UNIVERSITY OF NEW MEXICO

COLLEGE OF ARTS & SCIENCES

DEPARTMENT
OF
MATHEMATICS & STATISTICS

Humanities Building, Fourth Floor
(505) 277-4613

STUDENT HANDBOOK for MAJORS/MINORS
2007-2008

Dear Student:

Welcome to the University of New Mexico's Department of Mathematics & Statistics in the College of Arts & Sciences. Our department offers a Bachelor of Science degree in Mathematics or Statistics, as well as five (5) areas of concentration to choose from within the mathematics curriculum: Pure or Applied Mathematics, Computational Mathematics, Mathematics Education, and a Distributed Major. We also offer minors in Mathematics or Statistics.

Our faculty and academic advisors are committed to your success, and the best way to ensure that success is to maintain contact with us as you advance through the curriculum. Please visit the department and speak with our Academic Advisor, Donna George (E-mail: dgeorge@math.unm.edu) any time prior to and during your admission to the department. I encourage you to regularly check our Web pages (http://math.unm.edu) for updates on new faculty, courses, and lecture series. We also need you to keep us current about your email and mailing address.

Once again, welcome to the UNM Department of Mathematics and Statistics. I look forward to meeting you when you are admitted to the Department of Mathematics and Statistics.

Sincerely,
Charles Boyer
Interim Chair

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UNDERSTANDING THE SYSTEM.....

Most Freshmen and transfer students entering the university are admitted to University College, located on the first floor of the Student Services Center. When they satisfactorily complete a minimum of 26 semester hours and meet all prerequisites of the college they wish to enter, they may transfer to one of the degree-granting programs of the university. The system looks something like this:

UNIVERSITY COLLEGE

College of Fine Arts | College of Education | **College of Arts & Sciences** | School of Engineering

DEPARTMENT OF MATHEMATICS & STATISTICS

Bachelor of Science in Statistics

Bachelor of Science in Mathematics Option I: Pure Mathematics

Bachelor of Science in Mathematics Option II: Applied Mathematics

Bachelor of Science in Mathematics Option III: Math Education

Bachelor of Science in Mathematics Option IV: Mathematics of Computation

Bachelor of Science in Mathematics Option V: Distributed Major

THE COLLEGE OF ARTS & SCIENCES.....

Freshmen and new transfer students who intend to major in the College of Arts & Sciences must visit the College Advisement Center in Ortega Hall, Room 201, before registering for classes. All students are encouraged to visit the Academic Advisor in Mathematics & Statistics prior to admission to the department.

ADMISSION REQUIREMENTS:

- A minimum of 26 hours; 23 must be in courses acceptable toward graduation.
- A cumulative GPA of at least 2.00 on all work attempted.
- Demonstrated competence in the writing of English as evidenced by one of the following:
  Completion of English 102 with a grade of C or higher.
  A score of 29 or better on the English portion of the Enhanced ACT.
  A score of 650 or better on the verbal portion of the SAT.
  Credit for English 102 through the CEEB advanced placement program.
  Acceptance of writing proficiency portfolio (procedures available through the Dept. of English).
- Students should apply to the College of Arts & Sciences and declare a major as soon as these requirements are met.
- Non-degree students apply to the Office of Admissions.
- Students seeking any exception to the above must submit a written petition to the Associate Dean for Student Academic Affairs.

MATH PLACEMENT.....

The recommended course placement used by the Department of Mathematics & Statistics is derived from our experience with beginning freshmen students and the requirements of the University of New Mexico. It is based primarily on the American College Test (ACT) or the Scholastic Aptitude Test (SAT) scores. If you have not taken the ACT or SAT or wish to challenge your existing score, please contact the UNM Testing Center at (505) 277-5345.

