Irvine Valley College

MATH 105
MATH FOR LIBERAL ARTS STUDENTS
COURSE SYLLABUS
Spring Semester, 2001

Course Information
Ticket #65065
T/Th 8 a.m. - 9:30 a.m.
Room B239
3 units, 3 hours lecture

Instructor Information
Professor Richard Zucker
Office: B267
Telephone: (949) 451-5259
Email: rzucker@ivc.cc.ca.us
Office Hours: M/W/F 1:00-2:00 p.m., T/Th 11:00 a.m.-12:00 p.m.
See daily schedule here.

Course Description
"This course examines the nature of mathematics and its role in society, stressing the history of mathematical ideas and methods and the use of mathematics in problem solving and communication. The major categories of mathematics will be studied, with emphasis given to the application of mathematics to various disciplines in the liberal arts. (3 units)"

This course is unlike any math course you have ever taken. We won't be working on improving your algebra skills or memorizing formulas. Instead, you will experience the power, depth, and beauty of this much maligned subject. Prepare to...dare I say...like mathematics!

Prerequisites
Intermediate Algebra (Math 253), or placement based on the mathematics assessment test.

Textbook

The manipulative kit is also required.

Calculators
You are expected to bring a scientific calculator to class and use it whenever you need to, tests included.

Attendance
Being present in class certainly serves you. But you also contribute to the rest of the class when you are present to participate in discussions, respond to questions and share your own experiences. Therefore, your attendance is required. I intend to drop every student who misses five class meetings (first week excluded). Important: you must NEVER assume that you have been dropped!

If you decide to drop this class yourself, keep in mind that April 11 is the absolute drop deadline. Students who are still on my roster after April 11 must receive a letter grade.

Homework
Homework will be assigned regularly. You should complete all assignments with rigor and depth, even though only some assignments will be handed in.
I do not accept late work, regardless of the reason. Clarity of exposition is important, and you should strive for well written, polished solutions. You are encouraged to collaborate with others on homework, although your solutions must be individually
written up and collaborators must be acknowledged. Certain selected homework assignments are worth 25 points toward your course grade.

Quizzes, Tests and Final Exam
There will be five tests, each worth 50 points, for a total of 250 points toward your course grade. The final exam will be cumulative and is worth 100 points. Missed tests cannot be made up, regardless of the reason. However, to offset this seemingly severe rule, half the score on your final exam will replace the lowest score among your five tests. (This is because the final exam is worth twice as much as a test.)

Calculating Your Course Grade
Your course grade is based on the sum total of the points you earn out of 375 possible points, according to this scale:

- A's start at 337 points,
- B's start at 300 points,
- C's start at 262 points,
- D's start at 225 points.

Web Site, Newsgroup and Email
At times you may be directed to this web site which I will maintain for this class.

A newsgroup (an electronic bulletin board) has been set up for you to exchange messages with your classmates. The URL for the newsgroup is news://iserver.ivc.cc.ca.us/ivc.spring01.math105.rzucker.

Every student is provided an email address by the college. Your college email can be read at school or forwarded to another email address. Important information can be found at http://www.socccd.cc.ca.us/email.

Math Tutorial Center
You may use the Math Tutorial Center (Math Lab) if you enroll in Math 180. The Math Lab is located in Room B117. It is open for drop-in tutoring from 9 a.m. to 7 p.m. Monday and Wednesday, 9 a.m. to 8:30 p.m. Tuesday and Thursday, and 9 a.m. to 2 p.m. on Friday and Saturday. The Math Lab is closed on school holidays.

Study Tips
Study with a buddy. Two, three or four heads are better than one. Why? Because you can’t see what you can’t see and you don’t know what you don’t know.

Be committed to regular study sessions. Don’t let your study buddies down!

Frequent short study sessions are better than one long haul.

Give yourselves a short break every 30 minutes.

Read ahead. Let the class lecture be your second exposure to the material. You will be able to ask better questions, and you will stay more tuned in.

