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Office Hours	M,T,W: 9 – 9:50am in 15-213. M,W: 7:30-7:55am in 17-201, Th: 9-9:50am in 26-319 (the MRC). Also by appt.
home page	http://people.highline.edu/dwilson
WebAssign	https://www.webassign.net/login.html
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Course Description: (5 credits) Applications of functions (linear, quadratic, exponential and logarithmic) in business and social sciences, including total cost revenue and profit; break-even analysis; supply/demand and market equilibrium; exponential growth and decay; fitting curves to data with graphing utilities; theory of matrices; graphical methods for optimization (linear programming problems); and mathematics of finance (arithmetic and geometric sequences and sums).

Course Objectives: *The student will be able to …*
- Construct, analyze, and interpret linear, quadratic and exponential functions applied to (1) total cost, total revenue, total profit; (2) breakeven analysis; (3) supply/demand and market equilibrium; (4) exponential growth and decay; and (5) fitting curves to data with graphing utilities.
- Accurately describe the important quantities, variables, and relationships (including units of measure) in a given application, using function notation where appropriate.
- Interpret the meaning in everyday language of (1) the breakeven point, (2) the market equilibrium point, (3) function notation, (4) the results of Reduced Row Eschelon form of a matrix, and (5) mathematics of finance.
- Identify elements and dimensions of matrices, perform and interpret the results of matrix operations, including adding and multiply matrices and solving systems of equations.
- Solve optimization (linear programming) problems using graphical methods, matrices, and technology where appropriate.
- Apply geometric sequences to solve finance problems, including solving for future or present value, interest rates, compounding times, lump sums, ordinary annuities and loans.

Text: *Mathematical Applications*, 10th edition, Harshbarger and Reynolds. Because we will be using Enhanced WebAssign for our online homework, a previous edition of the book is acceptable.

Prerequisite: Math 091 or 098 with a minimum grade of 2.0 or MMT AlgCore score of 77.

Calculators: A graphing calculator is required for this course.
i.   The TI-83/4 is recommended.
ii.   Symbolic calculators such as the TI-89 or nSpire CX CAS will not be allowed during exams.
iii.   You will be asked to remove the cover of your calculator during exams.
iv.   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 take the receipt to the library.

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

i.   **Enhanced Web Assign:** Graded homework will be administered online thru EWA. The website is: https://www.webassign.net/login.html. Then select the red "I HAVE A CLASS KEY" button.

ii.   **EWA Class Key:** highline.cc.wa 7894 1459.

iii.   **Grace Period:** You will have a 14-day grace period during which you can use WebAssign without purchasing access. During the grace period, you can complete your coursework in WebAssign. Each time you access your class, you will be reminded to purchase access or enter an access code. After the grace period ends, you must purchase access online or enter a valid access code before you can continue using WebAssign for your class.

iv.   **Many submissions:** You may make up to five submissions on most problems (not multiple guess).

v.   **EWA Time:** Assignment times are the estimated amount of time a student spent online working on assignments. Time estimates are dependent upon student interaction with WebAssign. There is no way to account for the way a student spends the time between interactions or the time a student spends working offline. If a student walks away from the computer while working on a question without saving or submitting work the time estimate will be skewed by the time spent away from the computer. If a student works on an assignment while not logged into WebAssign then the time spent solving the question will not be accounted for.

vi.   **Bonus:** If you complete homework exercises 24 hours in advance of the deadline, you will earn a 5% bonus on the problem.

vii.   **Extensions:** You may request a 24 hour extension on the homework *for the week after the original due date*. There is a 20% penalty on each problem completed using the extension.

Tests: There will be 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. See the quarterly class schedule for dates and times. 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: 15%, Tests: 50%, Final Exam: 35%. GPA's will be according to:

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

<u>Policies and Notes:</u>

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.   **Devices**: The use of phones and other smart gadgets in class is strictly prohibited (except when requested). Failure to comply may result in your removal from the classroom.

iii.   **Math Resource Center**: Cost-free mathematics tutoring is available at the MRC. The MRC is located in building 26, room 319.

iv.   **Faculty Advising**: Highline Community College instructors are a wonderful resource for students at any stage of the academic process. Many HCC instructors have career experience, are knowledgeable about campus resources, and can assist students in reaching their educational goals through degree planning. If you have an advising question, feel free to approach your instructor. If your instructor cannot answer your question, s/he will help you find someone who can.

v.   **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: <u>Student Rights and Responsibilities</u> code WAC 132I-1210 adopted by the Board of Trustees of Community College District 9 on December 13, 2007. This is available in the counseling center.

vi.   **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 99 in the Student Development Center.

vii.   **Emergency Procedures**: In the event of an emergency, follow your instructor's directions. If you are told to evacuate the building, take your valuables because you may not be allowed to re-enter. Do not leave campus until your instructor or another campus official tells you to do so. If you may need assistance evacuating, notify your instructor today. To prepare yourself for an emergency, review the evacuation map on the last page of the emergency placard in your classroom and subscribe to HC Alert, a text message service for emergencies (https://hctextalerts.highline.edu/).

viii. **Final Exams**: Your completed final exam will not be returned to you. It belongs to the instructor. However, you may (and should) review your final exam by stopping by the instructor's office the next quarter.

ix.   **School Policies**:

    i.   The <u>Student Rights and Responsibilities Code</u>: A legal document that describes college expectations, students' rights, and outlines the process for resolving disciplinary matters and Code violations. http://studentservices.highline.edu/srr.php

    ii.   The <u>College Catalog</u>: Lots of fine print about grades, deadlines, and resources can be found in the catalog at: http://catalog.highline.edu/

x.   **Important Dates**:

    i.   January 26th: The last day to drop without incurring a "W"

    ii.   February 10th: The beginning of registration for Spring Quarter

    iii.   February 12th: Financial Aid Applications for Spring Quarter are due

    iv.   February 27th: The last day to officially withdraw with a "W"