MATHEMATICS PLACEMENT		
Math Class	**ACT Math Score**	**SAT Quantitative Score**
Math 100	11-18	220-440
Math 120	19-21	450-500
Math 121	22-24	510-560
Math 123*	25-27	570-630
Math 129	22-24	510-560
Math 145	22-24	510-560
Math 150	25-27	570-630
Math 162*	28+	640+
Math 180	26+	600+

The prerequisites for Math 162, are Math 123 (Trigonometry) and Math 150 (Pre-calculus). If you have passed an Advanced Placement exam or if you scored a 28 or higher on the ACT or 630 on the SAT and want to enroll in Math 162 but have not yet completed Math 123, you must pass the trigonometry exam offered at the UNM Testing Division before you will be allowed to enroll in Calculus I. The Testing Center is open from 8 a.m. to 4:00 p.m. Monday through Friday. The cost for all Math placement tests is $3.00 per test, except the Trig Placement test, which is free. **UNM Testing Center, Student Health Center, Basement, Room 2, 277-5345**

PREPARATORY CLASSES AND PREREQUISITES.....

Preparatory classes are provided for students who need to strengthen their skills in mathematics before entering the required curriculum. For instance, IS-Math 100 and Math 120 are preparatory classes for students who did not learn introductory and intermediate algebra classes in High School.

A **prerequisite** is a requirement that must be met before a particular course is taken. For instance, Math 123 (Trigonometry) and Math 150 (Pre-Calculus) are prerequisite courses that must be taken (in the absence of adequate ACT/SAT test scores) before enrollment in the Math 162 calculus sequence.

***A score of 33 and above on the ACT and 700 and above for SAT will waive the need for Trigonometry or for the TRIG COMPASS.**

SOME HELPFUL HINTS.....

Mathematics is a linear discipline, which means that each course you take, whether preparatory or prerequisite, feeds into the next course in your curriculum. Skipping a prerequisite will most likely result in a failing grade because you were not prepared.

Academic progress in Mathematics & Statistics means never receiving a grade lower than a C. **Academic success** in the curriculum means never receiving a grade lower than a B.

Algebra is the language of calculus. The program is designed to ensure that you have the fundamentals of algebra before moving into the calculus curriculum. If you fail the same class twice, you will be asked to step back one course to refresh your skills. You will not be allowed to fail the same class three times.

When thinking about **dropping a course**, ask yourself these questions first: What is the cause of the poor performance; can it be improved? Will dropping a class impact my scholarship or financial aid?

- Determine the time line and appropriate course of action
- Talk to your instructor about performance and grades
- Talk to your advisor about options
- Take action to meet deadlines, and take responsibility for your own actions

PLANNING YOUR FIRST SEMESTER AS A MAJOR.....

Remember, the Mathematics & Statistics curriculum does not begin until you have reached Calculus I (Math 162). Calculus III (Math 264) is the prerequisite for most 300 and 400 level math courses. You have to **do the math**.

DO YOU KNOW ABOUT CONCURRENT ENROLLMENT?

Occasionally, you will have classes with high school students in the class. This honors program permits highly qualified high school juniors and seniors to take University of New Mexico courses while simultaneously attending high school or during the summer between junior and senior years. This is a part-time status and should not be confused with Early Admission. Please refer to page 22 of the 2001-2003 University of New Mexico Catalog for guidelines or contact the Admissions Office at (505) 277-2446.

- Must be a high school senior with an expected graduation date within one calendar year.
- Must have the unconditional recommendation of the high school as well as proof of parental consent prior to participation.
- The high school must provide the Office of Admissions with an official high school transcript.

- Minimum quantitative requirement (one or more of the following)
  - Class rank in top 25%
  - Cumulative GPA of 3.0 for 9th., 10th., and 11th Grades
  - An ACT composite of 23 or an SAT total of 1060 or more.
- Enrolling in a math class requires a minimum ACT of 21 on math, or 490 SAT.

UNM CORE AND A & S GROUP REQUIREMENTS

The Core Curriculum applies to all bachelor degree students (freshman, transfer, or reentering) entering the University of New Mexico in Fall 1999 or later. It does not apply to second-degree-seeking students.

Students with transfer credit, CLEP, or AP should meet with an A & S Senior Advisor to discuss core and group requirements. Students interested in African American Studies, American Studies, Chicano Studies, Native American Studies and Women's Studies courses for the groups should talk to an A & S Senior Academic Advisor.

