 from the publisher).
- Students will use the course code: **aluthge73378** on MML to do their homework.
- **Caution:** Please do not buy used books or any other version of the book without MML access code. The MML access code alone can cost over \$100.
- **Caution:** Face-to-face MTH 140 classes on campus use a different textbook. Make sure to buy the correct textbook (with MML access code).
- **Recommended:** A graphing calculator (will be allowed during tests and homework). Cell phones, especially smart phones, will not be allowed in place of a calculator.

- **There is a page containing links to several online guides (on calculators). See the "Online Calculator guides" icon on the home page of the course.**
- **There is also a page containing some links for online resources. See the "Online Resources" link on the home page of the course.**

## Technical Requirements

For minimum hardware/software requirements please see:

[http://www.marshall.edu/muonline/computer\\_requirements.asp](http://www.marshall.edu/muonline/computer_requirements.asp)

Be sure to run the free web browser tune-up:

<http://www.marshall.edu/muonline/hardwaresoftwarecheck.asp>

You will need to have several plug-ins (software) installed on your computer. These plug-ins are all free. You will need **Real Player** and **Flash Player** to experience the streaming video and audio clips that are part of the course. You can easily check your computer to see if you have these programs (and if you don't install them for free), by clicking on this link:

[http://www.marshall.edu/muonline/computer\\_requirements.asp](http://www.marshall.edu/muonline/computer_requirements.asp)

If you have technical problems, please go to the Help Desk:

<http://www.marshall.edu/ucs/cs/helpdesk/>

FAQ – Frequently Asked Questions

<http://www.marshall.edu/muonline/technicalfaq.asp>

Students will need a [webcam](#) for their computer if they decide to take the tests on their own computer. (But they can come to campus and take the test on a campus computer in a computer lab).

### **HELP DESK PHONE NUMBERS:**

(304) 696-3200 (Huntington, WV)

(304) 746-1969 (Charleston, WV)

(877) 689-8638 (Toll free)

## Course Details

**Prerequisites:** Math ACT 24 or Math SAT 550 or MTH 127 concurrent or MTH 130 concurrent .

**Course Description:** A brief survey of calculus including both differentiation and integration with applications. This course is not a substitute for MTH 229.

**Course Objectives:** This course is intended for certain science and technology majors who wish to learn the rudiments of calculus. Theory is minimized and applications are emphasized.

**Course Contents:** Most of Chapters R through 4 and Sections 5.6 -5.7 & 6.1- 6.2

- **Review of Algebra**
- **Limits and Differentiation**
- **Applications of differentiation**
- **Exponential and logarithmic functions**
- **Integration and applications**
- **Functions of several variables (Partial Derivatives)**

**Learner Outcomes:** Upon completion of this course, students will have an understanding of the concepts of differential and integral calculus. They will be able to apply these concepts to solve real world applications. In particular, upon completion of this course, students will

- employ quantitative and analytical methods to solve problems drawn from basic algebra and geometry.
- verbally explain the meaning of limits, derivatives, and integrals in their own words and in the context of specific problems.

- evaluate limits, derivatives, and integrals of algebraic, exponential, and logarithmic functions numerically, graphically, and symbolically.
- apply the techniques of calculus to answer questions about the analytic geometry of functions, including tangent lines, local extrema, and absolute extrema.
- interpret symbolic and numerical results in real-world terms, and analyze the validity of their results in a real-world setting.
- apply techniques of calculus to solve applied problems from fields such as engineering and the sciences.

**Practicing Learner Outcomes:** Students will practice above learner outcomes by

- reading and studying the textbook.
- reading and studying lecture notes (with many worked out examples.)
- reading and studying the PowerPoint presentations (with illustrated examples from the book.)
- watching and studying the Video clips available on the course website.
- solving the suggested homework problems.
- reviving the provided solutions to selected exercise problems.

**Assessing Learner Outcomes:** Learner outcomes will be assessed by homework and exams.

### Some Helpful Advice

- **For each section, I have included the following in separate files in this order:**
  - Detailed lecture notes with hundreds of worked out problems.
  - A PowerPoint presentation.
  - A page containing a video link or playlist (for most sections)  
(If you have difficulty with videos, please contact me)
  - Solutions to exercise problems #3, 7, 11, etc.
  - PowerPoint presentations and videos are also available on MyMathLab and students are required to view them as a part of their homework.
- **I suggest the following approach:**
  - Read the syllabus and take the syllabus quiz on Blackboard (counts for the grade).
    - The course is divided in to three units. Each unit consists of several chapters.
    - Begin reading the text for each section of the textbook.
    - Next read my lecture notes including worked out examples.
    - Then view the PowerPoint presentation.
    - Next go and view the video (if there is a video for that section)
    - Do the HW on MML (<http://www.pearsonmylabandmastering.com/northamerica/>. code: aluthge73378)
    - If you need to study more, check the [online resources](#) page from the home page.
    - Take the “MTH 140 Practice Exam” to become familiar with test taking process before taking Exam 1
    - At the end of each unit, take the unit exam (these will be proctored by via a webcam).  
But students can also take the exam by coming to a campus computer lab. [Details below.](#)
    - At the end of the semester, take the final exam (proctored via a webcam or in a campus lab).
- **Getting Help From The Instructor:**
  - If you need help, please do not hesitate to contact me.
  - It is my job to help my students. [But you have to ask, if you need help.](#)
  - Contact me through “Internal Mail”, or at [aluthge@marshall.edu](mailto:aluthge@marshall.edu) or (304) 696 3050.
  - I prefer to communicate through the Internal Mail tool on MUonline.

