

UCLA
Department of
Mathematics
2008-2009

Undergraduate
Handbook

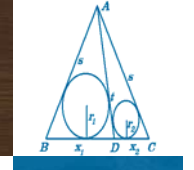
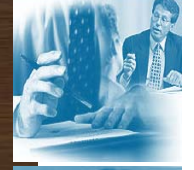
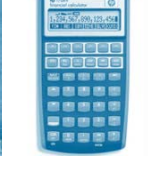


Table of Contents

Academic Policies & Advising

Student Services Office.....	1
Answers to Frequently Asked Questions.....	2
Credit Limitations	6

Majors & Specializations

Major Options	8
Mathematics.....	9
Applied Mathematics	10
Mathematics of Computation.....	11
Mathematics for Teaching	12
Mathematics/Applied Science – Individual	13
Mathematics/Applied Science – Actuarial.....	14
Mathematics/Applied Science – Medical/Life Sciences	15
Mathematics/Applied Science – History of Science.....	16
Mathematics/Economics	17
Specialization in Computing.....	18
Minor in Mathematics.....	19

Career/Graduate School Resources & Getting Involved

Career Opportunities	20
Graduate School	21
Student Research Opportunities.....	22
Student Groups.....	23
Teaching Preparation Programs	24
Departmental Honors Program	25

Computer Lab Facilities

PIC Lab	26
---------------	----

Faculty

Mathematics Faculty by Area of Research	27
---	----

Schedules and Course Planners

Academic Course Planners	30
--------------------------------	----

While we make every effort to ensure the accuracy of the information provided in the Undergraduate Handbook, please be aware that all courses, course descriptions, program descriptions and calendar information are subject to change without notice. Therefore, when questions arise, please refer to our website at <http://www.math.ucla.edu> or see a counselor in the Mathematics Student Services Office for clarification.



Student Services Office

6356 Math Sciences Building
(310) 206-1286

Undergraduate Advisor:

Kristin Olson
kristin@math.ucla.edu

Hours of Operation:

Monday-Friday
8:00am – 12:00pm
1:00pm – 4:30pm

Website:

www.math.ucla.edu/undergrad

Email:

ugrad@math.ucla.edu

Mailing Address:

UCLA Department of Mathematics
520 Portola Plaza
Box 951555
Los Angeles, CA 90095-1555

Academic Advising Schedule:

Weeks 0-1

Drop-in Advising
M-F 8:30-11:30 a.m. and 1:00-4:00pm

Weeks 2 -10

Drop-in Advising *

Finals Week

Drop-in Advising*

*Drop-in times vary. Please contact the office at (310) 206-1286 or stop by MS 6356 for actual hours.



ANSWERS TO THE MOST FREQUENTLY ASKED QUESTIONS



If I took an AP Calculus Exam, what Math course should I enroll in at UCLA?

Only students that receive a score of 3, 4 or 5 on the AP Calculus AB or BC Exams will receive college credit as indicated in the following chart:

UCLA Course Credit for AP Calculus Test:			
Score	AB Exam		BC Exam
5	Credit for Math 31A. (Enroll in Math 31B/3B)		Credit for Math 31A,31B. (Enroll in Math 32A/3C)
4 * ^	Credit for 4 units of Calculus		Credit for Math 31A and 4 units of Calculus. (Enroll in Math 31B/3B)
3*	Credit for 4 units of Calculus		Credit for 8 units of Calculus
2*	No college credit.		No college credit.
1*	No college credit.		No college credit.
Suggested Courses for Pre-Med Students:			
	UCLA's Calculus Series	If you have a 5 on the AB Exam:	If you have a 5 on the BC Exam:
			*4 on the BC Exam see AB Exam Info.
Applications to Medical School	30 Series	31B, 32A, 32B or 33A	32A, 32B, 33A



Do I need to take the Math Diagnostic Test?

All students wishing to enroll in Math 1, Math 3A or Math 31A are required to take the Math Diagnostic Test. Please contact the Student Services office if you are not sure whether you need to take the exam.



Can I retake the Math Diagnostic Test and how often is the test offered?

Yes. Students can retake the exam as many times as they would like. The most recent score will be counted, even if it is higher or lower than the previous score. The test is offered at every Freshman Orientation Session during the summer and once during the fall and winter quarters. Please refer to our website at <http://www.math.ucla.edu/ugrad/diagnostic.shtml> for specific exam times and locations.



How and When may I drop a course?

For non-impacted courses only:

By Friday of 2 nd Week:	Via URSA; No fee, no transcript notation.
By Friday of 4 th Week:	Via URSA; \$5 fee, no transcript notation.
By Friday of 7 th Week:	Via URSA, \$20 fee, transcript notation.
By Friday of 10 th Week:	Instructor's signature required. Forms available in A-316 Murphy. \$35 fee and transcript notation.

Warning: If you are on financial aid and plan to drop a course, it is important that you first go to the Financial Aid Office to find out the consequences of your actions.



What if a math course I planned to take is full during my enrollment appointment time?

If there are any open sections of that course offered at a different time, it is best to try to rearrange your schedule and enroll in the open section. Otherwise, you should add yourself to the waitlist. If both the course and waitlist are full, you can continue to check the enrollment numbers and try to add yourself to the waitlist if a space becomes available. If you are not enrolled in the class by the first day of instruction, you can stop by MS 6356 or email ugrad@math.ucla.edu for more information. It is always a good idea to have a back-up plan, as enrollment in any course is not guaranteed and you may have to take the course the next time it is offered.



Can I take a “Prep for the Major” or “Major” course Pass/No Pass?

NO. All courses that are required for the Major, Minor, or Specialization in Computing must be taken for a letter grade.



Can I take courses for my major at another school?

Yes. If you would like to complete some “Preparation for the Major” or “Major” courses during the summer at a community college, four-year university, or at another UC campus, you may do so. However, you must verify course equivalencies with a math advisor prior to completing the course. Also, please check with a Letters and Science Counselor in A-316 Murphy Hall regarding residency requirements and other rules/regulations for taking courses at another school.

Upon completion of the course, have an official transcript sent to UCLA Undergraduate Admissions and Relations with Schools, 1147 Murphy Hall, Box 951436, Los Angeles, CA 90095-1436. You must also fill out a Transfer Credit Evaluation Request form in order to have the course evaluated and credited to your record.



Will the grade for a course taken at another institution transfer to UCLA?

Only grades from other UC campuses (not a UC Extension program) will be computed into your UCLA GPA. UCLA Extension courses with XLC (Concurrent Enrollment) count as UC courses and the grades do transfer.



Will I receive credit for both a math course and the honors version of that course (Math 115A and Math 115AH)?

NO. Students will only receive credit for either the regular course or the honors version of that course. Taking both courses will result in a credit deduction.



If I received a C- in my Math 31A class, may I continue on to Math 31B and retake Math 31A at a later quarter?

NO. If the course you are planning to repeat is a prerequisite of the more advanced course, then you must repeat the prerequisite course prior to enrolling in the next course. For example, a student wishing to retake 31A should do so prior to enrolling in 31B.



If I want to study abroad, how can I find out if the math courses I plan on taking will count towards my major?