To satisfy the Core Curriculum Requirements, elimination of an entire area or change in the number of hours within an area, is not allowed. A C (not C-) is required for all core courses. Credit (CR) is acceptable. Once the core requirements are met, students must take additional A&S hours in 6 of 7 groups. Visit the UNM Catalog for the description of the A&S core and group requirements as of Fall 2003 at http://129.24.112.108/cgi-bin/om_isapi.dll?clientID=90064&infobase=catalog03-05.nfo&record={D45}&softpage=Document42.

Arts and Sciences will accept courses for the group with grades below a C, but you must check with them for the cut offs for these courses or check the catalog.

DEPARTMENT ADVISEMENT

All Mathematics & Statistics majors have an Advisement Hold placed on their registration around the 12th week of each semester. This means that you:

- Cannot Drop/Add a class without prior approval from your faculty advisor
- Cannot Enroll in courses for the next semester without an advisement session Each student in the Department of Mathematics & Statistics must schedule an advisement session EVERY semester with the Academic Advisor or the Faculty Advisor assigned to them. These sessions last approximately one-half hour and involve:
  - Help with course selection and schedule balancing
  - Explanation of curriculum and choosing a major concentration
  - Answers to general questions on academic policies
  - Help with study skills, obtaining tutoring and study resources

The roles of your Faculty and Academic Advisors are to:

- Monitor your courses and grades

- Recommend alternative courses
- Develop a plan with you that leads to the successful completion of a degree in Mathematics or Statistics

Your responsibility is to:

- Read the UNM Catalog and the UNM Schedule of Classes to become familiar with academic policies.
- Review the curriculum for your major and/or concentration
- Attend all classes consistently
- Seek assistance from faculty when you need it
- Meet with your Academic Advisor or Faculty Advisor as soon as you encounter difficulty
- Take charge of your life, career, attitudes and behavior

MATHEMATICS DEGREES AND OPTIONS

As you will see, your first year in the department is devoted to the study of calculus. It is not until you have reached Calculus III (Math 264) that you can take more than one math course at the same time. You can, however, enroll in Computer Science 151L concurrently with Calculus I (Math 162), and we encourage you to do this. Please note that our course numbers do not run sequentially, so never make the assumption that one class will be easier than another based on the course number.

If you have not decided which degree or concentration you would like to pursue, please take your time and review the following information. Web page addresses are provided in case you would like to do more reading about the different options. And remember, we are here to help, so please feel free to contact us by E-mail, telephone or by making arrangements for an informal advisement session with your faculty or the department advisor.

CORE CURRICULUM FOR MATHEMATICS MAJORS:

Math 162	Calculus I
Math 163	Calculus II
Math 264	Calculus III
Math 321	Linear Algebra (not required for Math Ed)
Math 401	Advanced Calc (not required for Math Ed or the Bachelor of Science in Statistics)

Knowledge of a computing language at the level of Computer Science 151L (Comp. Programming Fundamentals).

At least 27 credit hours of mathematics and/or statistics courses numbered 300 or above.

OPTION I: PURE MATHEMATICS

Mathematics is an intriguing discipline even without regard to applications outside mathematics, and pure mathematics emphasizes fundamental ideas in mathematics itself. The study of pure mathematics also can be excellent preparation for graduate study in all areas of

mathematics and statistics, as well as being good pre-professional training for students wanting eventually to end up in law, medicine or other professions.

COURSE WORK:

In addition to the core curriculum listed above, the option in Pure Mathematics requires Math 322 and 402, and six of the following courses:

313, 319, 327, 421, 431, 434, 441, 462, or 472

Students who are unfamiliar with mathematical abstraction are encouraged to take Math 327 as early in their program as possible.

OPTION II: APPLIED MATHEMATICS

To prepare for a career in applied mathematics outside of academia, build your program around the skills that employers need: breath and depth in mathematics, communication and computational skills, knowledge of a relevant area outside of mathematics, and problem-solving ability. Choose areas that interest you and that are relevant to your probable future employment.

COURSE WORK:

In addition to the core curriculum listed above, the option in Applied Mathematics requires the following courses:

311 or 402, 312, 313, 316, 375, and one additional 300 and a 400 level course approved by the advisor. Both 311 and 402 can be taken for credit. Students are strongly encouraged to take science and engineering courses with significant mathematical content.

