MAC 2312 – Calculus with Analytic Geometry II
Course Syllabus – Fall 2020

**Professor:** Ms. Sandra Draper, MA
E-mail address: sdraper2@mail.valenciacollege.edu

**Office location:** Zoom
**Office phone:** (407) 582 – 1436

**Course:** MAC2312
**CRN:** 14740
**Time:** online
**Location:** online

**Student Engagement Hours in Zoom:**
- **Monday:** 2:30 pm – 3:30 pm
- **Tuesday:** 2:30 pm – 3:30 pm
- **Wednesday:** 2:30 pm – 3:30 pm
- **Thursday:** 2:30 pm – 3:30 pm

**Calculus 2 Meeting in Zoom:**
- **Monday:** 6:30 pm – 8:30 pm

**Student Engagement Hours by Email:**
- **Monday:** 3:30 pm – 4:30 pm
- **Tuesday:** 3:30 pm – 4:30 pm
- **Thursday:** 3:30 pm – 4:30 pm
- **Friday:** 11:00 am – 12:00 pm
  *Other times available by appointment.*

**Course Description:** Calculus with Analytic Geometry II
Prerequisite: Minimum grade of C in MAC 2311 or appropriate score on an approved assessment. Topics include differentiation and integration, techniques of integration, conic sections, and infinite series. Gordon Rule course. Minimum grade of C required if MAC 2312 is used to satisfy Gordon Rule and general education requirements.

**Text:** WebAssign that corresponds to *Calculus: Early Transcendentals, 8th* edition, by James Stewart. You do not specifically need the hardcopy of the text if you purchase WebAssign access since that access will come with an interactive textbook. The access codes can be purchased through [www.webassign.net](http://www.webassign.net).
**Course Learning Outcomes:**
The student will be able to:

- integrate functions using various techniques.
- apply integration mathematically as well as in other fields of study.
- model and solve functions using parametric equations and polar coordinates.
- evaluate sequences and series.
- compare series using various methods.

**Technology:**
- A graphing calculator is required; a TI – 84 graphing calculator is recommended.
- WebAssign for graded homework and practice.
- Webcam for HonorLock for testing.

**Attendance:** Regular attendance is determined by consistent participation in the course. You need to do your assignments, meet the due dates, and communicate with Ms. Draper regularly. All work for the week will be due at 11:59 pm the following Monday.

**Videos:** The videos of Ms. Draper teaching will be posted in the appropriate weeks in Canvas. Watch them, take notes, and work through the problems with Ms. Draper. Communicate with Ms. Draper about questions that you have.

**Tests:** There will be 4 tests throughout the semester. Tests are to be proctored.
- You need be sure that you do not miss the first HonorLock assignment.
- You will take your tests using HonorLock.
- The test will be open Saturday through Wednesday, the due date.
- All work for the week will still be due at 11:59 pm the following Monday.
- You may only use an approved calculator for your test, no apps or other electronic devices.

**Homework:** Homework is essential to passing this course! It will be graded. It is highly recommended that you complete homework assignments as the sections are covered. All work for the week will be due at 11:30 pm the following Monday. No late work is accepted. A word of warning: completing the homework problems by any means other than the ones covered in class is detrimental to your learning and will result in you not being prepared for the quizzes and exams. Don’t take shortcuts, even if you know how!

**Quizzes:** There will be a quiz every three to four lessons, as scheduled. You are to do the quiz on paper and submitted as a jpeg, gif, or pdf on Canvas. It will cover the sections stated. The quiz will be due at 11:59 pm on Monday. No late work is accepted. The lowest quiz grade of
the semester will be dropped. You may only use an approved calculator for your quizzes, no apps or other electronic devices.

**Final:** The cumulative final exam must be taken no later than **Wednesday, December 9, 2020, by 11:59 pm.** The HonorLock proctor rules apply here. The exam will be open Monday through Wednesday. If you do not take the final exam, it will result in an F in the class.

