

**Math 145 – 001
Precalculus II
Summer 2008**

Instructor: Lingju Kong

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Class Meetings: MTWTF 9:50 - 11:30 am in EMCS 422

Office Hours: MTWT 1:30 - 3:30 pm and by appointment

Textbook: Precalculus, Third Edition, by Beecher, Penna, and Bittinger, Pearson, 2008. We will cover Chapters 5, 6, the first four sections of Chapter 7, and the first three sections of Chapter 9 thoroughly, and selected other topics if time allows.

Prerequisites: UTC Math Placement Level 30 or Math 144 or 131 with minimum grade of C or Math ACT 26 or above. Credit will not be allowed in Math 145 after 150 or 151 with a grade of C or better. Students wishing to use Math 131 as a prerequisite must secure the approval of the Mathematics Department Head.

Course Description: This precalculus course is designed primarily for students majoring in Mathematics, the physical sciences, and Engineering who intend to take the calculus course Math 151/152. Topics include solving trigonometric identities and equations; complex numbers; conic sections; sequences; and other selected topics. This course fulfills a general education requirement in Mathematics and Statistics.

Grades: Your grade will be based on a total of 450 points as follows:

| | |
|---|------------|
| Two middle exams (100 point for each) ----- | 200 points |
| Final exam ----- | 200 points |
| Attendance ----- | 20 points |
| Quizzes ----- | 30 points |

Grading Scale: 90-100% A; 80-89% B; 70-79% C; 60-69% D; below 60% F.

Tentative Exam Schedule:

Exam 1 ----- Friday, July 18

Exam 2 ----- Tuesday, July 29

Note: Any changes to these dates will be announced in class.

Final Exam: Thursday, August 7, from 10:00 – 11:40 am

Make-up Policy: Make-up quizzes are not given for any reason. Make-up tests are given only in extreme circumstances and must be requested in advance and documentation will be required.

Attendance: Class attendance is required for successful completion of the course. Attendance will be taken at the beginning or end of each class period. If an illness or emergence occurs and you have to miss class, be sure to get the notes and handouts for that day. Your attendance points will be reduced 1 point for your first missing, and 2 points for each missing after the first.

Calculator: Graph calculators such as TI-83 and TI-86 are permitted in this class. Calculators with symbolic capabilities such as TI-89 and TI-92 are not permitted.

Homework: Homework will be assigned but not collected. However, students in this class are responsible for knowing how to solve every homework problem, being able to reproduce every example in the textbook and in the lectures. There will be exam and quiz questions that are drawn from the lectures, textbook examples, and regular homework. Success in this course will require that you solve problems on every day of the semester.

Important Dates:

| | |
|----------------------|---|
| July 11 (Friday) | Last day to drop before a “W” is recorded |
| July 11 (Friday) | Last day to register |
| July 28 (Friday) | Last day to drop with a “W” |
| August 6 (Wednesday) | Classes end |
| August 7 (Thursday) | Final Examinations |

Communication Information: To enhance student services, the university will use your UTC email address (firstname-lastname@utc.edu) for communication. (See <http://onenet.utc.edu> for your exact address if you do not know it.) Please check your UTC email on a regular basis. If you have problems with accessing your email account, you can contact the help desk at 425-2678.

Academic Conduct: Academic honesty and mutual respect (student with student and instructor with student) are expected in this class. Mutual respect means being on time for class and not leaving early, being prepared to give full attention to class work, not reading newspapers or other materials in class, not using cell phones or pagers during class time, not looking at another student’s work during examinations.

ADA statement: If you are a student with disability (e.g., physical, learning, psychiatric, etc) and think that you might need assistance or an academic accommodation in this class or any other class, contact the Office for Students with Disabilities at 425-4006 or come by the office – 110 First Hall.

Advice: Perhaps the single most important factor in your success in this course is your study habits. Think of learning math as “working out” in the gym, Study at least four times per week; do not wait until the day before the exam. Work on the concepts until they make sense. Do not just memorize facts and then forget them a few weeks later. Master each homework problem.

Always come to class! While you are there, listen, think, and ask questions.

Tentative Class Pace for Math 145 – 001

Note: This is not an exact schedule and will change based on the needs of the class.

| Dates | Sections | Topics |
|--------------|-------------------|--|
| 7/9 | 5.1 | Trig functions of acute angles |
| 7/10 | 5.2 | Applications of right triangles |
| 7/11 | 5.3 | Trig functions of any angle |
| 7/14 | 5.4 | Radians, arc length, and angular speed |
| 7/15 | 5.5 | Properties and graphs of trig. functions |
| 7/16 | 5.6 | Graphs of transformed sine and cosine functions |
| 7/17 | Review | |
| 7/18 | Exam 1 | |
| 7/21 | 6.1, 6.2 | Pythagorean, sum and difference, cofunction identities |
| 7/22 | 6.2, 6.3 | Double-angle and half-angle identities, proving identities |
| 7/23 | 6.3, 6.4 | Proving identities (cont.), inverse trig functions |
| 7/24 | 6.4, 6.5 | Inverse trig functions (cont.), trig equations |
| 7/25 | 6.5, 7.1 | Trig equations (cont.), the law of sines |
| 7/28 | 7.1, Review | The law of sines (cont.) |
| 7/29 | Exam 2 | |
| 7/30 | 7.2 | The law of cosines |
| 7/31 | 7.3 | Complex numbers |
| 8/1 | 7.4 | Polar coordinates and graphs |
| 8/4 | 9.1, 9.2 | The parabola and the circle |
| 8/5 | 9.2, 9.3 | The ellipse and the hyperbola |
| 8/6 | Review | |
| 8/7 | Final Exam | |