**Chaminade University of Honolulu**

# Syllabus for Survey of Math

**Early Draft of 29 Aug 2013 at Start of Semester**

**Fall 2013 MATH 100-01-1**
**from 26 Aug to 10 Dec 2013**
**Tue&Thu; 10:00 to 11:20a; Eiben Hall 202**

**Instructor**: J. Lee Ingamells << james.ingamells@adjunct.chaminade.edu >>

**Office [Hours]**: Henry Hall Room 1 [Mon-Wed-Fri 10:30a-to-noon or by appointment]

**Required Materials:**

1. Blitzer, Robert (2011) *Thinking Mathematically*. Prentice Hall. ISBN=0-321-64585-5
2. My Math Lab and internet access
3. Personal calculator for professional development.
4. Notebook (personal ledger/organizer) with helpful records for study and reference. Keep everything together. (Not good to have fragments at home when needed in class.)

**Description**: A study of mathematical thought as commonly applied to manage or explore the interactions of nature and knowledge. Topics include the basis of sets and logic, numbers and operations, algebra, geometry, measurement, financial management, probability and statistics, graphs and functions. This course fulfills the Track A general education requirement in mathematics. The course is intended as a terminal course and is not a prerequisite for any other course in mathematics.

**Protocol**: Use of **music devices and cell phones** is prohibited during all Natural Science and Mathematics classes at Chaminade, unless specifically permitted by your instructor. Use of cellphones and music devices in laboratories is a safety issue. In addition, use of cellphones and music devices in any class is discourteous and may lead to suspicion of academic misconduct. Students who cannot comply with this rule will be asked to leave class and may be subject to laboratory safety violation fines. Please refer any questions to the Dean of Natural Sciences and Mathematics.

**Accommodations**: Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from the CUH Counseling Center (Dr. June Yasuhara; phone 735 4845) by the end of week three of the class, in order for the instructor to plan accordingly. Failure to provide written documentation will prevent your instructor from making the necessary accommodations. Please refer any questions to the Dean of Students and review the procedures at …

http://www.chaminade.edu/student_life/sss/counseling_services.php

**Format**: The purpose of MATH 100 is to discover important applications of mathematics by applying inductive, deductive, and subjective reasoning. Student exercises are balanced among three modes of learning – kinesthetic, conversational, and visual. The course presumes math to be a universal language and so encourages intuitive understanding and collaboration. In addition to working out exercises found in the Blitzer text, students carry out one or more independent projects and make a brief oral presentation on an application significant to the history of mathematics.

**Grading**: Grades will be assigned to the following intervals:

| | |
|---|---|
| A (90.0%-99.9%) | 900 to 999 points |
| B (80.0%-89.9%) | 800 to 899 points |
| C (70.0%-79.9%) | 700 to 799 points |
| D (60.0%-69.9%) | 600 to 699 points |
| F | below 600 points |

Grade points are awarded for performance in the following:

| | | |
|---|---|---|
| Chap 1-10-15 | Preparation | 50 points |
| | Exam (Tentatively 19 Sep) | 150 points |
| Chap 2-11-12 | Preparation | 50 points |
| | Exam (Tentatively 22 Oct) | 150 points |
| Chap 10-11-12 | Preparation | 50 points |
| | Exam (Tentatively 19 Nov) | 150 points |
| Projects & Presentations | | 200 points |
| Final Comprehensive Exam (8:30a, Mon 09 Dec) | | 200 points |

**Preparation**: This is worth <u>150 grade points</u>. In the absence of truly compelling reasons, students are expected to 1) do the assigned homework, 2) be present at the beginning of every class and stay until the end, and 3) demonstrate a mastery of practice problems in preparation for respective exams.

Should you miss a class, please obtain the missed material from a classmate.
HOW CAN YOU WORK TOGETHER TO EVERYONE'S BENEFIT**?**
You are not in severe competition with your classmates.

**Exams**: The three mid-term exams and one final comprehensive exam are collectively worth 650 grade points. Practice is important to preparing for these exams, which is composed of problems similar to those discussed in class or found in Blitzer's text.

**Project**: A two-phase project (possibly done in groups) is worth 200 grade points. The project must be completed with **two oral presentations**. Details are discussed during the first few weeks of the semester. Students have considerable freedom over the selection of topics and the scheduling of their projects.