Students should consult with the Math Advisor only after they have met with EAP and know which math courses they are considering. Be sure to bring any program information and course descriptions/outlines when you meet with the advisor.



Who should I go to regarding my GE or university requirements?

Questions regarding university or college requirements should be directed to your designated college counseling office (College of Letters and Science, Honors, AAP or Athletics). You can also refer to the College of Letters and Science website at <http://www.college.ucla.edu/up/counseling/artagree.htm>.



How may I find out my grade in a course?

Please check online at: <http://www.ursa.ucla.edu> or on your personal My.UCLA page.



Where may I petition to change or declare my major?

After you have completed 12 units of math here at UCLA with a 2.0 GPA or better, you can go to MS 6356 to request to change or declare one of the math majors. For double majors, please start by meeting with the Math Advisor in MS 6356. If you are looking to switch to a different major outside of the Math Department, please consult with the advisor for that specific department.



How do I add the Specialization in Computing?

If you are in any of the math majors (except Math of Computation), you can submit a petition to MS 6356 upon completion of PIC 10B with a grade of "C-" or better. If at any time you wish to drop the specialization, you must submit a petition requesting that it be removed in MS 6356.



How can I find a tutor?

There are various tutoring resources available across campus. The following are some of the most frequently used tutoring services:

The Student Math Center offers individual and group homework assistance for lower division math courses. The center is located in MS 3974. Hours of operation are available at <http://www.math.ucla.edu/ugrad/smc.shtml>.

College Math /Sciences Tutorials is located in 230 Covell Commons and is open to all registered UCLA undergraduate students that need assistance with lower division Math and Sciences courses. All tutors are current UCLA students. For more information, refer to their website at http://www.college.ucla.edu/up/ct/math_sci.htm.

Engineering and Mathematical Sciences Library (EMS) is located in 8270 Boelter Hall and offers various academic resources to current UCLA students. For more information, visit their website at <http://www.library.ucla.edu/libraries/sel/>.

Private (Fee Based) Tutoring is available from current graduate students in the Math Department. Please refer to our website at www.math.ucla.edu/people/tutors/ for a list of tutors available. For price rates, please contact each individual tutor.

If you have further questions, please see the math advisor in MS 6356.

CREDIT LIMITATIONS

Credit is given for only one course in each of the following groups:

- Mathematics 3A, 31A
- Mathematics 3B, 31B
- Mathematics 32A, 32AH,
- Mathematics 3C, 32A
- Mathematics 110A, 117

Courses from only one of the following Statistics sequences may be applied toward any mathematics major:

- Statistics 100A, Statistics 100B, Statistics 100C
- Statistics 110A, Statistics 110B.

You may not receive credit for:	If you have already taken:
Math 2 or Stats 10	ANY Math # 106-199
Math 170A or Stats 100A or Stats 110A	Electrical Engineering 131A
Math 151A AND Math 151B	Electrical Engineering 103
Math 132	Physics 132
Econ 146	Math 164

Students may not take or repeat a mathematics course for credit, if it is a requisite of a more advanced course for which they already have credit. This applies in particular to the repetition of courses. For example, if you wish to repeat Math 31B, you must do so before completing Math 32A.

Students may not receive credit for both a course and the honors version of that course (e.g., they may not receive credit for both Math 131A and Math 131AH). Math 110A, Math 110B and Math 110AH, Math 110BH(Honors) are a special case.

Students should see an undergraduate advisor in the mathematics department if they find that they stop in the middle of one of the algebra sequences and want to finish with the other the following year.

Students who took Math 3C because they were interested in a life science major, but would like to switch to a physical science major requiring Math 32A, should see a counselor in MS 6356 to discuss their options.



What does a major in Mathematics give you that you may not find in other majors?

- ❖ A chance to develop and apply strong analytical problem solving skills.
- ❖ A major that will match your particular strengths and interests.
- ❖ Career options in business, industry, teaching, government, medicine, finance, ... almost ANYTHING that you want to do!
- ❖ Impressive starting salaries and a strong lifetime earning potential.

Major Options in Mathematics at UCLA

Mathematics (Pure Math)

This theoretical major is a good choice for students who are interested in pursuing graduate level mathematics. These students are interested in working as professors or researchers at the university level.

Applied Mathematics

Many different companies are interested in hiring applied mathematics graduates, including aerospace, financial companies, computer companies, and other technology-based industries. Students majoring in applied mathematics may also pursue graduate studies.

Mathematics of Computation

Students following this major take computer related mathematics courses and three upper division Computer Science courses, which are generally reserved only for CS majors. They are often hired into positions for CS engineers, but have the flexibility to pursue other computer-related fields. Mathematics of Computation majors have also succeeded in pursuing graduate degrees in Computer Science and Applied Mathematics.

Mathematics for Teaching

Mathematics for Teaching is a major geared toward individuals interested in teaching mathematics at the high school or middle school level. The program aligns with the guidelines established by the state to produce more qualified teachers.

Mathematics/Applied Science (Four plans available)

- a) **Individual** – Allows students to combine upper division math with upper division courses from other science areas (i.e. statistics, physics, chemistry, psychology, etc.).
- b) **Actuarial** – Provides students with a foundation in mathematics, economics, and finance to prepare for the actuarial field.
- c) **Medical and Life Sciences** – Prepares students for a career in the medical field while pursuing their interest in mathematics. Several courses overlap with the pre-med requirements.
- d) **History of Science** – For students intending to go to professional school, (law or business), while pursuing their interest in mathematics

Mathematics/ Economics

This interdepartmental major is great preparation for graduate level Economics and MBA programs. In addition, many business and finance companies find these students very desirable prospective employees.



MATHEMATICS

Preparation for the Major (10 Courses):

	Quarter	Grade	Two additional courses chosen from:	
			Quarter	Grade
Math 31A	_____	_____	Econ 11	_____
Math 31B	_____	_____	Chem 20A	_____
Math 32A	_____	_____	Chem 20B	_____
Math 32B	_____	_____	Physics 6B	_____
Math 33A	_____	_____	Physics 6C	_____
Math 33B	_____	_____	Physics 1B	_____
PIC 10A	_____	_____	Physics 1C	_____
Physics 1A	_____	_____	Philos 31	_____
			Philos 32	_____
			Life Sci 1	_____

The Major (12 Courses):

	Quarter	Grade
Math 110A	_____	_____
Math 110B	_____	_____
Math 115A	_____	_____
Math 120A	_____	_____
Math 131A	_____	_____
Math 131B	_____	_____
Math 132	_____	_____

Five upper courses chosen from Math 106-199, Statistics 100A-102C:

1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____



APPLIED MATHEMATICS

Preparation for the major (10 courses):

	Quarter	Grade		Quarter	Grade
Math 31A	_____	_____	Physics 1A	_____	_____
Math 31B	_____	_____	Physics 1B	_____	_____
Math 32A	_____	_____			
Math 32B	_____	_____	One course from the following:		
Math 33A	_____	_____	Physics 1C	_____	_____
Math 33B	_____	_____	Chem 20A	_____	_____
PIC 10A	_____	_____	Chem 20B	_____	_____

The Major (12 courses):

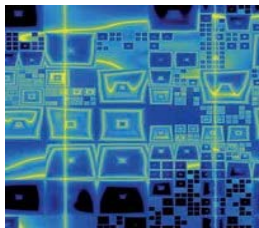
Math 115A	_____	_____
Math 131A	_____	_____
Math 131B or 132	_____	_____
Math 142	_____	_____

Two 2-quarter sequences chosen from three different categories:

A. Applied Numerical Methods:	Math 151A	_____	_____
	Math 151B	_____	_____
B. Probability and Statistics:	Math 170A, 170B <u>or</u> Stats 100A, 100B <u>or</u> Stats 110AB		
	Math 170A or Stats 100A or Stats 110A	_____	_____
	Math 170B or Stats 100B or Stats 110B	_____	_____
C. Differential Equations:	Math 134	_____	_____
	Math 135	_____	_____

Four additional courses chosen from Math 106 -199, Stats 100A-102C.