## 2014 Spring Semester Schedule – MTH 140

### Spring 2014 – MTH 140 – Homework Schedule (for MyMathLab) and Exams Schedule (for Blackboard)

Homework or Exam	<u>Open</u> at <b>12:00 AM</b> on	<u>Due</u> : by <b>11:59 PM</b> on Earn <b>100%</b> of possible points on HW	<u>Close</u> (late due HW) at <b>11:59 PM</b> on (3% a day penalty on HW during this period)
Syllabus Quiz	Please read the syllabus and take the Syllabus quiz on Blackboard by February 15, 11:59 PM (counts for the grade)		
Orientation HW	Very important. Do this <u>first</u> to learn how to enter your answers including graphs. Open always on MML		
HW R.1	Saturday, January 10	Sunday, January 25	Sunday, February 1
HW R.2	Saturday, January 10	Sunday, January 25	Sunday, February 1
HW R.3	Saturday, January 10	Sunday, January 25	Sunday, February 1
HW R.4	Saturday, January 10	Sunday, January 25	Sunday, February 1
HW R.5	Saturday, January 17	Sunday, February 1	Sunday, February 8
HW R.6	Saturday, January 17	Sunday, February 1	Sunday, February 8
HW 1.1	Saturday, January 17	Sunday, February 1	Sunday, February 8
HW 1.2	Saturday, January 17	Sunday, February 1	Sunday, February 8
HW 1.3	Saturday, January 17	Sunday, February 1	Sunday, February 8
HW 1.4	Saturday, January 24	Sunday, February 8	Sunday, February 15
HW 1.5	Saturday, January 24	Sunday, February 8	Sunday, February 15
HW 1.6	Saturday, January 24	Sunday, February 8	Sunday, February 15
HW 1.7	Saturday, January 24	Sunday, February 8	Sunday, February 15
HW 1.8	Saturday, January 24	Sunday, February 8	Sunday, February 15
Practice Exam	Please take the “MTH 140 Practice Exam” to become familiar with test taking process before taking Exam 1		
<b>Exam 1</b>	<b>Saturday, January 24</b>	Sunday, February 15 (11:59 PM)	<b>Close on 2/15, No “late due” option</b>
<b>Unit 1 work ends (and Unit 2 starts) here</b>			
HW 2.1	Saturday, January 31	Sunday, February 22	Sunday, March 1
HW 2.2	Saturday, January 31	Sunday, February 22	Sunday, March 1
HW 2.3	Saturday, January 31	Sunday, February 22	Sunday, March 1
HW 2.4	Saturday, February 7	Sunday, March 1	Sunday, March 8
HW 2.5	Saturday, February 7	Sunday, March 1	Sunday, March 8
HW 2.6	Saturday, February 7	Sunday, March 1	Sunday, March 8
HW 2.7	Saturday, February 14	Sunday, March 8	Sunday, March 15
HW 3.1	Saturday, February 14	Sunday, March 8	Sunday, March 15
HW 3.2	Saturday, February 14	Sunday, March 8	Sunday, March 15
HW 3.3	Saturday, February 21	Sunday, March 22	Sunday, March 29
HW 3.4	Saturday, February 21	Sunday, March 22	Sunday, March 29
HW 3.5	Saturday, February 21	Sunday, March 22	Sunday, March 29
<b>Exam 2</b>	<b>Saturday, February 21</b>	Sunday, March 29 (11:59 PM)	<b>Close on 3/29, No “late due” option</b>
<b>Unit 2 work ends (and Unit 3 starts) here</b>			
HW 4.1	Saturday, March 21	Sunday, April 5	Sunday, April 12
HW 4.2	Saturday, March 21	Sunday, April 5	Sunday, April 12
HW 4.3	Saturday, March 21	Sunday, April 5	Sunday, April 12
HW 4.4	Saturday, March 28	Sunday, April 12	Sunday, April 19
HW 4.5	Saturday, March 28	Sunday, April 12	Sunday, April 19
HW 5.6	Saturday, April 4	Sunday, April 19	Sunday, April 26
HW 5.7	Saturday, April 4	Sunday, April 19	Sunday, April 26
HW 6.1	Saturday, April 11	Sunday, April 26	Sunday, May 3
HW 6.2	Saturday, April 11	Sunday, April 26	Sunday, May 3
<b>Exam 3</b>	<b>Saturday, April 11</b>	Sunday, May 3 (11:59 PM)	<b>Close on 5/3, No “late due” option</b>
<b>Unit 3 work ends here. Start reviewing for the final.</b>			
<b>Final Exam</b>	<b>Saturday, April 11</b>	<b>Friday, May 8 (12:00 Noon)</b>	<b>Close on 5/8, No “late due” option</b>

