

ALAMO COLLEGES DISTRICT • PALO ALTO COLLEGE • - • MATH-MATHEMATICS

ALAMO COLLEGES DISTRICT
Palo Alto College

COLLEGE ALGEBRA

①

MATH-1314

Full Term Fall 2017 Section 091.14772 3-3-0 Credits 08/28/2017 to 12/16/2017

Modified 07/27/2017

MATERIALS

College Algebra

Author: Robert Blitzer

Publisher: Pearson

Edition: 5th

Calculator

A graphing calculator is required.

DESCRIPTION

In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included. This course fulfills the Mathematics foundational component area of the core and addresses the following required objectives: Critical Thinking, Communication, and Empirical Quantitative Skills.

Prerequisites

INRW 0420

MATH 0320

OUTCOMES

- 1 Demonstrate understanding and knowledge of properties of functions, which include domain and range, operations, compositions, and inverses.
- 2 Recognize and apply polynomial, rational, radical, exponential, and logarithmic functions and solve related equations.
- 3 Apply graphing techniques.
- 4 Evaluate all roots of higher degree polynomial and rational functions.
- 5 Recognize, solve and apply systems of linear equations using matrices.



ADDITIONAL ITEMS

COURSE OUTLINE

Chapter 1 – Equations and Inequalities

- 1.1 Graphs and Graphing Utilities – optional
- 1.2 Linear Equations and Rational Equations – optional as review
- 1.3 Models and Applications – optional as review
- 1.5 Quadratic Equations – omit problems with complex solutions
- 1.6 Other Types of Equations – omit absolute value equations

Chapter 2 – Functions and Graphs

- 2.1 Basics of Functions and Their Graphs
- 2.2 More on Functions and Their Graphs
- 2.3 Linear Functions and Slope
- 2.5 Transformations of Functions
- 2.6 Combinations of Functions; Composite Functions
- 2.7 Inverse Functions
- 2.8 Distance and Midpoint Formulas; Circles

Chapter 3 – Polynomial and Rational Functions

- 3.1 Quadratic Functions
- 3.2 Polynomial Functions and Their Graphs
- 3.3 Dividing Polynomials; Remainder and Factor Theorems
- 3.4 Zeros of Polynomial Functions – omit Descartes' Rule of Signs
- 3.5 Rational Functions and Their Graphs – omit slant asymptotes

Chapter 4 – Exponential and Logarithmic Functions

- 4.1 Exponential Functions
- 4.2 Logarithmic Functions
- 4.3 Properties of Logarithms
- 4.4 Exponential and Logarithmic Equations
- 4.5 Exponential Growth and Decay – omit modeling data

**Chapter 5 – Systems of Equations and Inequalities**

- 5.1 Systems of Linear Equations in Two Variables

Chapter 6 – Matrices and Determinants

- 6.1 Matrix Solutions to Linear Systems
- 6.2 Inconsistent and Dependent Systems and Their Applications
- 6.5 Determinants and Cramer's Rule – optional

Chapter 8 – Sequences, Induction and Probability

- 8.1 Sequences and Summation Notation
- 8.2 Arithmetic Sequences – optional
- 8.3 Geometric Sequences and Series – optional
- 8.5 The Binomial Theorem

INSTITUTIONAL POLICIES

STUDENT RESPONSIBILITIES:**A. Attendance:**

SmartStart. Student absences will be recorded from the first day the class meets, and beginning Fall 2014, students who do not attend the first scheduled class meeting or contact the instructor will be dropped. Students should verify the drop is completed.

For fully online courses, an attendance verification activity is assigned and must be completed by the 3rd class day.

Effective Spring Term 2010, student absences will be recorded from the first day the class meets. Regular and punctual attendance in all classes and laboratories, day and evening, is required.

