Summer 2012

Math 135 - Precalculus I

Course Description: Algebra review, functions with special attention to polynomial, rational, exponential and logarithmic functions, composed and inverse functions, techniques of graphing. A passing grade fulfills the prerequisites for both Math 140 and Math 203.

Grade Options: Credit/No Credit or Audit

Prerequisites: 2 years high school algebra, 1 year plane geometry.

Course Format: The lectures for this class are online, and you are required to watch them on your own time according to the schedule below. The class meets four times a week for two hours. The first hour we will go through a lecture and supervised small group work, and the second hour will be online practice.

Course Schedule: MWRF 12:30- 2:20 pm. The first hour will be in Keller Hall 302 and the second hour will take place in the computer lab PSB 208. The class runs from July 2nd to August 10th.

Instructor:

Lane McIntosh
Physical Sciences Building 315
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http://math.hawaii.edu/∼lmcintosh

Office Hours: Official office hours are announced on the course web page. Students may visit the office hours of any math 135 instructor. Tentatively, my office hours will be M 2:30-3:20 and by appointment.

Course Web Page: http://math.hawaii.edu/∼lmcintosh/teaching/math135.html
A detailed class schedule, homework assignments and solutions, announcements, lecture notes and videos, and grades will be posted on the class web page. Students are expected to check the class web page frequently.

Topics: (The numbering of the lectures refers to Professor Myers' Math 140 lectures.)
Linear equations and inequalities (Lecture 1 & 2)
Equations involving rational expressions
Integer and rational exponents
Manipulating polynomial expressions
Relations and functions (Lecture 3 & 4)
Linear functions (Lecture 2)
Composition of functions, inverse functions (Lecture 6 & 7)
Review and Midterm
Quadratic equations and functions (Lecture 8)
Rational expressions and division of polynomials (Lecture 3)
Graphing techniques (Lecture 5)
Graphing polynomial and rational functions (Lecture 9 & 10)
Properties of logarithms (Lecture 12 & 13)
Logarithmic and exponential equations (Lecture 12 & 13)
Graphing logarithmic and exponential functions (Lecture 11 & 12)
Review for final examination
Final Examination

Attendance: Attendance is mandatory. Three missed classes will mean a grade of "NC". Being late or leaving early will count as a partially missed class (0.2 absences), and five partial absences will count as one full absence. In addition to attending lectures you are required to attend the laboratory hour following class and practice with ALeKS. At the end of each week your ALEKS hours must at least match the scheduled class hours.

Exams: There will be two exams: a midterm and a final. A sufficient score on each exam is required for course credit. Students will be allowed to take each exam twice. Inform your instructor of scheduling conflicts well in advance.

Quizzes: You will be asked to recall the derivation of certain formulas and identities presented in class.

Grades: Math 135 is a credit/no credit course. The following are necessary to obtain a passing grade:

- a passing score on the midterm examination;
- a passing score on the final examination;
- less than 3.0 total absences.

Grades are posted on the course web page. Check your grades on a regular basis.

Lecture Videos: Professor Dale Myers' Math 140 lecture videos. See the course web page for more information.

Course Objectives and Student Learning Outcomes: Upon successful completion of Math 135, the student will be able to work with, apply, and answer questions pertaining to the material in the list of topics at the level of a standard "College Algebra" text.

Program Objectives: The successful student will acquire the skills prerequisite to Math 203, Calculus for Business and Social Sciences, and Math 140, Precalculus.

Academic Expectations: In addition to adhering to and following the University Student Conduct Code students are expected to follow the Mathematics Department Academic Expectations.

Required Material: Access to ALeKS. To set up access go to http://www.aleks.com. Click on "SIGN UP NOW!" and enter the course code *DDKLN-JRKRK*. Purchase the ALEKS Math (6 Week) license. The cost is $32.00.

Suggested Material: Any College Algebra text (older editions are fine) or Cohen's Precalculus (formerly used in Math 140 - Cohen) or Stewart's Precalculus (currently used in Math 140 - Stewart) and Professor Dale Myers' Math 140 course package. ALEKS also provides an electronic version of a standard precalculus text.

Suggested Reading: Anything on Professor Dale Myers' Math 140 website. In particular, the worked examples are an excellent study aid. You may also find the homework solutions posted on my Math 140 webpage helpful.

Tutoring: Your primary resource is your instructor and you may work with a tutor if you wish, but the usual math tutoring service offered by the department is closed during the summer.

PSB 208 Computer Lab Login Information:

User Name:_____

Password:_____

General Remarks:

- Students absolutely must read the designated lectures and examples before coming to class and attempt the practice problems before class without looking at the solutions. Class will consist of a short lecture, a Q & A session based on your preparation, and a practice session. After class check your work against the posted solutions, bring your questions to office hours or class, and prepare for the next lecture.
- Math 135 is a "refresher" course and we assume that you are familiar with the material. If you have never been exposed to the above topics or if you scored in the single digits on the assessment exam, then you may find this course overwhelming.
- If you are not comfortable with the above two remarks, then the sequence of Math 024, 025 and 103 at KCC is a better option for you.
- Calculators will not be used in this course, nor will they be allowed on quizzes or exams. You should therefore not be using calculators on your homework.
- ALeKS will be used primarily for practice and attendance and does not figure into grade calculations. In the past, the successful students spent significantly more time using ALeKS than the one hour following lecture, while those students who chose not to invest into online practice failed the course.
- The vast majority of questions about the course are answered by consulting the syllabus or the class web page. Please familiarize yourself with both.