OPTION III: MATHEMATICS EDUCATION

Undergraduates seeking secondary certification in Mathematics may be enrolled in either the College of Arts & Sciences or the College of Education. Mathematics major and minor requirements differ somewhat between the two colleges.

COURSE WORK:

In addition to the core curriculum listed above, the requirements for an A&S Mathematics Education major are:

321 or 314, 305, 306, 338, Stat 345, and at least 12 hours from 307, 308, 309, 311, 317, 319, 322, 331, 401, 375, 406, or other upper division courses approved by the math-education advisor.

Supporting courses may also be taken in the College of Education.

OPTION IV: MATHEMATICS OF COMPUTATION

The Mathematics of Computation degree has an automatic Computer Science minor. With preparation in mathematics combined with a background in another field, you can enjoy the dual pleasures of computational mathematics, using your mind and seeing the results.

COURSE WORK:

In addition to the core curriculum listed above, this option requires:

1. Math 375, 464 and 471; four of 312, 316, 317, 318, 319,

322; Stat 345, or Math 441. Note that Math 401 is not required for this option but is recommended for students contemplating advanced study in mathematics.

2. A minor in Computer Science. Currently this includes 22 CS hours of which the following are required: CS 151L, 201, 251L, EECE 238L, CS 257L, and two of CS 341L, 351L and 361L.

The CS advisor may make exceptions where appropriate. See the CS department catalog for substitutions and restrictions.

OPTION V: DISTRIBUTED MAJOR

This option was designed for students who would like more flexibility in their program. This new option allows students to design a program that combines their areas of interest (e.g. pure mathematics and statistics) while maintaining a high academic standard.

COURSE WORK:

In addition to the core curriculum listed above, this option requires completion of Math 317 or 327 or Stat 345, and at least two of the following 10 groups of courses. Reasonable substitutions, approved by the student=s advisor are allowed. The remainder of the required 27 credit hours at the 300 level and above may be chosen by the student with the approval of the advisor.

Math 401 and 402 (Analysis)
Math 322 and 421 (Algebra)
Math 431 and either 331 or 434 (Topology/Geometry)
Math 319 and one of 317, 318, 327 (Discrete Mathematics)
Two of Math 312, 316, 462, 463, 466 (Differential Equations)
Math 311 and 313 (Multivariate and Complex Calculus)
Math 375 and either 464 or 471 (Computational Mathematics)
Stat 345 and Stat 427 (Applied Statistics)
Math 441 and Stat 453 (Statistics Theory, preparation for second actuarial exam)
Math 472 and an approved course, possibly in another department, in image processing.

ADDITIONAL INFORMATION FOR MATH MAJORS:

- Each Mathematics major should be in regular contact with his or her faculty advisor to discuss his or her program of studies.
- Since many graduate schools require a reading knowledge of one or two foreign languages, it is desirable that an undergraduate takes three semesters of at least one of the following: French, German or Russian.
- A student who would like to have a course offered which is listed as offered on demand should discuss the possibility with their faculty advisor as well as the department chair.

MINORING IN MATHEMATICS

Mathematics Minor Study Requirements:

Math 162, 163 , 264, plus 12 hours in Mathematics and Statistics courses numbered above 300. At least 6 of the 12 hours must be in courses labeled Math. The pass/fail (CR/NC) option may not be used for minor study and the grades in all mathematics and statistics courses must be C (not C-) or better.