1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____



MATHEMATICS OF COMPUTATION

Preparation for the Major (13 Courses):

	Quarter	Grade		Quarter	Grade
Math 31A	_____	_____	PIC 10A	_____	_____
Math 31B	_____	_____	PIC 10B	_____	_____
Math 32A	_____	_____	PIC 10C or 30	_____	_____
Math 32B	_____	_____			
Math 33A	_____	_____	One course from the following:		
Math 33B	_____	_____	Physics 1C	_____	_____
Math 61	_____	_____	Chem 20A	_____	_____
Physics 1A	_____	_____	Chem 20B	_____	_____
Physics 1B	_____	_____			

The Major (14 Courses):

	Quarter	Grade
Math 115A	_____	_____
Math 131A	_____	_____
Math 131B or 132	_____	_____
Math 151A	_____	_____
Math 151B	_____	_____

Six upper courses chosen from Math 106-199, Statistics 100A-102C:

1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

Three upper division Computer Science courses:

1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____



MATHEMATICS FOR TEACHING

Preparation for the Major (11 Courses):

	Quarter	Grade			
Math 31A	_____	_____	Two additional courses from:		
Math 31B	_____	_____	Chemistry 20AB, Physics 1BC, Econ 11, PIC 10B- 97		
Math 32A	_____	_____		Quarter	Grade
Math 32B	_____	_____	_____	_____	_____
Math 33A	_____	_____	_____	_____	_____
Math 33B	_____	_____			
Math 61	_____	_____			
PIC 10A	_____	_____			
Physics 1A	_____	_____			

The Major (13 Courses):

	Quarter	Grade
Math 115A	_____	_____
Math 105A	_____	_____
Math 105B	_____	_____
Math 105C	_____	_____
Math 106	_____	_____
Math 110A or 117	_____	_____
Math 120A or 123	_____	_____
Math 131A	_____	_____
Math 170A or Stats 100A	_____	_____
Stats 100B		

One course chosen from Mathematics 131B - 136: Analysis

Math _____

One course chosen from Mathematics 142 - 167: Applied Mathematics

Math _____

One additional course from Math 110BH-191H, or Statistics 100C



INDIVIDUAL PLAN

Under the Mathematics/Applied Science major

Preparation for the major (7 Courses):

	Quarter	Grade		Quarter	Grade
Math 31A	_____	_____	Math 33A	_____	_____
Math 31B	_____	_____	Math 33B	_____	_____
Math 32A	_____	_____	PIC 10A	_____	_____
Math 32B	_____	_____			

You are also responsible for any pre-requisites for the seven upper division courses from the 1-2 related fields.

The Major (14 Courses):

Seven upper division mathematics courses #106-199:

- a) You must select Math 115A and at least one two-quarter sequence.
- b) All seven upper division mathematics courses must be passed with an overall GPA of 2.0.

	Course	Title	Quarter	Grade
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____

Seven upper division courses from 1-2 related fields:

- a) At least 3 of the 7 courses must be mathematics oriented.
- b) At least 5 of the 7 courses from the 1-2 related fields must be taken after the program has been approved.
- c) All seven courses from the 1-2 related fields must be passed with an overall GPA of 2.0.

Department: _____ Department _____

	Course	Title	Quarter	Grade		Course	Title	Quarter	Grade
1.	_____	_____	_____	_____	1.	_____	_____	_____	_____
2.	_____	_____	_____	_____	2.	_____	_____	_____	_____
3.	_____	_____	_____	_____	3.	_____	_____	_____	_____
4.	_____	_____	_____	_____	4.	_____	_____	_____	_____
5.	_____	_____	_____	_____	5.	_____	_____	_____	_____
6.	_____	_____	_____	_____	6.	_____	_____	_____	_____
7.	_____	_____	_____	_____	7.	_____	_____	_____	_____

*Official petition can be picked up in MS 6356.



ACTUARIAL PLAN

Under the Mathematics/Applied Science major

Preparation for the Major (12 Courses):

	Quarter	Grade		Quarter	Grade
Math 31A	_____	_____	PIC 10A	_____	_____
Math 31B	_____	_____	Econ 1	_____	_____
Math 32A	_____	_____	Econ 2	_____	_____
Math 32B	_____	_____	Econ 11	_____	_____
Math 33A	_____	_____	Mgmt 1A	_____	_____
Math 33B	_____	_____	Mgmt 1B	_____	_____

The Major (13 Courses):

Seven upper division Mathematics courses:

	Quarter	Grade
Math 115A	_____	_____
Math 131A	_____	_____
Math 170A	_____	_____
Math 170B	_____	_____
Math 172A	_____	_____
Math 172B	_____	_____

	Quarter	Grade
1 from Math 134, 135, 164, 171, 174	_____	_____

Sever upper division courses from Economics, and Statistics:

	Quarter	Grade
Econ 101	_____	_____
Econ 102	_____	_____
2 from Econ 141 – 148	_____	_____
_____	_____	_____
_____	_____	_____
Stats 100B	_____	_____
Stats 100C	_____	_____
Stats 170	_____	_____



MEDICAL & LIFE SCIENCES PLAN

Under the Mathematics/Applied Science major

Preparation for the Major (18 COURSES):

	Quarter	Grade		Quarter	Grade
Math 31A	_____	_____	Life Sci 1	_____	_____
Math 31B	_____	_____	Life Sci 2	_____	_____
Math 32A	_____	_____	Life Sci 3	_____	_____
Math 32B	_____	_____	Life Sci 4	_____	_____
Math 33A	_____	_____	Chem 20A	_____	_____
Math 33B	_____	_____	Chem 20B	_____	_____
PIC 10A	_____	_____	Chem 30A	_____	_____
Physics 1A	_____	_____	Chem 20L	_____	_____
Physics 1B	_____	_____	Chem 30AL	_____	_____

The Major (13 COURSES):

Seven upper division Mathematics courses:

	Quarter	Grade
Math 115A	_____	_____
Math 134	_____	_____
Math 151A	_____	_____
Math 170A	_____	_____
Math 170B	_____	_____

2 courses chosen from Math 106-199, Stats 100B-120B:

_____	_____	_____
_____	_____	_____

Six upper division courses in Physiological Sciences, Neuroscience, Computer Science, and Biomathematics:

