# IMPERIAL VALLEY COLLEGE

**MATH 091**

**Intermediate Algebra
Course Syllabus**

# Course Syllabus

| | |
|---|---|
| **Course Title:** | Intermediate Algebra |
| **Course Schedule/ Time:** | Monday - Thursday – 4:45 p.m. to 5:55 p.m. |
| **Course Location:** | Main Campus, 400 Building Room 403 |
| **Book:** | Introductory & Intermediate Algebra Custom Edition for Imperial Valley College<br>Robert Blitzer  ISBN  978-1-256-83889-0 |
| **Electronic Resources:** | MathXL MyMathLab can be purchased separately. |
| **Instructors Name:** | Carlos Canez |
| **Telephone:** | Please Leave a Message<br>Cell:    760-622-6589 |
| **E-Mail Address** | carlos.canez@imperial.edu |

## <u>Calculator</u>            **<u>REQUIRED</u>**!  Please bring a scientific non-graphing calculator.

## <u>Math 91</u>

Chapter 4    (Sec. 1-5)
Chapter 8    (Sec. 1-4)
Chapter 9    (Sec. 1-3) First year only.
Chapter 10   (Sec. 1-7)
Chapter 11   (Sec. 1-4)
Chapter 12   (Sec. 1-5)
Chapter 13   (Sec. 1-5)
Chapter 14   (Sec. 1-3)

# Institutional Student Learning Outcomes

Imperial Valley College's students, faculty, staff, and administrators will work toward and assess student learning outcomes in the following areas:

- Communication Skills
- Critical Thinking Skills
- Personal Responsibility
- Information Literacy
- Global Awareness

# Student Learning Outcomes for Math 91

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. (ILO2)
2. Solve equations involving radicals. (ILO2)
3. Recognize and graph equations of conic sections. (ILO2)
4. Solve three by three linear systems by elimination or/and substitution. (ILO2)
5. Solve an application involving exponential functions. (ILO2, ILO5)

**MEASURABLE COURSE OBJECTIVES AND MINIMUM STANDARDS FOR GRADE OF "C"**
Upon satisfactory completion of the course, students will be able to:
1. demonstrate an understanding of radical expressions and equations.
2. demonstrate 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 graph ellipses, parabolas, and hyperbolas.
7. demonstrate an understanding of sequences and series and their operations.

# CORE CONTENT TO BE COVERED IN ALL SECTIONS:

| CORE CONTENT | APPROX. % OF COURSE |
|---|---|
| Radicals<br>A. Solving equations containing radical expressions<br>B. Introducing complex numbers<br>C. Applications of radicals | 10.00% |
| Systems of Linear Equations<br>A. Systems of linear equations in two variables (substitution, elimination, graphing)<br>B. Systems of linear equations in three variables (substitution, elimination)<br>C. Applications of systems of linear equations | 15.00% |
| Quadratic Equations<br>A. Solving quadratic equations by factoring<br>B. Solving quadratic equations by completing the square and by using the quadratic formula<br>C. Equations that are reducible to quadratic forms<br>D. Graphing quadratic functions.<br>    E. Applications. | 20.00% |
| Functions and Relations<br>A. General and specific functions, one-to-one functions<br>B. Graphing functions<br>C. Domain/Range.<br>    D. Applications | 10.00% |
| Nonlinear Functions, Nonlinear Systems and Conic Sections<br>A. Additional graphs of functions<br>B. Nonlinear systems of equations<br>C. The circle and the ellipse<br>D. The hyperbola | 15.00% |
| Exponential and logarithmic functions and equations<br>A. Exponential and logarithmic graphs<br>B. Properties of logarithms<br>C. Solving exponential and logarithmic equations.<br>    D. Applications of exponential and logarithmic functions | 20.00% |
| Sequences and Series<br>A. Sequences and series<br>B. Arithmetic sequences<br>C. Geometric sequences | 10.00% |
| TOTAL | 100% |

# Course Description

This one semester course is equivalent to a second year algebra course offered in a full year of high school. Topics covered include the real number system, polynomials, rational expressions, exponential and radical forms, linear and quadratic equations, relations, functions and graphs, systems of equations and logarithmic and exponential functions.

# Grades

**How Percentages Equate to Grades**

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

**Grade Make-up**

Test ………………….. 50%
Quizzes/ Homework …. 25%
Final ………………….. 25%

# Policies and Procedures

**Academic Honesty**

Academic honesty is highly valued at IVC. You must always submit work that represents your original thoughts and steps. Please see the IVC catalog for more information about academic honesty, including consequences of academic dishonesty.

**Late Assignments**

No late assignments will be accepted.

**Missed Tests**

If you miss a test, the percentage worth of that test will be added to your final test. For example if you miss a test that is worth 15 percent and the final is worth 25 percent your final is now 40 percent of your grade.

