

# Syllabus

## Calculus and Analytic Geometry 2

### Math 208 GH – Spring 2014

<b>Course Title</b>	Calculus and Analytic Geometry 2
<b>Credit Hours</b>	5
<b>Length of Course</b>	16 weeks
<b>Prerequisites</b>	Math 207 with a grade of C or better, or Consent of Department Chairperson
<b>Section</b>	208 GH (section number: 66391)
<b>Classes</b>	Tuesday, Thursday, 10:00 AM – 12:15 PM in Room 3150
<b>Instructor</b>	Marta Hidegkuti e-mail: <a href="mailto:mhidegkuti@ccc.edu">mhidegkuti@ccc.edu</a> Office: Room 3824 D
<b>Office Hours</b>	Monday, Tuesday, Wednesday 12:30 PM – 1:45 PM (Room 3824 D) Tuesday, Thursday 8:30 PM – 9:30 PM (Room 3824 D) Thursday 12:30 PM – 1:45 PM (Math Center) or by appointment Some office hours may be cancelled or re-scheduled due to meetings.
<b>Web Sites</b>	All handouts and announcements will be available on the class's web site, at <a href="http://www.teaching.martahidegkuti.com/Math208/math208_sp14/Math208.html">http://www.teaching.martahidegkuti.com/Math208/math208_sp14/Math208.html</a> In case the web site is down, check at Blackboard. Please e-mail to <a href="mailto:mhidegkuti@ccc.edu">mhidegkuti@ccc.edu</a> if you notice broken links.
<b>Textbook Policy</b>	<b>Due to price consideration, students are welcome to use previous editions of the official textbook, which is</b> Thomas' Calculus, Early Transcendentals by George B. Thomas, Weir, and Hass. (Pearson, 2012; ISBN Number: 978-0-321-662883-1). Most topics will be also covered by handouts posted on the course's web site.

#### Calculator Policy

The use of a scientific calculator is strongly recommended. Students are expected to bring the calculator to class. The optimal calculator is [TI-30X II S](#). The price of this model is between \$15 and \$20. Do NOT purchase a different calculator if it is significantly more expensive. Any calculator different from TI-30X II S has to be approved by the instructor first. If a calculator is able to compute symbolically, (f.e. that  $\sqrt{12} = 2\sqrt{3}$ ), then it is not allowed to be used during quizzes and exams. **During quizzes and exams, students are not allowed to use a graphing calculator. Students are not allowed to use a cell phone as a calculator any time during class.**

#### Supplements

The textbook is bundled with MyMathLab. The use of MyMathLab is **optional**. The course ID of this class is hidegkuti91495 and students can log in at [www.mymathlab.com](http://www.mymathlab.com).

#### Important Dates

First class: Tuesday, January 14  
Exam 1: Thursday, February 20  
Exam 2 : Thursday, April 3

Last day to withdraw from classes: Monday, April 7  
Exam 3 (same as Final Exam): Thursday, May 8  
End of Semester: Saturday, May 10

#### Attendance Policy

Attendance is an essential part of the course. Regular attendance is expected of all students in the course. Attendance will be taken each class period. Students are expected to be on time and to attend the entire session. Please make every effort to arrive to class on time. If you are absent, you are responsible for all work and assignments covered in lecture that day.

#### No-Show Withdrawal (NSW)

Students who do not attend the first two class sessions will be withdrawn from the class by the instructor and issued an NSW.

#### Administrative Withdrawal (ADW)

Students will be administratively withdrawn at midterm if at least two of the following apply:

- 1 Less than 70% of quizzes and tests up to the midterm have been attempted.
- 2 Less than 50% of class sessions up to the midterm have been attended.
- 3 Student missed 4 consecutive classes.

