Mathematical Sciences

Introduction
The Department of Mathematical Sciences offers a Bachelor of Science (BS) degree. The BS in Mathematics allows for concentrations in Applied Mathematics, Actuarial Sciences, Secondary Education (with teacher certification in either 7-12 Mathematics or 7-12 Mathematics/Physics), and Statistics.

Registration for each course in Mathematical Sciences (with a MATH or STAT prefix) requires a minimum grade of C in all prerequisite courses.

Advising
All undergraduate mathematics majors are required to consult with and have their enrollment approved by their undergraduate advisor before every enrollment.

Placement
Students who intend to register in the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 0311</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1319</td>
<td>Math in the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1320</td>
<td>Math for Social Sciences I</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1411</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1508</td>
<td>Precalculus</td>
<td>5</td>
</tr>
<tr>
<td>MATH 2301</td>
<td>Math for Social Sciences II</td>
<td>3</td>
</tr>
</tbody>
</table>

must present an official document at registration showing that they have either an adequate placement examination score or received a grade of C or better in the prerequisite course. Placement exam scores expire after five (5) years.

GPA Requirements
Mathematics majors must maintain a 2.0 GPA in all MATH and STAT courses (Students should refer to the Standards of Academic Performance (http://catalog.utep.edu/undergrad/academic-regulations/curriculum-and-classroom-policies/) section of this catalog.)

Prerequisites
All mathematics (MATH) or statistics (STAT) courses that have MATH or STAT prerequisites require a grade of C or better in the prerequisite course.

Programs
Bachelor of Science
- BS in Mathematics (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/mathematics-bs/)

Minor
- Minor in Mathematics (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/mathematics-minor/)
- Minor in Statistics (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/statistics-minor/)

Fast Track
- BS in Mathematics to MS in Mathematics (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/fast-track/bs-math-ms-math/)
- BS in Mathematics to MS in Statistics (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/fast-track/bs-math-ms-statistics/)
- BS in Mathematical Sciences to MBA (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/fast-track/bs-math-mba/)
- BS in Mathematical Sciences with Applied Mathematics Concentration to MBA (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/fast-track/bs-math-applied-conc-mba/)
• BS in Mathematical Sciences with Actuarial Concentration to MBA (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/fast-track/bs-math-actuarial-conc-mba/)
• BS in Mathematical Sciences with Statistics Concentration to MBA (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/fast-track/bs-math-stat-conc-mba/)
• BS in Mathematical Sciences to MS in Bioinformatics (http://catalog.utep.edu/undergrad/college-of-science/mathematical-sciences/fast-track/bs-math-ms-bioinformatics/)

CHAIR: Dr. Maria Mariani (http://facultyprofile.utep.edu/default.aspx?ID=mcmariani/)

Professor

Behzad Djafari-Rouhani (http://facultyprofile.utep.edu/default.aspx?ID=behzad/)
Contact Information: behzad@utep.edu (mtcortez@utep.edu); 915-747-6767
Education: Baccalaureat (High School Degree), Lycee franco-iranien de Teheran; D.U.E.S. (Math-Physics), Universite Pierre et Marie Curie (Paris 6); Maitrise de Mathematiques, Universite Pierre et Marie Curie (Paris 6); Ingenieur Civil des Mines, Ecole Nationale Superieure des Mines de Paris; Ph D, Yale University

Art Duval (http://facultyprofile.utep.edu/default.aspx?ID=aduval/)
Contact Information: aduval@utep.edu (mtcortez@utep.edu); 915-747-6846
Education: BS, California Institute of Technology; Ph D, Massachusetts Institute of Technology

Joe Guthrie (http://facultyprofile.utep.edu/default.aspx?ID=jguthrie/)
Contact Information: jguthrie@utep.edu (mtcortez@utep.edu); 915-747-6755
Education: BA, The University of Texas at Austin; MA, Texas Christian University; Ph D, Texas Christian University

Mohamed Khamsi (http://facultyprofile.utep.edu/default.aspx?ID=mohamed/)
Contact Information: mohamed@utep.edu (mtcortez@utep.edu); 915-747-6763
Education: Ph D, University of Paris 6