Make a set of “Master Notes” with all the important formulas and the main ideas.

Never ever get even one day behind. It’s a major red flag if you succumb to the thought, “Oh, I have the weekend to catch up.”

If You Are Having Problems
My office hours are for you, not me. Please use them.

The Learning Center in the IVC library may be able to provide you with limited one-on-one tutoring for free.

I can recommend private tutors ($15 to $50 per hour).

Don't forget to enroll in Math 180 to be eligible to use the Math Lab.
Timeline
Spring Semester, 2001

The instructor reserves the right to adjust, amend, or otherwise modify this timeline at any time.

TEXTBOOK:

Tue, Jan 9  Introduction
Thu, Jan 11  Memorizing numbers (The Peg System)
Tue, Jan 16  Arithmetic Revisited
Thu, Jan 18  Ch. 1 -- Fun and Games: An Introduction to Rigorous Thought
Tue, Jan 23  Problem Solving Strategies
Thu, Jan 25  Review for Test 1
Tue, Jan 30  TEST 1
Thu, Feb 1   Sec 2.1 – Counting
Tue, Feb 6   Sec 2.2 - Patterns in Nature
Thu, Feb 8   Sec 2.3 - Prime Numbers
Tue, Feb 13  Sec 2.4 - Bar codes
Thu, Feb 15  Sec 2.6 - Irrational numbers
Tue, Feb 20  Review for Test 2
Thu, Feb 22  TEST 2
Tue, Feb 27  Sec 3.1, 3.2 – Infinity
Thu, Mar 1   Sec 3.3 - Different size infinities
Tue, Mar 6   Sec 3.4 - Power sets
Thu, Mar 8   Review for Test 3
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue, Mar 13</td>
<td><strong>TEST 3</strong></td>
</tr>
<tr>
<td>Thu, Mar 15</td>
<td>Mathemagic Show</td>
</tr>
<tr>
<td>Tue, Mar 20</td>
<td>Sec 4.1 - The Pythagorean Theorem</td>
</tr>
<tr>
<td>Thu, Mar 22</td>
<td>Sec 4.3 - The Golden Rectangle</td>
</tr>
<tr>
<td>Tue, Mar 27</td>
<td>Sec 4.5 - The Platonic Solids</td>
</tr>
<tr>
<td>Thu, Mar 29</td>
<td>Sec 4.7 - The Fourth Dimension</td>
</tr>
<tr>
<td>Tue, Apr  3</td>
<td>Review for Test 4</td>
</tr>
<tr>
<td>Thu, Apr  5</td>
<td><strong>TEST 4</strong></td>
</tr>
<tr>
<td>Tue, Apr 10</td>
<td>Sec 7.1 - Counterintuitive problems in probability</td>
</tr>
<tr>
<td>Thu, Apr 12</td>
<td>7.2 - Measuring uncertainty</td>
</tr>
<tr>
<td>Tue, Apr 17</td>
<td>HOLIDAY</td>
</tr>
<tr>
<td>Thu, Apr 19</td>
<td>HOLIDAY</td>
</tr>
<tr>
<td>Tue, Apr 24</td>
<td>Sec 7.5 - The Expected Value</td>
</tr>
<tr>
<td>Tue, Apr 26</td>
<td>Sec 7.7 - Aids testing</td>
</tr>
<tr>
<td>Tue, May  1</td>
<td>Review for Test 5</td>
</tr>
<tr>
<td>Thu, May  3</td>
<td><strong>TEST 5</strong></td>
</tr>
<tr>
<td>Tue, May  8</td>
<td>Special topic</td>
</tr>
<tr>
<td>Thu, May 10</td>
<td>Review for final exam</td>
</tr>
<tr>
<td>Tue, May 15</td>
<td><strong>FINAL EXAM</strong>, 8:15 a.m.</td>
</tr>
</tbody>
</table>