#### Withdrawal from the course

Not attending classes does not constitute withdrawal from the course. After midterm, instructors can no longer drop students from the course. If students stop attending classes after the midterm, the instructor can only assign a grade of F. **If you no longer attend classes, it is essential that you stop by at the registrar's office and officially withdraw from the course to protect your average.** The last day for student initiated withdrawal is Monday, April 7. Before withdrawing from the course, students are encouraged to consult the instructor.

# Grading Policies

Students who register late are responsible for all course work they missed due to their absence.

## Grading Scale

Grading of all assignments, quizzes, and exams will be based on the following scale.

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

## Midterm Grade

The midterm grade will be the weighted average of the grades shown below with their weights.

Exam 1: 45%      Quizzes: 55%

Before determining the grade given for quizzes, the lowest quiz score will be dropped.

## Final Grade

The final grade will be the weighted average of the grades shown below with their weights.

Exam 1: 15%      Exam 2: 20%      Exam 3: 35%      Quizzes: 30%

Before determining the grade given for quizzes, the lowest two quiz scores will be dropped.

Please retain all class-related material until you receive your final grade for the course. The final exams will not be distributed. They will be kept by the instructor for a calendar year after the course and then they will be destroyed.

## Makeup Policy

**Without exception, there will be no making up quizzes.** Permission to make-up an exam is subject to the discretion of the instructor, and will be granted only in cases of emergency. If an absence is anticipated, the student should notify his/her instructor prior to the absence. Students need to present written documentation to make-up an exam. Without exception, students can only make up one exam in the course. All make-up exams will take place on Friday, May 2.

## Academic Integrity

The CCC has no tolerance for violations of academic integrity. Plagiarism and cheating of any kind are serious violations of these standards and will result, minimally, in the grade of F. All course work will be checked for academic integrity. In this course, the first violation will result in an F for the assignment; the second violation will result in course failure. Make-ups and revisions are not available after an infraction of academic integrity. For further information, please refer to the [student policy manual](#).

# General Information

## Class Room Etiquette

At all times, please treat the instructor, other students, and their opinions with respect. Before arriving to class, please **turn off all cell phones, pagers, and other loud devices. Please make every effort to arrive on time for class.** Please refrain from talking while the instructor is lecturing. If you need an extensive review (for example, due to absence) of material presented in class, please see the instructor during office hours. Valuable class time can not be spent on assisting one or a few students to the detriment of the entire class. Office hours are designated to address these problems.

**Eating is not allowed in the class rooms.** Students are allowed to eat only in designated areas such as the cafeteria or student lounge.

Repeated noises such as sniffing, moaning or sighing are generally normal behavior but are very distracting during quizzes and exams. Students are to refrain from making such noises during quizzes and exams. If there is a medical reason making that impossible, the instructor must be notified in advance so that arrangements can be made for a separate room for that student.

## Office Hours

Arrive to office hours prepared. If you have missed a class, be sure to obtain and read all class-related material (handouts, text book section, and class notes). Have a list of specific questions. If you need help with a problem, bring your work on the problem with you. After your questions are answered, please leave so that the next student can enter. Please do not bring food to the instructor's office.

## Contact

At all times, email is the fastest and most efficient method to contact the instructor. If you wish to contact the instructor about grades or attendance or other administrative issues via email, please use your CCC student account. FERPA (Family Educational Rights and Privacy Act) is a federal law that protects the privacy of student educational records: [www.ed.gov/policy/gen/guid/fpco/ferpa/index.html](http://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html). Faculty cannot reveal information about students, or discuss student records over the phone or unsecure e-mail. CCC student e-mail meets FERPA requirements.

If a student wants to receive class-related information via e-mail to an e-mail address different from the student ccc account, they must first complete a release form posted at <http://www.teaching.martahidegkuti.com/shared/resources/ferpa.pdf>.

If you are contacting me about an assignment, please be sure to include your full name in the message and identify the assignment. Please use grammatically correct sentences in your email with punctuation and correct capitalization. Communications such as "can u pls reset my quiz thnx" are not acceptable in this course just as much as they will probably not be acceptable at your future job.