## Course Grading

- Your grade will be based on HW assignments, unit exams, and the final exam, all done online.
- There are 36 HWs (one HW for each section – each worth 3 points). There is a syllabus quiz - worth 2 pts. So there are 110 total possible points ( $3 * 36 + 2$ ) from HWs and the syllabus quiz.
- There are three unit exams. Each Unit Exam is on the material from that unit and has 21 multiple-choice questions. Each question is worth 5 points. So each exam is worth 105 points (21 times 5). The three exams will be worth 315 points (3 times 105) towards the semester's points total.
- The Final exam is comprehensive and has 22 multiple-choice questions. Each question is worth 5 points. So the final exam is worth 110 points (22 times 5) towards the semester's points total.
- So there are possible 535 points ( $110 + 315 + 110 = 535$ ) for students to earn.
- Letter grades will be assigned as follows:
  - A = 450 – 535 points
  - B = 400 – 449.99 points
  - C = 350 – 399.99 points
  - D = 300 – 349.99 points
  - F = 0 – 299.99 points
- **Students should concentrate on the "Total" points column in their grade sheet. Do not pay attention to the percentage column. In order to earn an A, a student must accumulate a minimum of 450 points. In order to secure a B, a student must accumulate a minimum of 400 points, etc.**
- Students will have **unlimited time** and **unlimited number of attempts** on each HW (as long as they finish the HW by the deadline). HWs are due on most Sundays at 11:59 PM. But there is a "late due" period that is usually till 4:00 PM on the following Friday. **During that period, the point value students can earn will decrease by 4% per day. This applies only for the questions student attempt after the original due date.**
- On each exam, student will get only one attempt. Each exam is 2 hours long.

## Exams and Homework

- All homework will be done on MML (<http://www.pearsonmylabandmastering.com/northamerica/>). There is a separate document (**Instructions to MML for MTH 140**) with instructions for logging into MML. Homework is due on a weekly basis. These deadlines will not be extended for any reason.
- All exams are taken on MUonline and will be proctored. Will need a webcam. More details about exam taking later in a separate document (**Instructions about taking exams for MTH 140**).
- A formula sheet (for exams) will be provided and a graphing calculator is allowed.
- **Students' performances on exams and homework must reflect their own ability. Any attempt to cheat on exams will not be tolerated. Students found cheating will receive an F for the course and the incident will be reported to the administration for further action.**
- Please visit [http://www.marshall.edu/academic-affairs/?page\\_id=802](http://www.marshall.edu/academic-affairs/?page_id=802) for more information university policies.

## University Policies:

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 [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs) and clicking on "Marshall University Policies." Or, you can access the policies directly by going to [http://www.marshall.edu/academic-affairs/?page\\_id=802](http://www.marshall.edu/academic-affairs/?page_id=802) Read about: 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/ Sexual Harassment.

## On-Campus Requirements

Though there is no requirement for you to come to campus, you are encouraged come and see me for help. You can communicate with me via the course "Internal Mail" tool. All of your assignments are submitted electronically through the course "Quizzes and Exams" Tool and all exams are timed and taken online through the "Quizzes and Exams" Tool.

### Course Policies

As mentioned before, this is a 100% online course and all the activities (learning and testing) are done online. Policies of the course are detailed throughout this syllabus.

### Resources

Don't hesitate to contact me directly with questions or concerns. You can reach me through the MUonline "Internal Mail" Tool or if necessary by phone at 304.696.3050. Please don't let your questions hang out there and simmer. If you are not sure about something the best thing to do is to ask about it right away! You can also contact me at my Outlook email address:

[aluthge@marshall.edu](mailto:aluthge@marshall.edu). Something that may seem obvious to me may not be obvious to you at all!

### Support Services:

Marshall University offers a variety of support services to students enrolled in online courses.

### Computer Lab Schedule for Exams:

Students can reserve a spot for each exam in one of the labs listed below by emailing the instructor using the "Internal Mail" tool on MUonline. Spots will be allocated on a "first come first serve" basis. Please plan ahead and reserve a lab for all four exam early enough to guarantee a spot.