Each presentation should be three to five (3-5) minutes plus a short time to follow up with questions or discussion. Grading criteria may include…

| | | | | |
|---|---|---|---|---|
| Personal interest in topic | Description of topic | Background or history | Organization & clarity | Correct work |
| Documentation | Difficulty | Known or suspected applications | Conclusions & Challenges | Other |

**J. Lee Ingamells (BA Chemistry; MS Agronomic Education; PhD Soil Ecology)**

**The instructor is a specialist in biometry, experimental design, and applied statistics. He began teaching with Peace Corps Philippines (1970-73) and has since held elementary, secondary and university teaching appointments in science and math, most recently at Sino-British College Shanghai (2010-11) and International Community School Singapore (2011-12). He has twenty-five years of professional experience as project leader and consultant on programs in tropical agriculture, soil systems, and environmental awareness.**

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**CALENDAR SCHEDULE**
**Fall 2013 MATH 100-1**

**from 26 Aug to 09 Dec 2013**
**Tue-Thu 10:00-11:20hrs Eiben Hall 202**

**DRAFT 29 AUG START OF SEMESTER**

| MON | TUE | WED | THU | FRI | SAT | HOURS WK | HOURS SUM |
|---|---|---|---|---|---|---|---|
| 26 | 27-Aug<br>Introduction<br>**Opening Exercise(s)** | 28 | 29-Aug<br>Ways of Thinking & Solving<br>**Chap 1 -- Overview/Begin** | 30 | 31 | 2.8 | |
| 2 | 3-Sep<br>add-drop period ends Tue 03 Sep | 4 | 5-Sep<br>Geometry<br>**Chap 10 -- Overview/Begin** | 6 | 7 | 2.8 | 5.6 |
| 9 | 10-Sep | 11 | 12-Sep<br>Topology & Graph Theory<br>**Chap 15 -- Overview/Begin** | 13 | 14 | 2.8 | 8.4 |
| 16 | 17-Sep | 18 | 19-Sep<br>**<< EXAM #1 -- Chap 1, 10 & 15 >>** | 20 | 21 | 2.8 | 11.2 |
| 23 | 24-Sep<br>**<< STUDENT SYMPOSIUM SESSION #1 >>** | 25 | 26-Sep | 27 | 28 | 2.8 | 14.0 |
| 30 | 1-Oct<br>Set Theory<br>**Chap 2 -- Overview/Begin** | 2 | 3-Oct | 4 | 5 | 2.8 | 16.8 |
| 7 | 8-Oct<br>Counting & Probability<br>**Chap 11 -- Overview/Begin** | 9 | 10-Oct | 11 | 12 | 2.8 | 19.6 |
| 14 | 15-Oct<br>Statistics<br>**Chap 12 -- Overview/Begin** | 16 | 17-Oct | 18 | 19 | 2.8 | 22.4 |
| 21 | 22-Oct<br>**<< EXAM #2 -- Chap 2, 11 & 12 >>** | 23 | 24-Oct<br>**<< STUDENT SYMPOSIUM SESSION #2A >>** | 25 | 26 | 2.8 | 25.2 |
| 28 | 29-Oct<br>Real Numbers<br>**Chap 5 -- Overview/Begin** | 30 | 31-Oct | 1 | 2 | 2.8 | 28.0 |
| 4 | 5-Nov<br>Equations & Inequalities<br>**Chap 6 -- Overview/Begin** | 6 | 7-Nov | 8 | 9 | 2.8 | 30.8 |
| 11 | 12-Nov<br>Graphs & Linear Systems<br>**Chap 7 -- Overview/Begin** | 13 | 14-Nov | 15 | 16 | 2.8 | 33.6 |
| 18 | 19-Nov<br>**<< EXAM #3 -- Chap 10, 11 & 12 >>** | 20 | 21-Nov<br>Consumer Math<br>**Chap 8 -- Overview/Begin** | 22 | 23 | 2.8 | 36.4 |
| 25 | 26-Nov<br>**<< STUDENT SYMPOSIUM SESSION #2B >>** | 27 | 28-Nov<br><< no class 28 & 29 Nov >><br>**Thanksgiving** | 29 | 30 | 1.4 | 37.8 |
| 2 | 3-Dec<br>Voting & Apportionment<br>**Chap 14 -- Overview/Begin** | 4 | 5-Dec<br>**- - Semester Review - -** | 6 | 7 | 2.8 | 40.6 |
| 9-Dec<br>FINAL EXAM **MONDAY** 8:30-to-10:30hrs | | | | | | | |