**Disabled Student Program**

Services are provided on an individual basis and may include reader services, note taking, tutoring, counseling, sign language, interpreting, priority registration, learning disability assessment and adapted computer instruction. If there are any modifications you may need, please let me know as soon as possible or call the DSP&S at 355-6312 or go to building 2100.

**Attendance**

Attendance is mandatory. If you miss more than the allowed two classes I may drop you from the class. Please *do not assume* that I will drop you from the class if you stop attending, it is your responsibility to drop the class.

**Drop date**

The last day to drop with a "W" is April 13.

**Learning resources**

- Please ask me.
- Tutoring services
- Math lab
- Study Guide
- MathXL

Two (2) hours of independent work done out of class per each hour of lecture or class work, or 3 hours lab, practicum, or the equivalent per unit is expected.

**Final Exam**

**Final exam for Math 91 will be held on <u>*Monday, May 6<sup>th</sup>*</u>, on the main campus from 4:45PM-5:55PM. If you need to take the final exam at any other time than the scheduled, you need to complete and submit a Student Petition by Monday, April 8, 2013.** The final exam will be comprehensive and students will need to bring the following:

- **Bring scientific calculator no graphing calculators or phones allowed**
- **Have Picture ID**
- **Know your student ID number ( G-------)**
- **Have #2 pencils**
- **Have Eraser**

# January 2013

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14<br>Intro Review | 15<br>8.1 Intro to func<br>8.2 Graphs of func | 16<br>8.3 Alg. Func | 17<br>8.4 comp inv func | 18 | 19 |
| 20 | 21<br>9.1 ineq & app | 22<br>9.2 comp ineq | 23<br>9.3 eq. & ineq<br>absolute value | 24<br>**Test 1<br>Chapters 8-9** | 25 | 26 |
| 27 | 28<br>4.1 Sys by graph | 29<br>4.2 Sys by sub | 30<br>4.2 Sys by sub | 31<br>4.3 Sys by add | | |
| | | | | | | |

# February 2013

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|
| | | | | | 1 | 2 |
| 3 | 4<br>4.3  Sys by add | 5<br>**Review**<br>4.1 – 4.3 | 6<br>4.4  Prob solving using sys | 7<br>4.4  Prob solving using sys | 8 | 9 |
| 10 | 11<br>4.5  Sys in 3 var | 12<br>4.5  Sys in 3 var | 13<br>**Test 2<br>Chapter 4** | 14<br>10.1  Rad exp | 15 | 16 |
| 17 | 18<br>**Presidents Day** | 19<br>10.2  Rational exp | 20<br>10.2  Rational exp | 21<br>10.3  Mult & simplify rad exp | 22 | 23 |
| 24 | 25<br>10.4  add, sub, div rad | 26<br>10.4  add, sub, div rad | 27<br>**Review**<br>10.1 – 10.4 | 28<br>10.5 multiply & rationalize | | |
| | | | | | | |

# March 2013

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|--------|---------|-----------|----------|--------|----------|
| | | | | | 1 | 2 |
| 3 | 4<br>10.5 multiply & rationalize | 5<br>10.6 Rad eq | 6<br>10.6 Rad eq | 7<br>10.7 Complex | 8 | 9 |
| 10 | 11<br>10.7 Complex | 12<br>**Test 3**<br>Chapter 10 | 13<br>11.1 Sqrt prop Complete square | 14<br>11.2 Quad form | 15 | 16 |
| 17 | 18<br>11.3  Quad funct & graphs | 19<br>11.4 Eq in quad form | 20<br>**Test 4**<br>Chapter 11 | 21<br>12.1  Exp func | 22 | 23 |
| 24 | 25<br>12.2  log func | 26<br>12.3  log prop | 27<br>12.4 exp and log func | 28<br>12.5  exp growth and decay | 29 | 30 |
| 31 | | | | | | |

# April 2013

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8<br>**Test 5<br>Chapter 12** | 9<br>13.1  Circles | 10<br>13.2  Ellipse | 11<br>13.3  Hyperbola | 12 | 13 |
| 14 | 15<br>**Review**<br>13.1 – 13.3 | 16<br>13.4  Conics | 17<br>13.5  Sys of Eq 2 variables | 18<br>**Test 6<br>Chapter 13** | 19 | 20 |
| 21 | 22<br>14.1  Sequence and Summations | 23<br>14.2  Arithmetic Sequence | 24<br>14.3  Geometric Sequence | 25<br>**Test 7<br>Chapter 14** | 26 | 27 |
| 28 | 29<br>**Cumulative Review** | 30<br>**Cumulative Review** | | | | |
| | | | | | | |

# May 2013

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|
| | | | 1 **Cumulative Review** | 2 **Cumulative Review** | 3 | 4 |
| 5 | 6 **FINAL** | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |
| | | | | | | |

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