Exam	Lab	Date	Time	Capacity	Proctor
Exam 1	Corbly Hall 330	Feb 13 Friday	9 AM – 3 PM	30 students	Aluthge
Exam 2	<i>Harris Hall</i> 444	Mar 27 Friday	9 AM – 3 PM	30 students	Aluthge
Exam 3	Corbly Hall 330	May 1 Friday	9 AM – 3 PM	30 students	Aluthge
Final Exam	Corbly Hall 332	May 6 <i>Wednesday</i>	9 AM – 3 PM	30 students	Aluthge



## MyMathLab Student Registration Instructions:

### To register for Spring 2015 - MTH 140 - Section 205 (Aluthge):

1. Go to [www.pearsonmylabandmastering.com](http://www.pearsonmylabandmastering.com)
2. Under Register, click **Student**.
3. Enter your instructor's course ID: **aluthge73378**, and click **Continue**.
4. **Sign in with an existing Pearson account or create an account:**
  - If you have used a Pearson website (for example, MyMathLab, or MyPsychLab), enter your Pearson username and password. Click **Sign in**.
  - If you do not have a Pearson account, click **Create**. Write down your new Pearson username and password to help you remember them.
5. **Select an option to access your instructor's online course:**
  - Use the access code that came with your textbook or that you purchased separately from the bookstore.
  - If not, buy access using a credit card or PayPal.
  - If available, get 14 days of temporary access (Look for a link near the bottom of the page).
6. Click **Go To Your Course** on the Confirmation page. Under MyLab & Mastering New Design on the left, click **Spring 2015 - MTH 140 - Section 205 (Aluthge)** to start your work.

### Retaking or continuing a course?

If you are retaking this course or enrolling in another course with the same book, be sure to use your existing Pearson username and password. You will not need to pay again.

### To sign in later:

1. Go to [www.pearsonmylabandmastering.com](http://www.pearsonmylabandmastering.com)
2. Click **Sign in**.
3. Enter your Pearson account username and password. Click **Sign in**.
4. Under MyLab & Mastering New Design on the left, click **Spring 2015 - MTH 140 - Section 205 (Aluthge)** to start your work.
5. **Do the Orientation HW**: Please do this first to learn how to enter your answers including graphs.

### Additional Information:

See **Students > Get Started** on the website for detailed instructions on registering with an access code, credit card, PayPal, or temporary access.

### Notes:

- Students will have **unlimited time** and **unlimited number of attempts** on each HW (as long as they finish the HW by the deadline and before it is closed).
- HWs are due on most Sundays at 11:59 PM. But there is a "late due" period that is usually till 11:59 PM on the following Sunday.
- **During that period, the point value students can earn will decrease by 3% per day. This applies only for the questions student attempt after the original due date.**

## Using LockDown Browser and a webcam (Respondus Monitor) for Online Exams:

- This course requires the use of LockDown Browser for taking online exams.
- The computer used for taking exams must also have a built-in or external webcam.
- The LockDown Browser software prevents a user from accessing other applications or going to other websites during an exam.
- The webcam (sometimes called Respondus Monitor) records you during the exam to ensure you're only using resources that are permitted.
- Together, these tools make it possible for students to take online exams from any location, and at times that are convenient.
- It also creates a fair testing environment for everyone in the course.
- **Watch the following video for more information:** [Overview for Students](#) (video)
- You will need to download and install LockDown Browser to your computer and use it to take tests (instead of using your normal browser.) The download URL is: <http://www.respondus.com/lockdown/installinfo.pl?ID=323615594> See the video under "Additional Resources" below for instructions for downloading.
- **Caution: Don't download a copy of LockDown Browser from elsewhere on the Internet; those versions won't work at our Marshall University.**
- **Review this list before taking an exam with LockDown Browser and Respondus Monitor:**
  - Ensure you are in a location where you won't be interrupted
  - Turn off all mobile devices, phones, etc.
  - Clear your desk of all external materials – books, papers, other computers, or devices
  - No one else should be in the room with you
  - Remain at your desk or workstation for the duration of the test
  - **Start LockDown Browser. Select the first option "Blackboard Learn Production" from the dropdown menu. It will take you to Blackboard (MUonline) page. Log onto MUonline. Then select this course and the exam you are taking. Click "BEGIN". Then select the first option (Taking the exam using a webcam). Then follow the instructions. The second option is if you are taking the exam in a lab.**
  - If an interruption occurs during the exam, briefly explain what happened by speaking directly to your webcam
  - You cannot exit the exam until all questions are completed and submitted for grading.
  - **Practice Exam:**  
Please take the "MTH 140 Practice Exam" to become familiar with test taking process before taking Exam 1
- **Additional Resources:**
  - (pdf) [Student Quick Start Guides](#)
  - (video) [How to Download & Use LockDown Browser](#)