MATH 091. INTERMEDIATE ALGEBRA
CODE: 10429
FALL SEMESTER 2012

GENERAL INFORMATION

Instructor: R. Varela-Ham
Textbook: Introductory and Intermediate Algebra for College Students/Blitzer/Pearson
Building/Room: 2700/2725
Time: Monday & Wednesday 6:30 p.m – 9:00 p.m
E-mail: ruben.varela@imperial.edu

MEASURABLE COURSE OBJECTIVES

The student will demonstrate the followings:
1) **Demonstrate and understanding of radical expressions and equations.**
2) **An ability to solve systems of applications, including systems with three equations and three variables.**
3) **Demonstrate and understanding of quadratic functions, including graphing and equations.**
4) **Demonstrate and understanding of functions and relations, including one to one functions.**
5) **Demonstrate and understanding of logarithmic and exponential functions and their graphs.**
6) **Classify and graphs ellipses, parabolas, and hyperbolas.**

STUDENT LEARNING OUTCOMES

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:
1) **Solve quadratic equations by factoring, completing the square, and quadratic formula**
2) **Solve equations involving radicals**
3) **Recognize and graph equations of conic sections**
4) **Solve three by three linear systems by elimination and/or substitution**
5) **Solve an application involving exponential functions**

GRADING SCALE

90 – 100 = A
80 – 89 = B
70 – 79 = C
60 – 69 = D
00 – 59 = F

GRADE DISTRIBUTION

Exam one   = 15%
Exam two   = 15%
Exam three = 15%
Exam four   = 15%
Final exam = 25% (Mandatory)
Homework   = 15%

GENERAL GUIDELINES

1) Late work is not accepted.
2) School policy: No food or beverages are allowed in the classroom.
3) Turn off the cellular phones inside classroom.
4) Bring your textbook to class every-session.
5) School policy: No children are allowed in the classroom.
6) It is your responsibility to drop before the W deadline (Nov 10, 2012). Important dates: Last day to add (Sep 2), Census Roster (Sep 4)
7) Missed assignments and exams are recorded as zeros.
8) You need to complete at least 80% of the total of sessions (30 Sessions)
9) After two unexcused absences you will be dropped. I will determine whether you may stay in the class after three. Coming late and leaving early will be counted as ½ attendance.
10) Students who disrupt or interfere with my class may be sent out of the room and told to meet with the Dean of students Affairs and Campus Disciplinary Officer, before returning to continue with coursework. They will follow disciplinary procedures as outlined in the General Catalog.
11) Students found to have cheated on any assignment or plagiarized will receive a zero for the assignment and sent to Disciplinary Officer. A second occurrence of cheating or plagiarism may result in dismissal from class and expulsion from IVC as outlined in the General Catalog.
12) Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible.

COURSE CALENDAR

Week # 1 : Chapter 4. Systems of linear equations
1. **Solving systems of linear equations by graphing**
2. **Solving systems of linear equations by the substitution method**
3. **Solving systems of linear equations by the addition method**

Week # 2 ; Chapter 4. Systems of Linear Equations
4. **Problem solving using systems of equations**
5. **Systems of linear equations in three variables**
6. **Properties of the Real Number System**

Week # 3: Chapter 8. Basics of functions
1. **Introduction to functions**
2. **Graphs of functions**

Week # 4: Chapter 8. Basic of functions
3. **The algebra of functions**
4. **Composite and inverse functions**

Week # 5: Chapter 9. Inequalities and problem solving
1   **Reviewing linear inequalities and using inequalities in business application**
2   **Compound inequalities**

Week # 6: Chapter 9. Inequalities and problem solving
3   **Equations and inequalities involving absolute value**

Week # 7: Chapter 10. Radicals, radical functions, and rational exponents
1. **Radical expressions and functions**
2. **Rational exponents**
3. **Multiplying and simplifying radical expressions**

Week # 8: Chapter 10. Radicals, radical functions, and rational exponents
4. **Adding, subtracting, and dividing radical expressions**
5. **Multiplying with more than one term and rationalizing denominators**
6. **Radical equations**
7. **Complex numbers**

Week # 9: Chapter 11. Quadratic equations and functions
1. **The square root property and completing the square; distance and midpoint formulas**
2. **The quadratic formula**

Week # 10: Chapter 11. Quadratic equations and functions
3. Quadratic functions and their graphs
4. Equations quadratic in form

Week # 11 : Chapter 12. Exponential and Logarithmic Functions
1. Exponential function
2. Logarithmic function
3. Properties of logarithms

Week # 12: Chapter 12. Exponential and Logarithmic Functions
4. Exponential and logarithmic equations
5. Exponential growth and decay; modeling data

Week # 13 : Chapter 13. Conic sections and systems of nonlinear equations
1. The Circle
2. The Ellipse
3. The Hyperbola

Week # 14; Chapter 13. Conic sections and systems of nonlinear equations
4. The Parabola; Identifying conic sections
5. Systems of nonlinear equations in two variables

Week # 15 : Chapter 14. Sequences, series, and the binomial theorem
1. Sequences and summation notation
2. Arithmetic sequences
3. Geometric sequences

Week # 16: Final Exam

Holidays: September 3 (Labor Day)
**   November 12 (Veterans Day)**
**   November 23 – 24(Thanksgiving)**

Sessions: 16 weeks
Last day: December 5