Lawrence Lesser (http://facultyprofile.utep.edu/default.aspx?ID=lesser/)
Contact Information: Lesser@utep.edu (mtcortez@utep.edu); 915-747-6845
Education: BA, Rice University; MS, The University of Texas at Austin; Ph D, The University of Texas at Austin
Research Interests: mathematics education, statistics education, equity, teacher education, motivation, intuition, language, culture, humanistic mathematics

Ming-Ying Leung (http://facultyprofile.utep.edu/default.aspx?ID=mleung/)
Contact Information: mleung@utep.edu (mtcortez@utep.edu); 915-747-6836
Education: BS, University of Hong Kong; M. Phil., University of Hong Kong; MS, Stanford University; Ph D, Stanford University
Research Interests: Predictive Algorithms, Scan Statistics, Sequence Analysis, and Structural Bioinformatics

Nancy Marcus (http://facultyprofile.utep.edu/default.aspx?ID=nancymarcus/)
Contact Information: nancymarcus@utep.edu (mtcortez@utep.edu); 915-747-6750
Education: BS, Texas Western College; MS, The University of Texas at El Paso; Ph D, New Mexico State University

Maria Mariani (http://facultyprofile.utep.edu/default.aspx?ID=mcmariani/)
Contact Information: mcmariani@utep.edu (mtcortez@utep.edu); 915-747-6861
Education: MS, Univ. of Buenos Aires; Ph D, Univ. of Buenos Aires; MS, Univ. of Buenos Aires

Panagis Moschopoulos (http://facultyprofile.utep.edu/default.aspx?ID=pmoschopoulos/)
Contact Information: pmoschopoulos@utep.edu (mtcortez@utep.edu); 915-747-6764
Education: BS, University of Athens; MS, McGill University; MA, University of Rochester; Ph D, University of Rochester
Research Interests: Linear models, multivariate analysis, statistical distributions, data analysis, statistical consulting

Ori Rosen (http://facultyprofile.utep.edu/default.aspx?ID=orosen/)
Contact Information: orosen@utep.edu (mtcortez@utep.edu); 915-747-6843
Education: BS, Technion; MS, Technion; ScD, Technion - Israel Institute of Technology

Emil Schwab (http://facultyprofile.utep.edu/default.aspx?ID=eschwab/)
Contact Information: eschwab@utep.edu (mtcortez@utep.edu); 915-747-6758
Education: BS, West University of Timisoara; Ph D, Babeș-Bolyai University
Research Interests: Arithmetic Functions, Algebraic Combinatorics, Theory of Semigroups, Special Categories, Quantum Logic, Fuzzy Sets and Systems, Factorization

Edward Sewell (http://facultyprofile.utep.edu/default.aspx?ID=sewell/)
Contact Information: sewell@utep.edu (mtcortez@utep.edu); 915-747-6762
Education: Ph D, Purdue University; MS, University of Texas Austin

Xiaogang Su (http://facultyprofile.utep.edu/default.aspx?ID=xsu/)
Contact Information: xsu@utep.edu (mtcortez@utep.edu); 915-747-6860
Education: BS, Beijing Normal University; MS, University of California, Davis; Ph D, University of California, Davis

Mourat Tchoshanov (http://facultyprofile.utep.edu/default.aspx?ID=mouratt/)
Contact Information: mouratt@utep.edu (mtcortez@utep.edu); 915-747-7668
Education: Specialist Degree, Turkmen State Pedagogical Institute; Candidate of Sciences Degree, Kazan State Pedagogical Institute; Ph D, Kazan State Pedagogical University
Research Interests: Cognition and representation in mathematics learning, teacher knowledge and student achievement, engineering of learning, engineering of teacher learning, and cross-national studies in mathematics education.

Piotr Wojciechowski (http://facultyprofile.utep.edu/default.aspx?ID=piotrw/)
Contact Information: piotrw@utep.edu (mtcortez@utep.edu); 915-747-6774
Education: Ph D, Bowling Green State University

Associate Professor

Miguel Argaez (http://facultyprofile.utep.edu/default.aspx?ID=margaez/)
Contact Information: margaez@utep.edu (mtcortez@utep.edu); 915-747-6775
Education: BS, Universidad del Valle; MS, Universidad Nacional; MA, Rice University; Ph D, Rice University

