Gannon University
Math 242-02, Fall 2012
Calculus 3
MWF 12:20pm – 1:15pm
Beyer 215

Instructor:	Dr. Geoffrey D. Dietz
Department:	Mathematics
E-Mail:	dietz005@gannon.edu
Office:	Zurn 408
Office Phone:	871-7595
Office Hours:	MW 9am–11am or by appointment
Text:	**Essential Calculus, 1st Edition.** Stewart, 2007
Web Site:	http://webwork.gannon.edu/dietz005/teaching/F12-242.html
WeBWorK:	http://webwork.gannon.edu

1. **Credits and Prerequisites.** Math 242 is worth 3 credits. The prerequisite is Math 141: Calculus 2.

2. **Course Content.** Infinite sequences and series; power series; Taylor series and polynomials; parametric equations; polar coordinates; vectors in the plane and space; vector-valued functions. We will cover Chapters 8–10 from the text listed above. You are expected to read the assigned sections before every class and be prepared to answer questions.

3. **Course Objectives.**
   - Identify whether a given integer sequence has a limit and compute the limit if it exists.
   - Identify general series, power series, and Taylor series.
   - Determine if a given series converges or not and use the appropriate series test.
   - Compute the sum of a geometric series.
   - Match a parametric or polar function with its graph in the plane.
   - Graph parametric and polar functions with a calculator, computer, or by plotting points.
   - Apply calculus methods to these curves.
   - Represent vectors in two and three dimensions graphically and algebraically.
   - Compute dot and cross products of vectors.
   - Determine the equations representing lines and planes in three dimensions given by verbal descriptions.
   - Match equations of quadric surfaces with their graphs.
   - Apply calculus methods to functions defined in terms of vectors.
   - Apply course topics to various scientific fields.

4. **Evaluation.** Homework problems from the text will be assigned in class. Although they will not be collected or graded, correctly solving these problems is essential to prepare for the exams. Online homework (*WeBWorK*) problems will be assigned and graded regularly. Further instructions, including due dates, can be found below or at the URL listed above. Three exams will be held during regular class time, and the dates may be subject to change.

5. **Grading.** Final grades will be based on

   A: 93–100 A-: 90–92 B+: 87–89 B: 83–86 B-: 80–82
   C+: 77–79 C: 73–76 C-: 70–72 D: 60–69 F: 0–59.

   The ranges may be widened at my discretion but only in your favor. The grades are weighted as follows:

Exam 1 (Wed. 9/19):	18%
Exam 2 (Wed. 10/24):	18%
Exam 3 (Fri. 11/16):	18%
Final Exam (Fri. 12/14, 11:00am–1:00pm):	30%
WeBWorK:	16%

6. **WeBWorK Guidelines.** All graded homework in this course will be submitted using the *WeBWorK* system at `http://webwork.gannon.edu`. To log in initially, use your Gannon network ID (e.g., lastname001) as the Username and your 7-digit student ID number as the Password. After logging in the first time, you should change your password to anything that you wish. Please note that your WeBWorK password is completely separate from your Gannon network password. Once you are logged in, you will see any assignments that are currently available for you to work on, the due dates for those assignments, and access to past submissions. New assignments will appear after a new section has started in class. Each person will be assigned similar but slightly different problems, so working together will help with ideas but not with final answers. Most problems will allow *six* submissions. You should work out the problems by hand before submitting them. A PDF copy may be produced and then printed for each problem set. Make sure to *preview* your answers before submission. If you have any questions or problems, contact me immediately. **Warning!** *WeBWorK* problems are not a substitute for practice problems in the text. Make sure you work out textbook problems also, particularly ones that involve sketching graphs or pictures.

7. **Attendance.** Attending every class is necessary to maximize your success in this course. Regular attendance of scheduled office hours is also recommended if you have additional questions or concerns about any aspect of the course. You are responsible for obtaining any information missed due to absence.

8. **Excused Absences.** An excused absence from an exam will only be given when the absence is truly unavoidable and beyond your control. If you have advanced warning of a situation that will cause you to miss an exam, you must arrange a make-up exam before your absence. An exam missed due to illness must be made up the following day unless excused by a doctor.

9. **Technology.** A graphing calculator is recommended for this course and will be useful during class and on exams. The TI-83 and TI-84 are the preferred models. The TI-89, TI-92, and other devices capable of symbolic differentiation and integration will not be allowed for exams and quizzes. It is your responsibility to understand how to operate your calculator.

10. **Academic Integrity.** Students are assumed to be familiar with the Academic Integrity Policy found in the current edition of the student handbook. Cheating or dishonesty may result in a failing course grade or even expulsion from the University.

11. **Student Disabilities.** Gannon University is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with me as early in the semester as possible. You must also be registered with The Program for Students with Learning Disabilities prior to receiving accommodations in this course.

Math 242-02 Tentative Schedule for Fall 2012

Date	**Day**	**Sect.**	**Practice** (runs are odds only)	**WW**
8/22	W	8.1	3–25, 31, 32, 33–36(all),	due
8/24	F		37, 38, 41, 43	8/29
8/27	M	8.2	3–15, 21, 24, 27, 29, 31,	due
8/29	W		39, 44, 47	9/5
8/31	F	8.3	3, 4, 6, 7–17, 21, 33, 35	
9/3	M	**No Class**		due
9/5	W	8.3		9/10
9/7	F	8.4	2, 3–7, 11, 19–27, 33–41, 42	
9/10	M			due
9/12	W			9/17
9/14	F	8.5	3–9, 13, 17, 21	
9/17	M	Review		
9/19	W	**Exam #1**		due
9/21	F	8.6	3–9, 13, 23, 27, 29, 35	10/1
9/24	M			
9/26	W	8.7	2, 4, 5, 7, 11–13(all), 23–31,	
9/28	F		39, 43, 47, 59–63, 64	due
10/1	M	8.8	3, 5, 6, 23	10/8
10/3	W	9.1	1, 5, 9, 13, 19, 31	
10/5	F	9.2	1–5, 9, 13, 17, 23, 27, 29, 33–41	due
10/8	M			10/15
Fall Break 10/10 – 10/12				
10/15	M	9.3	1–13, 17, 23, 25, 29, 47–53,	
10/17	W		55, 57	due
10/19	F	9.4	1–7, 8, 15, 19, 29–35	10/23
10/22	M	Review		
10/24	W	**Exam #2**		
10/26	F	10.1	1–5, 6, 7, 11, 13, 21–33	
10/29	M	10.2	3, 4, 5–9, 13–19, 22, 29	due
10/31	W	10.3	1–7, 11, 12, 13–17, 21, 25, 31, 33	11/7
11/2	F			
11/5	M	10.4	1–13, 23, 25, 29, 33–37	
11/7	W	10.5	2–5(all), 7, 11–17, 21–25, 33,	due
11/9	F		37, 41, 47, 49	11/15
11/12	M			
11/14	W	Review		
11/16	F	**Exam #3**		
11/19	M	10.6	1, 3, 7, 11–25, 29, 31	
Thanksgiving Break 11/21 – 11/23				due
11/26	M	10.7	1–9, 13, 15, 17–22(all), 25,	12/3
11/28	W		29, 35, 39–49, 57–65	
11/30	F	10.8	1, 2, 3, 7, 11–19, 35, 37	due
12/3	M	10.9	3, 7, 11, 15, 19, 21, 25, 29	12/7
12/5	W	Review		
12/7	F	Review		
12/14	F	**Final Exam**, 11:00am–1:00pm		