	Quarter	Grade
Phy Sci M180A	_____	_____
Phy Sci M180B	_____	_____
Phy Sci M180C	_____	_____

3 courses chosen from the following:

	Quarter	Grade		Quarter	Grade
Com Sci M196B	_____	_____	EEB C 119	_____	_____
Phy Sci 100	_____	_____	EEB 133	_____	_____
Phy Sci C135	_____	_____	EEB 135	_____	_____
Biomath 110	_____	_____	Chem C160A	_____	_____
Biomath 160	_____	_____	Biostats 100A	_____	_____



HISTORY OF SCIENCE PLAN

Under the Mathematics/Applied Science major

PREPARATION FOR THE MAJOR (10 COURSES):

	Quarter	Grade
Mathematics 31A	_____	_____
Mathematics 31B	_____	_____
Mathematics 32A	_____	_____
Mathematics 32B	_____	_____
Mathematics 33A	_____	_____
Mathematics 33B	_____	_____
PIC 10A	_____	_____

Three from the following:

History 2B	_____	_____
History 2D	_____	_____
History 3A	_____	_____
History 3B	_____	_____
History 3C	_____	_____
History 3D	_____	_____

THE MAJOR (14 COURSES):

Eight upper division Mathematics courses:

Mathematics 106	_____	_____
Mathematics 115A	_____	_____
Mathematics 131A	_____	_____
Mathematics 134	_____	_____
Math 170A	_____	_____

3 from Math # 110A – 199.

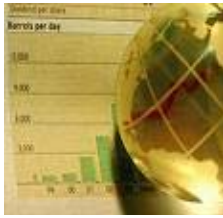
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Six upper division courses from:

History 179A	_____	_____
History 179B	_____	_____
History 180B	_____	_____
History 180C	_____	_____
History 180A	_____	_____
Philosophy 124	_____	_____
Phy Sci/Neurobio M168	_____	_____

Any Honors Collegium with ‘history of science’ or ‘history of medicine’ content:

_____	_____	_____	_____
-------	-------	-------	-------



MATHEMATICS/ECONOMICS

Preparation for the major (11 courses):

	Quarter	Grade		Quarter	Grade
Math 31A	-----	-----	PIC 10A	-----	-----
Math 31B	-----	-----	Econ 1	-----	-----
Math 32A	-----	-----	Econ 2	-----	-----
Math 32B	-----	-----	Econ 11	-----	-----
Math 33A	-----	-----			
Math 33B	-----	-----			
Math 61	-----	-----			

The Major (13 courses):

Seven upper division Mathematics courses:

	Quarter	Grade
Math 115A	-----	-----
Math 131A	-----	-----
Math 170A or Stats 100A	-----	-----
Math 170B or Stats 100B	-----	-----

2 Courses chosen from: (Math 110A or 117), Math 164, Math 167, Math 174*

-----	-----	-----
-----	-----	-----

1 additional course chosen from Math 110B-199, Stats 100C, 101BC:

-----	-----	-----
-------	-------	-------

Six upper division Economics courses:

	Quarter	Grade
Econ 101	-----	-----
Econ 102	-----	-----

3 additional courses chosen from the following: Econ 103, Econ 141A-148, and Math 174*:

-----	-----	-----
-----	-----	-----
-----	-----	-----

1 additional course chosen from Econ 103 - 199:

-----	-----	-----
-------	-------	-------

**Math 174 may only be used in one category*



SPECIALIZATION IN COMPUTING

You must satisfy all of the requirements for your chosen major and the following courses in order to receive the Specialization in Computing:

REQUIRED (7 COURSES):

		Quarter	Grade
Program in Computing 10A	Introduction to Programming	-----	-----
Program in Computing 10B	Intermediate Programming	-----	-----

2 courses from:

Program in Computing 10C	Advanced Programming	-----	-----
Program in Computing 15	Intro. to LISP and Symb. Comp.	-----	-----
Program in Computing 20A	Prin. of Java Lang. with Apps.	-----	-----
Program in Computing 20B	Adv. Aspects of Java Lang. w/Apps	-----	-----
Program in Computing 30	Mach. Organ. & Assembly Lang.	-----	-----
Program in Computing 40A	Intro. to Prog. for Internet	-----	-----
Program in Computing 40B	Adv. Topics in Prog. for Internet	-----	-----
Program in Computing 60	Data Structures and Algorithms	-----	-----

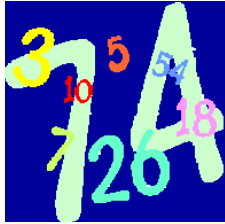
1 course from:

Mathematics 61	Discrete Structures	-----	-----
Mathematics 180	Combinatorics	-----	-----

2 courses from Mathematics #149 - 159.

The Specialization in Computing is not a major, but a supplement to the Mathematics, Applied Mathematics, General Mathematics, Mathematics/Economics and Mathematics/Applied Science majors. It provides an extensive education in elementary computer science and an introduction to its applications in mathematics. Students who complete the specialization will receive a notation on their diploma. Mathematics/Economics majors interested in a Specialization in Computing must follow the Specialization offered through the Mathematics Department.

- Each PIC course, Math 61 or 180, and at least two courses from Math 149-159 must be passed with a minimum grade of C- and an overall combined GPA of 2.0.
- Students planning to complete the Specialization in Computing must petition to add this program to their major after completing PIC 10B. Petitions should be filed in the Student Services Office, MS 6356.
- Several courses that are required for the Specialization in Computing are also required for various mathematics majors. Credit for these courses will apply toward the requirements for both programs.
- Students who have added the Specialization in Computing to their major and choose to graduate before completing the specialization must officially drop the program by filing a petition in MS 6356.



MINOR IN MATHEMATICS

Required (8 Courses):

	Quarter	Grade
Math 32A	_____	_____
Math 33A	_____	_____
Math 33B	_____	_____

Five courses from Mathematics #106-199:

	Quarter	Grade
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____

- The minor in mathematics is designed to provide students with the opportunity to widen their background and general comprehension of the role of mathematics in various disciplines.
- All courses must be completed with a **letter grade** and passed with an overall GPA of at least 2.0.
- Math 32B is not required for the Minor. Please be aware of any upper division mathematics courses for which Math 32B is a pre-requisite.



CAREER OPPORTUNITIES

Graduating with a major in Mathematics from UCLA will give you the critical thinking skills that employers are looking for. Mathematics opens the door to unlimited opportunities, if you are willing to make the effort to invest the time necessary to perform well. Our students have been employed by a diverse selection of companies in varying capacities.

In today's competitive world, a good education is essential. With a strong background in mathematics and logic you give yourself the best advantage for **ANY** career you choose.

