

**Item #6306**  
**9am in 17-102**

**Math 112 in Spring 2007**  
**Elements of Calculus**

**Item #6308**  
**11am in 17-102**

**Instructor:** Dusty Wilson  
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**Phone:** (206) 878-3710 ext. 3338  
**Office Hours:** 10 – 10:50am M - Th (M in the MRC, T-Th in my office) and M noon in my office  
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**Course Description:** (5 credits) Informal and intuitive approaches to topics in calculus and general problems applying differentiation and integration to business and other fields. Especially for students majoring in a non-science area..

**Course Objectives:** *The student will be able to ...*

- Demonstrate an understanding of the intuitive idea of limits.
- Evaluate finite and infinite limits.
- Find derivatives using the limit of the difference quotient.
- Understand the notation for higher-order derivatives.
- Apply principles of derivatives to applied problems.
- Have an intuitive understanding of the Fundamental Theorem of Calculus.
- Graph functions having asymptotes.
- Use integrals to solve application problems.
- Decide intuitively if a function is continuous or discontinuous.
- Understand the derivative as the rate of change of a function.
- Find derivatives of polynomial, exponential, and logarithmic functions using product, quotient, power and chain rules.
- Understand the geometric interpretation of derivative including extrema and concavity.
- Use the technique of substitution for integration.
- Find the area under the curve and the area between two curves.
- Compute antiderivatives.

**Text:** *Mathematical Applications*, 8<sup>th</sup> edition, Harshbarger and Reynolds. Bring the book to class.

**Prerequisite:** Math 111 with a minimum grade of 1.7 or COMPASS college algebra score of 51.

**Calculators:** A graphing calculator is required for this course.

- i. The TI-83/4 family of calculators is recommended. The use of symbolic calculators such as the TI-89 and TI-92 will not be allowed during exams. Furthermore, the use of all calculators may be prohibited during some exams (forewarning will be given).
- ii. Calculators may be rented from the math department on a first come first serve basis. To rent a calculator, pay the rental fee at the cashier in building 6 and then submit the form to me.

**Homework:** The format and grading criteria for homework is as follows.

- i. **Format:** Homework should be done on Engineering Paper (Engineer's Computation Pad in the Bookstore). Write your name, the date, and the assignment number in the upper-right corner. Multiple page assignments must be stapled in the upper-left corner. Each problem should be clearly labeled with the problem number. Your work should be done neatly in pencil and you should generously space each problem.
- ii. **Grading:** Your homework will be graded for accuracy and completion. Missed assignments will be given a score of zero. Your three assignments with the lowest score will be dropped from your grade. *Late assignments will not be accepted.*

**Tests:** There will be three tests given during the quarter.

- i. The exams will be cumulative, but will emphasize the material covered since the last test.
- ii. If you miss a test, a score of 0% will be assigned. All tests must be taken during the scheduled class time. *No make-up tests.*
- iii. Spoken and written communication as well as sharing of calculators during exams is prohibited.

**Final Exam:** A comprehensive final exam will be held in the regular class meeting room. The dates and times for the finals are listed in the quarterly. The final exam is mandatory and a grade of 0.0 may be assigned at the instructor's discretion to those who fail to take the final exam.

**Grading:** Homework: 10%, Exams: 60%, Final Exam: 30%. GPA's will be given according to the following scale:

95-100%	4.0	% % %	GPA	% % %	GPA	% % %	GPA	% % %	GPA
93-4%	3.9	81%	3.1	73%	2.3	65%	1.5	57%	0.7
91-2%	3.8	80%	3.0	72%	2.2	64%	1.4	56%	0.6
89-90%	3.7	79%	2.9	71%	2.1	63%	1.3	55%	0.5
87-8%	3.6	78%	2.8	70%	2.0	62%	1.2	54%	0.4
85-6%	3.5	77%	2.7	69%	1.9	61%	1.1	53%	0.3
84%	3.4	76%	2.6	68%	1.8	60%	1.0	52%	0.2
83%	3.3	75%	2.5	67%	1.7	59%	0.9	51%	0.1
82%	3.2	74%	2.4	66%	1.6	58%	0.8	0-50%	0.0

**Policies and Notes:**

- i. **Attendance:** You are responsible for all material covered in class including all announced changes to the schedule and assigned course work. (If you miss class, *you* are still responsible for everything in class).
- ii. **Cell Phones:** The use of cell phones, pagers, and palm pilots in class is strictly prohibited. Failure to comply may result in your removal from the classroom.
- iii. **Corrections:** Changes and corrections to grading must take place during the week following the original distribution of the graded material. It is your responsibility to confirm accurate grading and bring it to my attention in a timely fashion.
- iv. **Tutor Center:** Individual and group mathematics tutoring is available at the *Tutoring Center*. The *Tutor Center* is located in building 26, room 319.
- v. **Math Resource Center:** Math materials, study space, and conceptual (vs problem specific) math help is available in 26-319H. Some of my office hours will take place in the MRC.
- vi. **Academic Dishonesty:** Cheating, plagiarism, and other forms of academic dishonesty are unacceptable at Highline Community College and may result in lower grades and/or disciplinary action. It is both your right and responsibility to be familiar with the document entitled: Student Rights and Responsibilities code WAC 1321-1210 adopted by the Board of Trustees of Community College District 9 on July 9, 1992. This is available in the counseling center.
- vii. **Special Concerns:** If you have any special concerns about this class, please talk to me personally in my office. The more I know about you individually, the more I can help you be successful in this course. If you need course adaptations or accommodations because of dis-Ability; if you have emergency medical information to share with me; or if you need special arrangements in case the building must be evacuated, please provide me with the Letter of Accommodation you have received from the Office of Access Services. Access Services is located in Building 6 in the Student Development Center.
- viii. **Important Dates:** *April 20<sup>th</sup>*: last day to drop without incurring a "W." *May 31<sup>st</sup>* last day to withdraw.