

## College Algebra and Precalculus

(MAT 130-101)

Quarter: Fall, 2013

Time: MW 11:20-12:50

Campus: LPC

Room: Levan 401

Term: 0920

Course number: 13702

Instructor: J. M. Ash

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Office Hours: M 1:15-2, Tu 10:30-12, W 8:45-9:30;

Also by appointment, email, or telephone.

### Prerequisites

Either a passing grade in MAT 101 or placement by the Mathematics Diagnostic Exam.

Prerequisites are strictly enforced. A prerequisite can only be waived by the chairman.

### Textbooks and other materials

*Precalculus*, Ninth edition by Michael Sullivan, Pearson, 2011, ISBN 0321716833. The DePaul bookstore carries a customized edition (less expensive than the regular textbook), ISBN 1256122678. Use of a graphing calculator such as the TI 84 Plus is suggested. Interactmath.com is useful.

### Sections of the book

#### Chapter 2: Functions

2.1 Functions

2.2 The Graph of a Function

2.3 Properties of Functions

2.4 Library of Functions; Piecewise-defined Functions

2.5 Graphing Techniques: Transformations

2.6 Mathematical Models: Building Functions

#### Chapter 4: Polynomial and Rational Functions

4.1 Polynomial Functions and Models

4.2 Properties of Rational Functions

4.3 The Graph of a Rational Function

4.4 Polynomial and Rational Inequalities

4.5 The Real Zeros of a Polynomial Function

#### Chapter 5: Exponential and Logarithmic Functions

5.1 Composite Functions

5.2 One-to-one Functions; Inverse Functions

5.3 Exponential Functions

5.4 Logarithmic Functions

5.5 Properties of Logarithms

5.6 Logarithmic and Exponential Functions

5.7 Financial Models

5.8 Exponential Growth and Decay Models; Newton's Law; Logistic Growth and Decay Models

### **Homework and grading policy**

Midterm and final exams, in class and closed book will count equally in determining a preliminary grade. Home-work will be assigned each class day, discussed the next class day, collected the next class day and will increase or decrease the preliminary grade by at most one grade. For example, B+ and satisfactory homework = A-. Make-up exams will not be given. You must attend the final exam. The final exam will be from 11:45-2:00 on Wednesday, November 20, 2013.

### **Methods**

Classroom lectures and discussion.

### **DePaul University's Policies**

*Course Withdrawal:* If you stop attending this course, then you need to officially withdraw from the course at CampusConnect. Last Day to Withdraw is October 29, 2013.

*Incompletes:* An incomplete is given only to a student who is doing passing work, and yet for legitimate reasons is unable to complete the course. Requests for an incomplete must be approved by the instructor. A grade of Incomplete is converted to an F if the student does not complete the course work during the next quarter.

*Academic Integrity:* I will strictly follow the university rules and regulations on academic integrity. Anyone found cheating or plagiarizing may be failed for the course and further disciplinary action may be taken. Consult the DePaul University Student Handbook for further details on the university's academic integrity policy at <http://academicintegrity.depaul.edu>

*Students with disabilities:* Students seeking disability-related accommodations are required to register with DePaul's Center for Students with Disabilities (CSD) enabling you to access accommodations and support services to assist your success. There are two office locations:

*Loop Campus- Lewis Center #1420 - (312) 362-8002*

*Lincoln Park Campus- Student Center #370 - (773)325-1677*

*Students are also invited to contact me privately to discuss your challenges and how I may assist in facilitating the accommodations you will use in this course. This is best done early in the term and our conversation will remain confidential.*

*Dean of Students:* The DOS helps students in navigating the university, particularly during difficult situations, such as personal, financial, medical, and/or family crises. Absence Notifications to faculty, Late Withdrawals for medical/personal situations, and Community Resource Referrals are DOS services that support students both inside and outside of the classroom. Additionally DOS has resources and programs to support health and wellness, violence prevention, substance abuse and drug prevention, and LGBTQ student services. DOS is committed to your success as a DePaul student. Please

feel free to contact DOS at <http://studentaffairs.depaul.edu/dos/>, (773)325-7290, or Student Center 307.