**Tentative Schedule:**

<table>
<thead>
<tr>
<th>Week</th>
<th>Material</th>
<th>Graded Assignments</th>
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<tbody>
<tr>
<td>Week 1</td>
<td><strong>Intro</strong>&lt;br&gt;Getting to Know WebAssign&lt;br&gt;5.5 The Substitution Rule&lt;br&gt;6.1 Areas Between Curves</td>
<td>Intro&lt;br&gt;Syllabus Quiz&lt;br&gt;HW WebAssign&lt;br&gt;HW 5.5&lt;br&gt;HW 6.1</td>
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<td>Week 2</td>
<td><strong>Practice HonorLock Assignment</strong>&lt;br&gt;6.2 Volumes&lt;br&gt;6.3 Volumes by Cylindrical Shells&lt;br&gt;<em>Due Tuesday since Monday is Labor Day</em></td>
<td>HL Quiz&lt;br&gt;HW 6.2&lt;br&gt;Quiz 5.5-6.2&lt;br&gt;HW 6.3</td>
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<td>Week 3</td>
<td><strong>6.4 Work</strong>&lt;br&gt;6.5 Average Value of a Function&lt;br&gt;<em>Test #1 Chapter 5 - 6 due Wednesday, Sept. 16</em></td>
<td>HW 6.4&lt;br&gt;HW 6.5&lt;br&gt;Quiz 6.3-6.5&lt;br&gt;<em>Test #1</em></td>
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<td>Week 4</td>
<td><strong>7.1 Integration by Parts</strong>&lt;br&gt;7.2 Trigonometric Integrals</td>
<td>HW 7.1&lt;br&gt;HW 7.2</td>
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<td>Week 5</td>
<td><strong>7.3 Trigonometric Substitution</strong>&lt;br&gt;7.4 Integration of Rational Functions by Partial Fractions</td>
<td>HW 7.3&lt;br&gt;HW 7.4&lt;br&gt;Quiz 7.1-7.4</td>
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<td>Week 6</td>
<td><strong>7.5 Strategy for Integration</strong>&lt;br&gt;7.7 Approximation Integration&lt;br&gt;7.8 Improper Integrals&lt;br&gt;<em>Test #2 Chapter 7 due Wednesday, Oct. 7</em></td>
<td>HW 7.5&lt;br&gt;HW 7.7&lt;br&gt;HW 7.8&lt;br&gt;Quiz 7.5-7.8&lt;br&gt;<em>Test #2</em></td>
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| Week 7 10/6 to 10/12 | 11.1 Sequences  
11.2 Series | HW 11.1  
HW 11.2 |
|---------------------|----------------------|-------------|
| Week 8 10/13 to 10/19 | 11.3 The Integral Test and Estimate of Sums  
11.4 The Comparison Tests | HW 11.3  
Quiz 11.1-11.3  
HW11.4 |
|---------------------|----------------------|-------------|
| Week 9 10/20 to 10/26 | 11.5 Alternating Series  
11.6 Absolute Convergence and the Ratio and Root Test | HW 11.5  
HW 11.6 |
|---------------------|----------------------|-------------|
| Week 10 10/27 to 11/2 | 11.7 Strategy for Testing Series  
11.8 Power Series | HW 11.7  
Quiz 11.4-11.7  
HW 11.8 |
|---------------------|----------------------|-------------|
| Week 11 11/3 to 11/9 | 11.9 Representation of Functions as Power Series  
11.10 Taylor and Maclaurin Series  
*Test #3 Chapter 11 due Thursday, Nov. 12* | HW 11.9  
HW 11.10  
Quiz 11.8-11.10  
*Test #3* |
|---------------------|----------------------|-------------|
| Week 12 11/10 to 11/16 | 10.1 Curves Defined by Parametric Equations  
10.2 Calculus with Parametric Curves  
*Wednesday is Veteran’s Day Holiday* | HW 10.1  
HW 10.2 |
|---------------------|----------------------|-------------|
| Week 13 11/17 to 11/23 | 10.3 Polar Coordinates  
10.4 Areas and Lengths in Polar Coordinates | HW 10.3  
HW 10.4  
Quiz 10.1-10.3 |
|---------------------|----------------------|-------------|
| Week 14 11/24 to 11/30 | 10.5 Conic Sections  
10.6 Conic Sections in Polar Coordinates  
*Test #4 Chapter 10 due Wednesday, Dec. 2 Thanksgiving Week* | HW 10.5  
HW 10.6  
Quiz 10.4-10.6  
*Test #4* |
|---------------------|----------------------|-------------|
| Week 15 12/1 to 12/7 | 8.1 Arc Length  
8.2 Area of a Surface of Revolution  
Students start reviewing for final exam. | HW 8.1  
HW 8.2  
Quiz 8.1-8.2 |
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<tr>
<td>Week 16 12/8 to 12/12</td>
<td><em>Cumulative Final Exam due Wednesday, December 9</em></td>
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**Grading:** Your grades will be computed according to the following percentages:

- 4 Tests: 60%
- Quizzes and assignments (2 dropped): 20%
- Cumulative Final Exam: 20%

**Grading Scale:**

- 90 – 100: A
- 80 – 89: B
- 70 – 79: C
- 60 – 69: D
- 59 or below: F

**Academic Honesty:** All students are expected to comply with Valencia’s policy on academic honesty. Any student caught cheating on a test or quiz will receive a zero for the assignment, and a course grade of an F may be assigned by the professor.

**Important Dates:**
- Monday, September 7th is Labor Day, so there is no class.
- Wednesday, November 11th is Veteran’s Day, so there is no class.
- Wednesday (11/25) through Sunday (11/29) is Thanksgiving Break, so there is no class.

**Withdrawal:** In order to receive a “W” in this course, you must withdraw by October 31st. If you do not withdraw by the deadline, you will receive a letter grade (A, B, C, D, or F). If you choose to withdraw, you must do so yourself through Atlas.

**Additional Help:** Ms. Draper is your first resource. Utilize the videos! Plan to contact Ms. Draper for help. Visit Valencia College tutors: [https://libguides.valenciacollege.edu/c.php?g=1014597&p=7351770](https://libguides.valenciacollege.edu/c.php?g=1014597&p=7351770)

**Conduct**
- You are encouraged to actively participate and ask pertinent questions by email. Be mindful of internet courtesy.
- Your attitude will greatly affect your ability to succeed in this course.
- Use only the materials allowed in your assignments to help to prepare you for the tests and final exam.

**Special Accommodations**
Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) from the Office for Students with Disabilities (OSD) and discuss specific
needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (WC SSB, Rm. 102, Ph: 407-582-1523, Fax: 407-582-1326, TTY: 407-582-1222).

**Student Assistance Program**
Valencia College is interested in making sure all students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. **Bay Care Behavioral Health Student Assistance Program** (SAP) services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.

**Valencia Core Competencies**
Valencia College wants graduates to possess and demonstrate a set of global competencies including the ability to **THINK, COMMUNICATE, VALUE AND ACT**. In an effort to help you acquire and improve your ability to demonstrate the competencies this course will include activities that require you to:

1. Think clearly, critically and creatively.
2. Communicate with others in written and verbal form.
3. Make reasoned value judgments and responsible commitments.
4. Act purposefully, reflectively and responsibly.

**Disclaimer:** Changes to the syllabus or schedule can be made at any time at the discretion of the professor.