TRANSFER EVALUATIONS

Within the state of New Mexico, the New Mexico Statewide Articulation Agreement will automatically transfer and evaluate your work. Outside of the state, a course description from the catalog where the class was taken is necessary in order to evaluate your work. The Department now has access to college catalogs on-line. We need you to please have the following documents ready to expedite the evaluation:

1) A copy of your transcripts from the college from which you are transferring
2) Your social security number, email, telephone or street address

BACHELOR OF SCIENCE IN STATISTICS

The following is required of all Statistics majors:

1. Assignment of a faculty advisor. Students must go to the Department of Mathematics and Statistics to be assigned a faculty advisor from the Statistics Group as soon as they decide to major in statistics.
2. Stat 145 or approved equivalent
3. Knowledge of a computing language at the level of CS 151L
4. Math 162, 163, 264 and 314 or 321
5. At least 21 hours of statistics courses numbered 250 or above (with a grade of C not C- or better). These must include Stat 345, 427, 428, 440 and 445.
6. Enrichment courses: At least 6 additional hours of courses numbered 300 or higher and approved by the students undergraduate advisor. These can be taken in an appropriate discipline of the student's choice, for example: anthropology, biology, business, chemistry, computer science, economics, engineering, mathematics, psychology, and statistics. These courses may overlap with the student's minor.
7. The pass/fail (CR/NC) option may not be used in courses taken to satisfy requirements 2, 4, and 5. All grades in these courses must be C (no C-) or better.

ADDITIONAL INFORMATION FOR STATISTICS MAJORS:

T For students interested in a career in actuarial science, preparation for the first actuarial exam consists of the courses Math 162, 163, 264 and Math 314 or 321. Preparation for the second actuarial exam consists of the courses Stat 453 and 461. For information on actuarial careers and other exams, please consult a

Statistics advisor.

T Students considering a graduate degree in Statistics are encouraged to take Math 321 and 401.

MINORING IN STATISTICS

Statistics Minor Study Requirements:

One year of calculus (Math 162 and 163), Stat 145, 345, 427, 428 and an additional 3 hours of mathematics or statistics in courses numbered 250 and above. The Pass/fail (CR/NC) option may not be used for minor study and the grades in all mathematics and statistics courses must be C (not C-) or better.

PREREQUISITE GUIDE

See the 2003-2005 UNM Catalog for Course Descriptions

http://www.unm.edu/~unmreg/catalog.htm

COURSE #	COURSE TITLE	PREREQUISITE
162	Calculus I	ACT/SAT/Math Placement score, or Advanced Placement, or Math 150/123
163	Calculus II	Math 162
264	Calculus III	Math 162 and 163
300	Computing in the Mathematics Curriculum	Math 162 or Math 180
305	Mathematics from a Historical Perspective	Math 162 and 163
306	College Geometry	No prerequisite
307	Elementary Topology	Math 162 and 163
308	Theory and Practice of Problem Solving	No prerequisite, offered upon demand
309	Applications of Mathematics	Math 162 and 163. Offered upon demand
311	Vector Analysis	Math 162, 163 and 264 or permission of dept. Chair
312	Partial Differential Equations for Engineers	Math 162, 163, 264 and 316
313	Complex Variables for Engineering	Math 162, 163 and 264. Math 311 is recommended
314	Linear Algebra with Applications	Math 162 and 163
316	Applied Ordinary Differential Equations	Math 162 and 163. Math 264 is recommended
317	Elementary Combinatorics	Math 162 and 163
318	Graph Theory	Permission of instructor
319	Theory of Numbers	No prerequisite
321	Linear Algebra	Math 162, 163 and 264

322	Modern Algebra I	Math 162, 163 and 264
327	Discrete Structures	Math 162 and 163
331	Survey of Geometry	Math 162, 163 and either 314 or 321. Offered upon demand
338	Mathematics for Secondary Teachers	Math 162 and 163
339	Topics in Mathematics for Elementary & Middle School Teachers	Permission of instructor. Offered upon demand
350	Topics in Mathematics for Secondary Teachers	Permission of instructor. Offered upon demand
356	Symbolic Logic	Offered as Phil 356. No prerequisite
361	Advanced Calculus I	Math 162, 163 and 264
362	Advanced Calculus II	Math 162, 163, 264, 361 and either 314 or 321. Offered on demand
375	Introduction to Numerical Computing	Math 162, 163 and some ability in Fortran or C programming
391	Advanced Undergraduate Honors Seminar	Permission of Instructor
393	Topics in Mathematics	No prerequisite. Offered upon demand
405	Linear and Integer Programming	Math 162, 163, 314 and CS 151L
406	Topics in the History of Mathematics	Math 162, 163, 264 and 305
415	Philosophy of Mathematics	Math 356 or 456 or permission of instructor
416	Axiomatic Set Theory	One year of college mathematics or Math/Phil 356 or 456
421	Modern Algebra II	Math 162, 163, 264 and 22 or 422
422	Modern Algebra for Engineers	Math 162, 163 and 264
431	Introduction to Topology	Math 162, 163, 264 and 361