## Academic Support Services

**The Math Center** is a free service open to all students. The Math Center, located in Room 1220, is a place where students can do their homework, study for tests, and participate in group study sessions to gain a better understanding of the course material. The Math Center also serves credit level math classes during specific block times during the week. Visit the Math Center for more information.

**The Tutoring Center** is located in Room 162 in the Larry McKeon Administrative Building. Students are encouraged to seek help and guidance during the course. Students have already paid for this service as part of tuition fees. Please note: in order to receive tutoring, students need to sign up in advance. (773) 907- 4785  
web site: <http://www.ccc.edu/colleges/truman/departments/Pages/Tutoring.aspx>

**The Student Success and Leadership Institute (SSLI)** is located in Room 162 in the Larry McKeon Administrative Building.. For students who need various other support services to achieve their educational goals. (773) - 907-4714,  
web site: <http://www.ccc.edu/colleges/truman/departments/Pages/Career-Services.aspx>

**TRIO Student Support Services** is located in Room 162 in the Larry McKeon Administrative Building. For low-income students, first generation college students, or students with disabilities who need academic support: (773) 907 - 4797. Registration is required at the start of each semester.  
web site: <http://www.ccc.edu/colleges/truman/departments/Pages/TRIO-Student-Support-Services.aspx>

**Disability Access Center** is located in Room 1428. The Center verifies needs pursuant to the American Disabilities Act (ADA), determines student academic accommodations, and issues accommodation letters. Registration is required at the start of each semester. (773) 907 - 4725, web site: <http://www.ccc.edu/colleges/truman/departments/Pages/Disability-Access-Center.aspx>

**The Wellness Center** is located in room 162 in the Larry McKeon Building. Services include: Personal, individual counseling, support groups, stress and time management coaching, referrals to community resources, special support for victims of relationship violence and sexual assault includes one-on-one counseling; safety planning; and referrals to medical care, legal services, and emergency child care. Contact: (773) 907-4786 for an appointment or information. Web site: <http://www.ccc.edu/colleges/truman/departments/Pages/Wellness-Center.aspx>

**GradesFirst** is a student support system that will be used by faculty, advisors and tutors to help students achieve success in their classes. Use GradesFirst to schedule tutoring or advising appointments, or to see communications about your course progress generated by me or your other professors.

# Calendar of Events

Please note that the Calendar of Events is subject to change. Last revised: January 2, 2014

	Tuesday	Thursday
Week 1	January 14 — Class 1	January 16 — Class 2
Week 2	January 21 — Class 3	January 23 — Class 4 Quiz 1
Week 3	January 28 — Class 5	January 30 — Class 6 Quiz 2
Week 4	February 4 — Class 7	February 6 — Class 8 Quiz 3
Week 5	February 11 — Class 9	February 13 — Class 10 Quiz 4
Week 6	February 18 — Class 11	February 20 — Class 12 Exam 1
Week 7	February 25 — Class 13	February 27 — Class 14 Quiz 5
Week 8	March 4 — Class 15	March 6 — Class 16 Quiz 6
Week 9	March 11 — Class 17	March 13 — Class 18 Quiz 7
Week 10	March 18 — Class 19	March 20 — Class 20 Quiz 8
Week 11	March 25 — Class 21	March 27 — Class 22 Quiz 9
Week 12	April 1 — Class 23	April 3 — Class 24 Exam 2
Week 13	April 8 — Class 25	April 10 — Class 26 Quiz 10
☀ ☀ ☀ April 14 – 20 Spring Break ☀ ☀ ☀		
Week 14	April 22 — Class 27	April 24 — Class 28 Quiz 11
Week 15	April 29 — Class 29	May 1 — Class 30 Quiz 12
Week 16	May 6 — Class 31	May 8 — Class 32 Exam 3
May 10 - End of Spring 2014 term		

Last day for student initiated withdrawal: Monday, April 7

## Course Information

**Course Description:** Derivatives of trigonometric and inverse trigonometric functions, logarithmic, and exponential functions. Techniques and applications of integration. Indeterminate forms and L'Hôpital's rule. Improper integrals, series and power series. Writing assignments, as appropriate to the discipline, are part of the course.