Here are some of the careers our students have enjoyed:

- Computer Programmer
- Financial Analyst
- Actuary
- Buyer
- Programmer Analyst
- High School Teacher
- Navy Pilot
- Management Consultant
- Cost Analyst
- Financial Planner
- Auditor
- Technical Advisor
- Accountant
- And many, many more

**For more information about career opportunities please visit
the Career Center online at:**

<http://career.ucla.edu>

Graduate School Opportunities



Recommended courses to prepare for graduate school:

For Pure Mathematics:

- ◆ Math 131AB (Honors) + 131C
Math 110AB (Honors) + 110C
- ◆ Math 132
- ◆ Math 120A, 121
- ◆ Math 134, 135 and 136

For Applied Mathematics:

- ◆ Math 131AB (Honors)
- ◆ Math 110A or 117
- ◆ Math 134, 135 and 136
- ◆ Math 151AB, 153
- ◆ Math 132

Successful graduate work in mathematics requires skills in formal reasoning and in constructing rigorous mathematical proofs. These skills are more essential for success at the graduate level than is knowledge of any particular topic. The honors sequences will provide training in these skills to a far greater degree than the regular sequences. In fact, our graduate admissions committee looks more favorably upon an A- earned in an honors sequence than on an A in the regular sequence. It is likely that other graduate programs follow similar policies.

Most applications for graduate programs in mathematics must be submitted between December and February so it is best to contact colleges during the summer or access their websites for online applications and additional information. Please be aware that most universities will require the following materials with their applications:

1) Three letters of recommendation.

2) GRE general and mathematics subject exams.

3) Personal statement.

For a more information on applying to graduate school and timelines please make an appointment with the Math Advisor.

For information about applying to medical school or other professional schools you may also visit the

Career Center online at:

<http://www.career.ucla.edu>



UNDERGRADUATE RESEARCH OPPORTUNITIES

IPAM Research in Industrial Projects for Students ("RIPS")

<http://www.ipam.ucla.edu/programs/rips2007/>

Research in Industrial Projects for Students (RIPS) is based on the successful Math Clinic concept that originated at Harvey Mudd College in 1973 as well as the Research Experience for Undergraduates (REU) program sponsored by the National Science Foundation. In the RIPS program, teams of students, directed by faculty advisors, work to solve industry-related problems. RIPS brings together highly qualified undergraduates in mathematics or related majors with sponsoring industry, government, and nonprofit organizations to collaborate on projects. Each team of three to four advanced students spends two summer months working on a problem posed by the sponsoring organization under the leadership of a faculty advisor. Projects focus on problems of serious interest to the sponsor and stimulating challenges to the students. Participation in RIPS provides valuable real-world technical and managerial experience for students and valuable R&D for the sponsor.

URC CARE

<http://college.ucla.edu/urc-care/>

The Undergraduate Research Center for Sciences, Engineering and Mathematics and the Center for Academic and Research Excellence work collaboratively to serve UCLA's undergraduate science population. Through various programs the URC/CARE recruits, develops, and celebrates students involved in research. Our mission is to support and increase the retention of science majors in all disciplines, with some programs focused on students who face economic, familial, educational, social or other challenges. Their office is located in *2121 Life Science Building.

NSF REU Program

http://www.nsf.gov/crssprgm/reu/list_result.cfm?unitid=5044

The REU program includes both individual research and group activities. Each student is assisted by a faculty adviser and some also by a graduate-student advisor. Group activities include seminars and other social and professional events. Students are encouraged to continue their research during the following academic year, under the direction of their summer mentor or another faculty member. Eligible students will receive a stipend and on-campus housing for their work. Visit the website above for important details.

Mathematics Student Organizations

UCLA ACTUARIAL CLUB

The UCLA Actuarial Club is designed for those students interested in the actuarial profession. During the last year, weekly e-mails were sent out to club members regarding company information sessions, internships, jobs, and scholarships.

To join please email the Actuarial Club at: actuary@math.ucla.edu or check out the website at www.math.ucla.edu/undergrad/~actuary.

UCLA PIMU EPSILON

Pi Mu Epsilon, Inc (PME), is the Honorary National Mathematics Society. Their purpose is "to promote scholarly activities in mathematics among students, awareness of higher educational programs and career opportunities in mathematics, as well as social activities among its members." Our current and future chapter projects include arranging popular talks on mathematical topics, a weekly problem-solving group, on-campus and off-campus community involvement (i.e. setting up high school competitions), and social activities.

For information please email PMEinLA@gmail.com

UNDERGRADUATE MATHEMATICS STUDENTS' ASSOCIATION

The UCLA Undergraduate Mathematics Students' Association (UMSA) is an officially recognized university club for mathematics majors and students who are interested in mathematics. UMSA was established in response to students' desire to have a "connection" to the Mathematics Department. The purpose of UMSA is to:

- Ø Promote the academic awareness of the mathematics major.
- Ø Promote better student-faculty relations.
- Ø Provide information on career opportunities in mathematics.
- Ø Provide a peer network in which students can discuss and further develop ideas and concepts that are presented in mathematics courses.



UCLA Teaching Preparation Programs in Mathematics

The UCLA Teacher Preparation Program in Mathematics was initiated in 1986 by the Department of Mathematics and the Graduate School of Education as a response to a growing severe shortage of well trained mathematics teachers in middle schools and high schools, especially in schools with a large minority and educationally disadvantaged population. The program is open to Mathematics students at the Junior and Senior level that are interested in teaching mathematics to middle and high school students.



Students completing the full senior program receive a University Recommended Single Subject (Mathematics) Teaching Credential with a Cross-cultural Language and Academic Development (CLAD) Emphasis and a Master of Education Degree. The program incorporates an internship experience, which is offered during the winter and spring quarters, and involves approximately five hours of classroom participation per week.

Students participating in the junior level program observe and tutor in middle and high school classes. Students will also participate in a seminar in which they discuss their classroom experiences. This seminar is directed by the UCLA visiting high school teacher in mathematics.

For applications and more detailed information about both programs, please refer to the Teacher Preparation Programs Handbook at:

<http://www.curtiscenter.math.ucla.edu/>

Departmental Honors Programs

These Honors Programs are independent of the honors sections of the mathematics courses. Graduation with Honors in Mathematics is also distinct from graduation with College Honors. Applications for the Honors Programs in Mathematics are available in the Student Services Office, 6356 Math Sciences. If you have any questions about the program, or special requests, you are welcome to consult any members of the Mathematics Honors Committee, or see an Undergraduate Mathematics Counselor in 6356 Math Sciences.



Admission To The Program:

To be considered for admission to the Honors Program in Mathematics, a student must:

- be officially in the Mathematics major;
- have completed at least four courses at UCLA in the Mathematics Department from those required in the "Preparation for the Major" or Major; and
- have at least a 3.6 GPA in such mathematics courses taken at UCLA.

Requirements for Honors at Graduation:

The student must have completed, in addition to usual course requirements:

1. Mathematics 110C (either regular or honors) or approved graduate substitute;
2. Complete one of the following:
 - Mathematics 191 (H) ; or
 - take as an approved active participant, any graduate seminar offered by the Department of Mathematics; or
 - submit an original project, which can be done as part of a regular course, a special course (Mathematics 199), or by special arrangement.
 - Earn a 3.6 GPA or higher in approved upper division and graduate mathematics courses.
 -

Requirements For Highest Honors At Graduation:

In addition to the above, the student must:

- complete at least one approved graduate mathematics course; and
- earn a 3.8 GPA or higher in approved upper division and graduate mathematics courses.