Students who are absent for any reason should always consult with their instructors. Course syllabi must provide specific information regarding attendance, including, for courses involving the internet, online activity that constitutes "attendance." Also, both tardiness and early departure from class may be considered forms of absenteeism. In all cases, students will be held responsible for completion of course requirements covered in their absence. (4)

Additionally, it is the student's responsibility to drop a course for nonattendance. Course instructors establish policy with regard to attendance in their respective syllabi and may drop a student for excessive absences. Absences are considered excessive when more than 12.5 percent of the total contact hours of instruction in a semester, including lecture and lab, are missed. For example, in a three-credit-hour lecture class, students may be dropped after more than six contact hours of absences. In a four-credit-hour lecture/lab class, students may be dropped after more than eight contact hours of absences. Absences are counted regardless of whether they occur consecutively.

In special programs with additional accreditation or certification standards, additional attendance requirements may be enforced but faculty must clearly explain these policies in their syllabi. Students who stop attending class for any reason should contact the instructor and the college registrar to officially withdraw from the class. Students may be required to consult with an advisor or designee before dropping.

Failure to officially withdraw may result in a failing grade for the course. It is the student's responsibility to withdraw officially from a class by submitting a completed Withdrawal Form to the Admissions and Records Office.

B. Early Alert and Intervention

Alamo College instructors care about students' success in every course. During the semester, students may receive alert emails through the ACES account regarding their progress and ultimate success in a course. Upon receipt of the email, students are to contact the course instructor to discuss specific tasks or actions to improve success in this course. In addition, students will also need to meet with their Certified Advisor. Discussions with faculty and Certified Advisors allows the student to identify actions that will help to successfully complete course requirements at the colleges of the Alamo Colleges District.

C. Student Responsibility for Success (Alamo Colleges District Policy F.6.2):

As members of the Alamo Colleges District learning community, students, faculty, staff and administrators all share the responsibility to create an atmosphere where knowledge, integrity, truth, and academic honesty are valued and expected. A clear acknowledgment of the mutual obligations of all members of the academic community emphasizes this implicit partnership in fostering the conditions necessary for student success.

In this relationship, the Alamo Colleges District provides institutional policies, procedures, and opportunities to facilitate student learning that encourage interaction, involvement and responsible participation. Inherent in the academic climate is the expectation that students will assume responsibility for contributing to their own development and learning. Academic success is directly tied to the effort students put into their studies, the degree to which they interact with faculty and peers, and the extent to which students integrate into the campus life.

1. Engagement

1. Create connections and build relationships with faculty, staff and students (visit during office hours, join clubs and organizations, participate in student activities, etc.);
2. Stay informed of policies, procedures, deadlines and events for academic and co-curricular activities;
3. Complete all requirements for admission, registration, and payment by deadlines;
4. Apply for financial assistance, if needed, complying with all federal, state and local regulations and procedures;
5. Meet all federal, state and local health care regulations.



2. Communication

1. Seek guidance from faculty, advisors or counselors for questions and concerns in regards to degree plans, major selection, academic status, grades, and issues impacting college success;
2. Develop a peer support system to identify student contacts for questions, group assignments, etc. regarding academic and co-curricular activities;
3. Communicate with College personnel promptly regarding academic or co-curricular concerns and assistance requests;
4. Carefully consider the information provided by College personnel and make decisions using that information;
5. Check the Alamo Colleges District's Web Services regularly for emails, holds, student records, financial aid status and announcements;
6. Submit disability documentation if seeking services and request academic accommodations in advance of each semester.

3. Academic Success

1. Complete courses with passing grades and maintain good academic standing (2.0 GPA) status;
2. Read and follow all syllabi;
3. Purchase textbooks and required supplies in a timely manner;
4. Attend classes regularly and on time, with as few absences, late arrivals, and early exits as possible;
5. Arrive to class with all needed materials and completed assignments for that class period;
6. Be attentive in class and actively participate as appropriate;
7. Devote sufficient time for studying;
8. Ensure integrity in all aspects of academic and career development;
9. Accurately represent one's own work and that of others used in creating academic assignments. Use information ethically and exercise appropriate caution to avoid plagiarism on all assignments;
10. Notify faculty in advance or as soon as possible about absences and provide documentation as appropriate;
11. Consult faculty members in advance when unable to complete projects, assignments, or take examinations as scheduled.