434	Introduction to Differential	Math 162, 163, 264 and 311 or 362
439	Topics in Mathematics	No prerequisite. Offered upon demand
441	Probability	Math 162, 163 and 264 or equivalent
449	Topics in Probability	No prerequisite. Also offered as Stat 469
456	Metalogic	Math 356 or permission of instructor
461	Introductory Real Analysis for Engineers	Math 162, 163, and 264
462	Introduction to Ordinary Differential Equations	Math 162, 163, 264, 314 or 321, and 361
463	Introduction to Partial Differential Equations	Math 162, 163, 264, 312, 313, 314 or 321, and 361
464	Applied Matric Theory	Math 162, 163, 264 and 314 or 321
466	Mathematical Methods in Science & Engr	Math 162, 163 and 264, 311, 312, 313, 316
471	Introduction to Scientific Computing	Also offered as CS 471
472	Fourier Analysis and Wavelets	Math 162, 163, 264, 314, 321, 361 or permission of instructor
499	Individual Study	Permission of instructor

DEPT. OF MATHEMATICS & STATISTICS FACULTY.....

PROFESSORS

Alejandro Aceves, Ph.D., University of Arizona, 1989. Nonlinear optics, theory of solitons.

Edward J. Bedrick, Ph.D., University of Minnesota, 1984. Categorical data analysis, Biostatistics, Computational Statistics.

Charles P. Boyer, Ph.D., Pennsylvania State University, 1972. Differential geometry, mathematical physics, relativity, gauge theories.

Michael A. Buchner, Ph.D., Harvard University, 1974. Singularity theory, real algebraic geometry.

Alexandru Buium, Ph.D., University of Bucharest, 1983. Algebraic geometry and number theory.

Ronald Christensen, Ph.D., University of Minnesota, 1983. Bayesian statistics, linear and log-linear models.

Evangelos A. Coutsias , Ph.D., California Institute of Technology, 1979. Nonlinear dynamics, fluid flow.

Sam Efromovich , Ph.D., Moscow Institute of Physics and Technology, 1979. Statistical inference, nonparametric curve estimation.

James A. Ellison, Ph.D., California Institute of Technology, 1970. Mathematical physics, dynamical systems, particle channeling in crystalline structures.

Pedro F. Embid, Ph.D., University of California-Berkeley, 1984. Partial differential equations, applied mathematics. (On Sabbatical 2002-03)

Krzysztof Galicki, Ph.D., SUNY at Stony Brook, 1987. Differential geometry, mathematics physics.

Frank L. Gilfeather, Ph.D., University of California-Irvine, 1969. Non-self-adjoint operator algebras, operator theory.

Thomas Hagstrom, Ph.D., California Institute of Technology, 1983.
Numerical analysis.

Wojciech Kucharz, Ph.D., University of Katowice, Poland, 1978. Real algebraic geometry.

Jens Lorenz, Ph.D., University of Münster, 1975. Numerical analysis, dynamical systems.

Terry A. Loring, Ph.D., University of California, Berkeley, 1986. C*-Algebras, operator theory.

Stanly L. Steinberg, Ph.D., Stanford University, 1967. Computer symbol manipulation, numerical grid generation, scientific computing, partial differential equations, applied mathematics.

Alexander P. Stone, Ph.D., University of Illinois, 1965. Differential geometry, differential equations, electromagnetic theory.

Deborah L. Sulsky, Ph.D., New York University, 1982. Scientific computing, fluid dynamics, mathematical biology.