Program in Computing/ Mathematics Lab

The PIC/Math lab supports both PIC students learning programming and Math students who wish to use analytical software. The Lab is reserved for PIC and Math students ONLY. Accounts should be automatically created for all eligible students each quarter or can be requested at the Student Services Office in MS 6356. Student accounts have 25 MB of disk space on the network drive and may print 200 pages per class per quarter at no charge.

LOCATION: 2817 Boelter Hall (Main PIC Lab)

HOURS: Fall, Winter and Spring Quarters:
M-R 9am - 6pm*
Fri 9am - 5pm*
Sun 1pm - 5pm*

Summer Sessions:
M-R 9am - 5pm
Fri, Sat, Sun Closed
See the web page for details.

*** Hours may vary per quarter. See webpage for actual hours each quarter.
Reduced hours during Finals - see posting**

**WEBSITE/
CONTACT:** <http://www.pic.ucla.edu/piclab/>
(310) 825-7267

The Faculty

UCLA Dept. of Mathematics

Including research area, graduate school and email

Anderson, Christopher, Ph.D., UC Berkeley, 1983 anderson@math.ucla.edu
Numerical analysis, computational fluid mechanics, differential equations.

Bertozi, Andrea, Ph.D., Princeton, 1991 bertozi@math.ucla.edu
Mathematical modeling.

Biskup, Marek, Ph.D., 1999 Catholic Univ. of Nijmegen, Netherlands biskup@math.ucla.edu
Probability.

Blasius, Don, Ph.D., Princeton, 1981 blasius@math.ucla.edu
Automorphic forms, number theory.

Brown, Robert, Ph.D., Wisconsin, 1963 rfb@math.ucla.edu
Algebraic topology; fixed point theory.

Caflisch, Russel, Ph.D., Courant Inst., 1978 caflisch@math.ucla.edu
Fluid dynamics, kinetic theory, partial differential equations, Monte Carlo methods.

Chan, Tony, Ph.D., Stanford, 1978 chan@math.ucla.edu
Scientific computing, applied mathematics.

Chayes, Lincoln, Ph.D., Princeton, 1983 lchayes@math.ucla.edu
Mathematical physics, condensed matter theory.

De Sapio, Rodolfo, Ph.D., Chicago, 1964 rds@math.ucla.edu
Differential topology, algebraic topology.

Duke, William, Ph.D., Courant Institute, 1986 duke@math.ucla.edu
Number Theory

Edwards, Robert, Ph.D., Michigan, 1969 rde@math.ucla.edu
Geometric topology.

Effros, Edward, Ph.D., Harvard, 1962 ege@math.ucla.edu
Operator algebras, representation theory, convexity.

Elman, Richard, Ph.D., UC Berkeley, 1972 rse@math.ucla.edu
Quadratic forms, algebra.

Eskin, Gregory, Ph.D., Moscow U., 1963 eskin@math.ucla.edu
Partial differential equations.

Fattorini, Hector, Ph.D., Courant Inst., 1965 hof@math.ucla.edu
Control theory, partial differential equations.

Gamelin, Theodore, Ph.D., UC Berkeley, 1963 twg@math.ucla.edu
Function algebras, analytic functions.

Garnett, John, Ph.D., Washington, Seattle, 1966 jbg@math.ucla.edu
Classical analysis.

Gieseker, David, Ph.D., Harvard, 1970 dag@math.ucla.edu
Algebraic geometry.

Green, Mark, Ph.D., Princeton, 1972 mlg@math.ucla.edu
Algebraic and differential geometry.

Greene, Robert, Ph.D., UC Berkeley, 1969 greene@math.ucla.edu
Differential geometry, several complex variables.

Grossman, Nathaniel, Ph.D., Minnesota, 1964 ng@math.ucla.edu
Differential geometry, mathematical geodesy, asymptotic expansions.

Hida, Haruzo, Ph.D., Kyoto U., Japan, 1980 hida@math.ucla.edu
Number theory (complex and p-adic), modular forms.

Hitrik, Michael, Ph.D., U. of Lund, 1999 hitrik@math.ucla.edu
Spectral theory of linear partial differential operators.

Hjorth, Greg, Ph.D., Melbourne U., 1987 greg@math.ucla.edu
Mathematical logic.

Killip, Rowan, Ph.D., Caltech, 2000 killip@math.ucla.edu
Analysis of Schrödinger operators.

Liggett, Thomas, Ph.D., Stanford, 1969 tml@math.ucla.edu
Probability theory, infinite interacting random systems.

Liu, Gang, Ph.D., SUNY Stony Brook, 1995 gang@math.ucla.edu
Mathematical Physics.

Liu, Kefeng, Ph.D., Harvard, 1993 liu@math.ucla.edu
Differential Geometry and Topology.

Martin, Donald, Fellow, Harvard, 1967 dam@math.ucla.edu
Mathematical logic, descriptive set theory, and infinite games.

Merkurjev, Alexander, Ph.D., Leningrad State U., 1979 merkurjev@math.ucla.edu
Algebraic K-theory.

Mess, Geoffrey, Ph.D., UC Berkeley, 1989 geoff@math.ucla.edu
Low dimensional topology.

Miech, Ronald, Ph.D., Illinois, 1963 rjm@math.ucla.edu

Number theory.

Moschovakis, Yiannis, Ph.D., Wisconsin, 1963 ynm@math.ucla.edu

Mathematical logic, foundations of computation theory.

Neeman, Itay, Ph.D., UCLA, 1996 ineeman@math.ucla.edu

Mathematical Logic, Set Theory.

Osher, Stanley, Ph.D., Courant Inst., 1966 sjo@math.ucla.edu

Scientific computing, applied mathematics.

Petersen, Peter, Ph.D., Maryland, 1987 petersen@math.ucla.edu

Riemannian geometry.

Popa, Sorin, Ph.D., U. Bucharest, 1983 popa@math.ucla.edu

Operator algebras and the theory of type II factors.

Ralston, James, Ph.D., Stanford, 1969 ralston@math.ucla.edu

Partial differential equations and inverse problems.

Roberts, Paul, Ph.D., Cambridge, 1954, Sc.D., Cambridge, 1967 roberts@math.ucla.edu

Fluid mechanics, magnetofluid mechanics, superfluid mechanics, nonlinear waves.

Rogawski, Jonathan, Ph.D., Princeton, 1980 jonr@math.ucla.edu

Automorphic forms, representation theory, number theory.

Rothschild, Bruce, Ph.D., Yale, 1967 blr@math.ucla.edu

Combinatorics and graph theory.

Schonmann, Roberto, Ph.D., U. Sao Paulo, 1984 rhs@math.ucla.edu

Probability theory (interacting particle systems and statistical mechanics).

She, Zhen-Su, Ph.D., Observatoire, 1987 she@math.ucla.edu

Applied mathematics, turbulence.

Shlyakhtenko, Dimitri, Ph.D., UC Berkeley, 1997 shlyyakht@math.ucla.edu

Operator Algebras.

Tao, Terence, Ph.D., Princeton, 1996 tao@math.ucla.edu

Analysis, oscillatory integrals.