4. Self-Responsibility and Responsibility to Others

1. Maintain accurate and complete degree/certificate major selection and contact



- information including name, address, phone number and emergency contact;
2. Balance personal obligations and educational pursuits. Work with a counselor / advisor to design a realistic schedule that dedicates adequate effort to be successful in college studies;
 3. Know and follow the regulations and guidelines outlined in the Student Code of Conduct and Student Handbook;
 4. Maintain respectful and appropriate behavior within and outside the classroom;
 5. Ask for help when needed. Use all available resources and facilities provided by the College to enhance the learning experience;
 6. Attend scheduled advising sessions, tutorials, and other appointments. Cancel or reschedule only with good reasons as early as possible;
 7. Arrive prepared for tutorial sessions, bringing all needed materials (books, syllabi, rough drafts, calculators, assignment sheets, etc.).

D. Textbook Availability

A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

E. Licensed Concealed Campus Carry

No open carry of firearms is allowed on all property owned, controlled, or leased by the College District, including vehicles operated by the Alamo Colleges District. Concealed carry of a handgun by persons licensed to carry may not be restricted except in locations signed as prohibited areas.

- Special testing locations requiring a complete surrender of personal effects during testing will be signed as prohibited areas.
- Persons may be required to place their purse, backpack or briefcase away from their person, but within their view during tests at the direction of their instructor or test administrator.
- License holders carrying on campus intending to access prohibited areas must leave their weapons locked in their vehicles. College lockers are not authorized for storage of handguns by license holders.

Disciplinary Sanctions

Open carry, intentional display, unlicensed carry, and carry in spite of signed prohibition are subject to employee and student discipline, as well as possible prosecution. Unintentional display of a weapon by a license holder must be avoided. Police will exercise their enforcement discretion.

If you see a person openly carrying or deliberately displaying a firearm:

- Call the Alamo Colleges District Police 210-485-0911
- Do not confront the person or ask if the person has a permit

COLLEGE REQUIREMENTS:

While other exams are given at the discretion of the instructor, a final assessment is given at the end of each semester for each course. The Final Exam Schedule changes with each term and differs from normal class meeting dates and times. See the Final Exam Schedule in the

Catalog/Schedule of Classes in the left hand navigation bar.



A student who must be absent from a final evaluation should petition that instructor for permission to postpone the evaluation. A student absent without permission from a final evaluation is graded "0" on the exam.

Incomplete Grades. The conditional grade of "I" may be issued to a student having a passing average on all completed coursework but for a justified reason, such as illness or death in the family or by providential hindrance, has been prevented from taking the final examination or completing other required coursework. The "I" becomes an "F" in one hundred twenty (120) calendar days from the end of the term unless the student completes the balance of the coursework with a performance grade of "D" or higher. Re-enrollment in the course will not resolve the "I." The student and faculty must fill out an Incomplete Contract, clearly defining the work remaining to be finished.

COLLEGE POLICIES

COLLEGE POLICIES:

A. All of the colleges of the Alamo Colleges District are tobacco free.

B. Alamo Colleges District DPS Emergency Phone Numbers:

Emergency Phone (210) 485-0911

General Phone (210) 485-0099

Weather Phone (210) 485-0189 (For information on college closures)

D. Students are required to silence all electronic devices (e.g., pagers, cellular phones, etc.) when in classrooms, laboratories and the library.

Disability Access Statement -- In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act, it is the responsibility of the student to self-identify with the campus Disability Services office. Only those students with appropriate documentation will receive a letter of accommodation from the Disability Services office. Instructors are required to follow only those accommodation and/or services outlined in the letter of accommodation. For further information, please contact the Disability Services office at (210) 486-3020 or visit the office located in the Palomino Center, Room 101. If you have specific needs, please discuss them privately with your instructor.