ASSOCIATE PROFESSOR

Aparna V. Huzurbazar, Ph.D., Colorado State University, 1994. Flowgraph Models, Bayesian inference, survival analysis. (On Sabbatical 2002-03)

Todd M. Kapitula, Ph.D., University of Maryland, 1991. Applied dynamical systems, existence and stability of travelling waves. (On Sabbatical fall 2002)

Vladimir I. Koltchinskii, Ph.D., Kiev University, Ukraine, 1982. Probability theory and mathematical statistics.

Cristina Pereyra , Ph.D., Yale University, 1993. Harmonic Analysis.

Ronald M. Schrader, (Chair) Ph.D., Pennsylvania State University, 1976. Robust statistical methods, quantitative genetics, applied statistics.

ASSISTANT PROFESSORS

Tim Hanson, Ph.D., University of California, Davis, 2000. Bayesian hierarchial models, biostatistics, and diagnostic screening.

Gabriel Huerta, Ph.D., Duke University, 1998, Bayesian statistics, Time series analysis

Michael Nakamaye, Ph.D., Yale, 1994. Diophantine and Algebraic geometry

Monika Nitsche, Ph.D., University of Michigan, 1992. Scientific computing, fluid dynamics, applied math.

Vakhtang Poutkaradze, Ph.D.,University of Copenhagen, The Niels Bohr Institute, 1997. Applied mathematics, fluid dynamics, free surface flows, turbulence.

Laura Salter, Ph.D., Ohio State University, 1999. Biostatistics, phylogenetic tree estimation, stochastic optimization.

Kristin Umland, Ph.D., University of Illinois, 1996. Group theory and algebraic topology.

Tim Warburton, Ph.D., Brown University, 1999. High performance scientific computing, numerical solution of partial differential equations.

LECTURERS

Adriana Aceves, M.S., University of Arizona, 1991. Applied Matheamtics

Jurg Bolli, M.A., University of Zurich 1984 Mathematics Education

James Dudley, M.A., University of New Mexico 1976 Mathematics Education

Cathy D. Gosler, M.A., University of New Mexico, 1988.
Mathematics education with emphasis on inovation in math education.

John Hamm, Ph.D. EE, University of Arizona, 1971. Boundary Value Problems, Electro Magnetic Fields.

Philip P. Herlan, M.S., State University College of New York, Buffalo, 1975.
Mathematics education with emphasis on Calculus reform.

Victoria Kauffman, M.A., University of New Mexico 1984 Education in Secondary Mathematics

Justin Kubatko, M.A.S., Ohio State University 1998 Statistics education with an emphasis on applied problem solving.

WEB PAGES AND RESOURCES.....

American Mathematical Society
PO Box 5904
Boston, MA 02206-5904
(800) 321-4267 or (401) 455-4000
E-mail: ams@ams.org
Web site: http://www.ams.org/

American Statistical Association
1429 Duke Street
Alexandria, VA 22314-3402
(703) 684-1221
Web site: http://www.amstat.org/

Association for Women in Mathematics
4114 Computer & Space Sciences Building
University of Maryland
College Park, Maryland 20742-2461
(301) 405-7892
E-mail: awm@math.umd.edu
Web site: http://www.math.neu.edu/awm/

Institute or Operations Research and the Management Sciences (INFORMS)
901 Elkridge Landing Road, Suite 00
Linthicum, MD 21090-2909
(800) 4IN-FORMS
E-mail: informs@jhuvms.hcf.jhu.edu
Web site: http://www.informs.org/

Mathematical Association of America
1529 Eighteenth Street N.W.
Washington, DC 20036
(202) 387-5200
E-mail: maahq@maa.org
Web site: http://www.maa.org/

National Council of Teachers of Mathematics
1906 Association Drive

Reston, VA 22091-1593
(703) 620-9840
Web site: http://www.nctm.org/

Society for Industrial and Applied Mathematics
3600 University City Science Center
Philadelphia, PA 19104-2688
(215) 382-9800
E-mail: siam@siam.org
Web site: http://www.siam.org

Society of Actuaries
475 North Martingale Road, Suite 800
Schaumberg, IL 60173-2226
(708) 706-3500
Web site: http://www.soa.org/

The University of New Mexico

College of Arts & Sciences

DEPARTMENT OF MATHEMATICS & STATISTICS

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