Thiele, Christoph, Ph.D., Yale, 1995 thiele@math.ucla.edu

Harmonic Analysis

Varadarajan, V.S., Ph.D., Indian Statistical Inst., Calcutta, 1960 vsv@math.ucla.edu

Reductive groups, modular forms, quantum theory, ordinary differential equations.

Vese, Luminita, Ph.D., University of Nice-Sophia Antipolis, France, 1996 lvese@math.ucla.edu

Calculus of variations, partial differential equations, image analysis.

UCLA DEPARTMENT OF MATHEMATICS TENTATIVE SCHEDULE FOR 2007-2008 (as of July 5, 2007)

Classes are MWF unless stated otherwise.

Course	FALL 2006	WINTER 2007	SPRING 2007
1 – Pre-Calculus	Sec. 1 – 8, Preda Sec. 2 – 1, Preda Sec. 3 -- , Calahan	Sec. 1--12, Brizolis	NOT GIVEN
31A – Calculus & Analytic Geometry	Sec. 1 – 8, Fattorini Sec. 2 – 10, Hitrik Sec. 3--11, Valdimarsson Sec. 4–1, Brown Sec. 5–2, _____	Sec. 1 – 9, Houdayer Sec. 2 – 11, Richthammer	NOT GIVEN
31B – Calculus & Analytic Geometry	Sec. 1 – 8, _____ Sec. 2 – 9, _____ Sec. 3 – 10, Rothschild Sec. 4 – 12, Kucherenko Sec. 5 – 1, Jenkins Sec. 6 – 2, Wittman	Sec. 1 – 8, Fattorini Sec. 2 – 9, Pasour Sec. 3 – 10, Haddad Sec. 4 – 11, Valdimarsson Sec. 5–1, DeVita Sec. 6 – 2, _____	Sec. 1 – 9, Houdayer Sec. 2 – 11, Richthammer
32A – Calculus of Several Variables	Sec. 1 – 8, Weinstein Sec. 2 – 9, Ward Sec. 3 – 10, _____ Sec. 4 – 11, Liu, G. Sec. 5 – 1, Chayes Sec. 6 – 2, Rogawski	Sec. 1 – 10, Liu, K Sec. 2 – 1, Fernos Sec. 3 – 9, Rogawski Sec. 4 – 2, _____	Sec. 1 – 9, Shalom Sec. 2 – 11, Valdimarsson Sec. 3 -- 12, Song Sec. 4--1, Duke Sec. 5 -- , _____
32B – Calculus of Several Variables	Sec. 1 – 1, Song Sec. 2 – 12, Radko	Sec. 1 – 9, Liu, G. Sec. 2 – 11, Rogawski Sec. 3 – 1, Weinstein Sec. 4 – 2, Kucherenko	Sec. 1 – 10, DeSapio Sec. 2 – 11, Rogawski Sec. 3 – 9, Wylie
33A – Linear Algebra and Applications	Sec. 1 – 8, Wylie Sec. 2 – 11, Lee, E.	Sec. 1 – 8, Ralston Sec. 2 – 11, Zhang	Sec. 1 – 11, Gamelin Sec. 2 – 1, Laub
33B – Infinite Series & Differ. Equations	Sec. 1 – 9, Miech Sec. 2 – 11, Oberlin	Sec. 1 – 8, _____ Sec. 2 – 10, Lee, E.	Sec. 1 – 8, Ralston Sec. 2 – 11, Grossman
61 – Intro to Discrete Structures	Sec. 1 – 12, Enderton	Sec. 1 – 1, Hida	Sec. 1 – 2, Rothschild
105A – The Teaching of Mathematics	Sec. 1 – TR 3-5, Calahan	NOT GIVEN	NOT GIVEN
105B – The Teaching of Mathematics	NOT GIVEN	Sec. 1 – TR 3-5, Calahan	NOT GIVEN
105C – The Teaching of Mathematics	NOT GIVEN	NOT GIVEN	Sec. 1 – TR 3-5, Calahan
106 – History of Mathematics	NOT GIVEN	Sec. 1—11, Gamelin	NOT GIVEN
110A – Algebra	Sec. 1 – 10, Hida	Sec. 1 – 11, Enderton	NOT GIVEN
110B – Algebra	NOT GIVEN	Sec. 1 – 10, Hida	NOT GIVEN
110C – Algebra	NOT GIVEN	NOT GIVEN	Sec. 1 – 2, Giesecker
110AH – Algebra, Honors Sequence	Sec. 1 – 2, Giesecker	NOT GIVEN	NOT GIVEN
110BH – Algebra, Honors Sequence	NOT GIVEN	Sec. 1 – 2, Giesecker	NOT GIVEN
111 – Theory of Numbers	NOT GIVEN	NOT GIVEN	Sec. 1—3, EIman
M114S – Introduction to Set Theory	NOT GIVEN	Sec. 1 – 12, Moschovakis	NOT GIVEN
113 – Combinatorics	Sec. 1 – 9, Richthammer Sec. 2 – 12, Pravda-Starov Sec. 3 – 2, Duke	Sec. 1 – 9, Neeman Sec. 2 – 11, Weinstein Sec. 3 – 2, _____	Sec. 1 – 1, Petersen Sec. 2 – 11, CANCELLED Sec. 3 – 12, Lee, E.
114A – Computation Theory & Logic	NOT GIVEN	NOT GIVEN	NOT GIVEN
114L – Mathematical Logic	NOT GIVEN	NOT GIVEN	Sec. 1—9, Aschenbrenner
115A – Linear Algebra	Sec. 1 – 9, Dai, Shaoxin Sec. 2 – 10, Liu, K. Sec. 3 – 1, Vese Sec. 4 – 2, Zhang	Sec. 1 – 9, Valdimarsson Sec. 2 – 10, Rothschild Sec. 3 – 12, _____ Sec. 4 -- 2, Preda	Sec. 1 – 9, Enderton Sec. 2 – 10, Hida Sec. 3 – 11, Effros Sec. 4 -- 1, DeSapio
115AH – Linear Algebra Honors	Sec. 1 – 11, Houdayer	NOT GIVEN	NOT GIVEN
115B – Linear Algebra	NOT GIVEN	Sec. 1 – 11, Houdayer	NOT GIVEN
116 – Mathematical Cryptology	NOT GIVEN	Sec. 1 – 10, Jenkins	NOT GIVEN
117 – Algebra for Applications	Sec. 1 – 9, Ouellette	NOT GIVEN	Sec. 1 – 11, Dai, Shaoxin
120A – Differential Geometry	Sec. 1 – 1, Grossman	Sec. 1 – 1, Greene	NOT GIVEN
120B – Differential Geometry	NOT GIVEN	NOT GIVEN	Sec. 1 – 1, Greene
121 – Introduction to Topology	NOT GIVEN	NOT GIVEN	Sec. 1 – 12, Mess
123 – Foundations of Geometry	NOT GIVEN	NOT GIVEN	Sec. 1 – 9, Fernos
131A – Analysis	Sec. 1 – 10, DeSapio Sec. 2 – 11, Khritik Sec. 3 – 12, Khan	Sec. 1 – 9, Kucherenko Sec. 2 – 10, DeSapio Sec. 3 – 2, Eskin	Sec. 1 – 10, Song Sec. 2 – 2, Oberlin Sec. 3 – 9, Kucherenko
131B – Analysis	NOT GIVEN	Sec. 1 – 11, Khitrik	Sec. 1 – 2, Eskin
131C – Topics in Analysis	NOT GIVEN	NOT GIVEN	Sec. 1 – 11, Mess
131AH – Analysis, Honors Sequence	Sec. 1 – 11, Liggett	NOT GIVEN	NOT GIVEN
131BH – Analysis, Honors Sequence	NOT GIVEN	Sec. 1 – 11, Liggett	NOT GIVEN