**Students the Course is Expected to Serve:** This course is intended for those students who require at least two courses in calculus.

### Course Objectives:

- Differentiate inverse trigonometric, exponential, and logarithmic functions.
- Differentiate and integrate in polar coordinates.
- Apply the concepts of integral calculus to contextual (real-world) scenarios.
- Apply various convergence tests to an infinite series.
- Derive and apply the Taylor series of a function.
- Apply various integration techniques, calculate improper integrals and numerically estimate definite integrals.

**Student Learning Outcomes:** Upon satisfactory completion of the course, students will be able to:

- Apply integration techniques such as partial fractions, trigonometric substitution, or use of integration tables.
- Estimate definite integrals using the Midpoint Rule, Trapezoidal Rule and Simpson's Rule.
- Apply L'Hospital's Rule to calculate limits of functions.
- Evaluate improper integrals.
- Apply integration to computing the area between two curves and the volume of a solid.
- Graph a curve, including the conics, using polar coordinates.
- Differentiate equations in parametric and polar form.
- Calculate the area of regions in polar form using integrals.
- Determine the limit of a sequence.
- Calculate the sum of a geometric series.
- Determine the convergence or divergence of a series using the Integral Test, comparison tests, Alternate Series Test, and Ratio Test.
- Determine the interval of convergence for a power series.
- Determine the McLaurin and Taylor series representation of a function at a point.
- Apply Taylor series to estimate function values and definite integrals.
- Calculate integrals using substitution and integration by parts methods.

### Truman College General Education Goals:

- Upon successful completion of this course, students will demonstrate the ability to
- think critically, abstractly, and logically.
  - communicate effectively in written and oral forms.

# Projected Course Outline

Please note that the Course Outline is subject to change. Last revised: December 29, 2013  
The class's web site will contain a Course Outline that is updated after each class.

## **Week 1**

Review of differentiation and integration (3.1-3.7), Differentiating trigonometric functions and their inverses (3.8, 3.9)

## **Week 2**

The fundamental theorem of calculus (5.4), Differentiating logarithmic and exponential functions (3.8, 7.1, 7.2), Integrating by substitution (5.5)

## **Week 3**

Integration by Parts (8.1), Integrating Trigonometric Functions (8.2), Trigonometric Substitutions

## **Week 4**

L'Hôpital's Rule (4.5), Partial Fractions (8.4), Numerical Integration (8.6), Improper Integrals (8.7)

## **Week 5**

Volumes (6.1, 6.2)

## **Week 6**

Exam Review and Exam 1

## **Week 7**

Arc Length (6.3), Areas of Surfaces of Revolution (6.4), Work (6.5), Center of Mass (6.6)

## **Week 8**

The real number system (Appendix 6), Sequences (10.1)

## **Week 9**

Infinite Series (10.2), Geometric Series (10.2)

## **Week 10**

Integral Test (10.3), Comparison Test (10.4), Root Test and Ratio Test (10.5),

## **Week 11**

Exam Review and Exam 2

## **Week 12**

Alternating Series (10.6), Power Series (10.7)

## **Week 13**

Taylor Series and their Applications (10.8, 10.9, 10.10)

☀ ☀ ☀ April 14 – 20 Spring Break ☀ ☀ ☀

## **Week 14**

Parametrization (11.1), Calculus with Parametric Curves (11.2), Differential Equations (7.2, 9.2)

## **Week 15**

Polar coordinates (11.3, 11.4), Areas and Length in Polar Coordinates (11.5)

## **Week 16**

Final Review and Final Exam