Hamide Dogan Dunlap (http://facultyprofile.utep.edu/default.aspx?ID=hdogan/)
Contact Information: hdogan@utep.edu (mtcortez@utep.edu); 915-747-6769
Education: Ph D, University of Oklahoma
Research Interests: Linear Algebra and its Applications, Cognition of Advanced Mathematics

Leslie Foged (http://facultyprofile.utep.edu/default.aspx?ID=lfoged/)
Contact Information: foged@math.utep.edu (mtcortez@utep.edu); 915-747-6765
Education: BA, Midland Lutheran College; Ph D, Washington University (St.Louis)

Helmut Knaust (http://facultyprofile.utep.edu/default.aspx?ID=hknaust/)
Contact Information: hknnaust@utep.edu (mtcortez@utep.edu); 915-747-7002
Education: Diplom-Mathematiker, Rheinische Friedrich-Wilhelms Universitaet; Ph D, The University of Texas at Austin

Kien Lim (http://facultyprofile.utep.edu/default.aspx?ID=kienlim/)
Contact Information: kienlim@utep.edu (mtcortez@utep.edu); 915-747-6772
Education: General Certificate of Education 'A' Level, Raffles Junior College, Singapore; BA, National University of Singapore; MS, University of Wyoming; Ph D, University of California San Diego & San Diego State University
Research Interests: Problem-solving disposition, Mathematical habits of mind, Ways of thinking, Proportional reasoning, Algebraic reasoning, Student cognition, Teacher preparation, Classroom voting, Mindfulness

Osvaldo Mendez (http://facultyprofile.utep.edu/default.aspx?ID=osmendez/)
Contact Information: osmendez@utep.edu (mtcortez@utep.edu); 915-747-6862
Education: Licenciado en Matematicas, Universidad Nacional de Rosario; Ph D, University of Minnesota; MS, University of Minnesota

Naijun Sha (http://facultyprofile.utep.edu/default.aspx?ID=nsha/)
Contact Information: nsha@utep.edu (mtcortez@utep.edu); 915-747-6844
Education: BS, Fudan University; MS, The University of Texas at El Paso; Ph D, Texas A&M University
Research Interests: Bayesian Approach, Survival/Reliability, Classification and Clustering, High Dimensional Data, Variable Selection Technique, Bioinformatics.

Luis Valdez-Sanchez (http://facultyprofile.utep.edu/default.aspx?ID=lvsanchez/)
Contact Information: lvsanchez@utep.edu (mtcortez@utep.edu); 915-747-6766
Education: BS, The University of Texas at El Paso; MA, University of California, Berkeley; Ph D, University of California, Berkeley

Amy Wagler (http://facultyprofile.utep.edu/default.aspx?ID=awagler2/)
Contact Information: awagler2@utep.edu (mtcortez@utep.edu); 915-747-6847
Education: BS, The University of Texas of the Permian Basin; MS, Oklahoma State University; Ph D, Oklahoma State University

Son-Young Yi (http://facultyprofile.utep.edu/default.aspx?ID=syi/)
Contact Information: syi@utep.edu (mtcortez@utep.edu); 915-747-6864
Education: BS, Korea University; MS, Seoul National University; Ph D, Purdue University
Assistant Professor

Sangjin Kim (http://facultyprofile.utep.edu/default.aspx?ID=skim10/)
Contact Information: skim10@utep.edu (mtcortez@utep.edu); 915-747-8246
Education: BA, City College of New York; MS, Brown University; MS, Brown University; Ph D, University of Georgia, Athens

Michael Pokojovy (http://facultyprofile.utep.edu/default.aspx?ID=m pokojovy/)
Contact Information: mpokojovy@utep.edu (mtcortez@utep.edu); 915-747-6761
Education: Ph D, University of Konstanz

Natasha Sharma (http://facultyprofile.utep.edu/default.aspx?ID=nssharma/)
Contact Information: nssharma@utep.edu (mtcortez@utep.edu); 915-747-6858
Education: Ph D, University of Houston
Research Interests: Numerical methods solving differential equations describing problems on electromagnetic wave propagation, incompressible flow, plate bending, time-dependent processes and their error analysis, and on developing mesh and time adaptivity schemes

Xianyi Zeng (http://facultyprofile.utep.edu/default.aspx?ID=xzeng/)
Contact Information: xzeng@utep.edu (mtcortez@utep.edu); 915-747-6759
Education: Ph D, Stanford University