Course	FALL 2006	WINTER 2007	SPRING 2007
132 – Complex Analysis for Applications	Sec. 1 – 10, Balmer Sec. 2 – 1, Effros	Sec. 1 – 11, Grossman Sec. 2 – 2, Roberts	Sec. 1 – 11, Liu, K. Sec. 2 – 12, Miech
133 – Introduction to Fourier Analysis	NOT GIVEN	NOT GIVEN	Sec. 1 – 9, Pravda-Starov
134 – Linear and Nonlinear Systems of Differential Equations	Sec. 1 – 10, Szlam	Sec. 1 – 9, Dai, Shubin	Sec. 1 – 10, Preda Sec. 2 – 2, Short
135 – Ordinary Differential Equations	Sec. 1 – 9, Pasour	Sec. 1 – 10, Szlam Sec. 2 – 2, Mess	Sec. 1 – 1, Chayes
136 – Partial Differential Equations	NOT GIVEN	NOT GIVEN	Sec. 1 – 10, Liu, G.
142 – Mathematical Modeling	Sec. 1 – 10, DeVita	Sec. 1 – 9, Song	Sec. 1 – 2, Grossman
143 – Analytic Mechanics	NOT GIVEN	NOT GIVEN	NOT GIVEN
146 – Methods of Applied Mathematics	NOT GIVEN	NOT GIVEN	NOT GIVEN
149 – Math of Computer Graphics	NOT GIVEN	NOT GIVEN	NOT GIVEN
151A – Applied Numerical Methods	Sec. 1 – 11, Haddad	Sec. 1 – 10, Ward Sec. 2 – 11, Short	Sec. 1 – 10, Fattorini
151B – Applied Numerical Methods	NOT GIVEN	Sec. 1 – 11, Xia	Sec. 1 – 10, Ward Sec. 2 – 11, Pasour
153 – Numerical Methods for PDE's	NOT GIVEN	NOT GIVEN	NOT GIVEN
155 – Mathematical Imaging	NOT GIVEN	Sec. 1 – 1, Vese	NOT GIVEN
157 – Software Tech. for Scientific Comp.	NOT GIVEN	NOT GIVEN	NOT GIVEN
157X – Workshop in Software Techniques for Scientific Computing	NOT GIVEN	NOT GIVEN	NOT GIVEN
164 – Optimization	Sec. 1 – 11, Yu Sec. 2 – 1, Xia	Sec. 1 – 10, Fattorini Sec. 2 – 12, Brown	Sec. 1 – 12, Szlam
167 – Mathematical Game Theory	Sec. 1 – 2, Blasius	Sec. 1 – 9, Brose	Sec. 1 – 10, Radko
170A – Probability Theory	Sec. 1 – 11, Brose Sec. 2 – 2, Chayes	Sec. 1 – 2, Khan, R.	Sec. 1 – 9, Richthammer
170B – Probability Theory	NOT GIVEN	Sec. 1 – 11, Chayes	Sec. 1 – 2, _____
171 – Stochastic Processes	NOT GIVEN	NOT GIVEN	Sec. 1 – 11, DeVita
172A – Actuarial Mathematics	Sec. 1 – TR 3-5, Kong	NOT GIVEN	NOT GIVEN
172B – Actuarial Mathematics	NOT GIVEN	Sec. 1 – TR 1:30-3:20, Kong	NOT GIVEN
181 – Mathematics of Finance	NOT GIVEN	Sec. 1 – 10, Caffisch	NOT GIVEN
191 – Advanced Variable Topics in Mathematics	Sec. 1 – 1, Aschenbrenner	Sec. 1 – 1, Radko	Sec. 1 – 9, Gieseke
191H – Honors Mathematics Seminar	NOT GIVEN	NOT GIVEN	NOT GIVEN
330 – Observ. & Part. Math/Sc. Instruction	Sec. 1 – R 4-5:50, Hakansson	Sec. 1 – R 4-5:50, Hakansson	Sec. 1 – R 4-5:50, Hakansson
PROGRAM IN COMPUTING			
10A – Introduction to Programming (5 units)	Sec. 1 – 10, Sheehan Sec. 2 – 11, Wittman	Sec. 1 – 10, Burhanuddin Sec. 2 – 11, Burhanuddin	Sec. 1 – 10, Sheehan Sec. 2 – 1, Sheehan
10B – Intermediate Programming (5 units)	NOT GIVEN	Sec. 1 – 11, Wittman	Sec. 1 – 10, Wittman
10C – Advanced Programming (5 units)	NOT GIVEN	NOT GIVEN	Sec. 1 – 11, Wittman
15 – Intro. to LISP and Symbolic Comp. (5 units)	NOT GIVEN	NOT GIVEN	NOT GIVEN
20A – Prin. of the Java Language with Applications (5 units)	NOT GIVEN	Sec. 1 – 12, Sheehan	Sec. 1 – 11, Ouellette
20B – Adv. Aspects of the Java Language with Applications (5 units)	NOT GIVEN	NOT GIVEN	NOT GIVEN
20C – Seminar: Enterprise Computing w/ Java (5 units)	NOT GIVEN	NOT GIVEN	NOT GIVEN
30 – Machine Organization & Assembly Lang. (5 units)	NOT GIVEN	NOT GIVEN	NOT GIVEN
40A – Intro. to Programming for the Internet	Sec. 1 – 12, Ouellette	Sec. 1 – 12, Ouellette	Sec. 1 – 1, Ouellette
40B – Adv. Topics in Programming for the Internet (5 units)	NOT GIVEN	NOT GIVEN	NOT GIVEN
60 – Data Structures & Algorithms	Sec. 1 – 10, Burhanuddin	NOT GIVEN	NOT GIVEN
97 – Special Topics in Programming	NOT GIVEN	NOT GIVEN	NOT GIVEN
110 – Parallel & Distributed Computing (5 units)	NOT GIVEN	NOT GIVEN	NOT GIVEN
130 – Cryptography	NOT GIVEN	NOT GIVEN	NOT GIVEN
187 – Adv. Topics in Programming	NOT GIVEN	NOT GIVEN	Sec. 1 – 11, Burhanuddin

Quarter Course Planner

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					

Quarter Course Planner

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					

Quarter Course Planner

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					

Quarter Course Planner

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					

STUDENT ACADEMIC PLANNER

ACADEMIC YEAR _____ - _____

Fall	Winter	Spring	Summer

ACADEMIC YEAR _____ - _____

Fall	Winter	Spring	Summer

ACADEMIC YEAR _____ - _____

Fall	Winter	Spring	Summer

ACADEMIC YEAR _____ - _____

Fall	Winter	Spring	Summer

Notes