

# COLLEGE OF ARTS AND SCIENCES



## MATHEMATICS & STATISTICS

### A Great Academic Experience

The Mathematics & Statistics Department at Sam Houston State is designed for students who are looking for excellent academic programs, individualized attention and research opportunities.

Our small classes will enhance your graduate program experience. Our faculty, with broad and diverse research interests, will provide many opportunities for faculty-student collaboration, fully preparing you for success in your doctoral studies or teaching career.

*Dr. Allison McCulloch received her MA in Mathematics from SHSU. She recently graduated from the doctoral program at Rutgers and has accepted an assistant professorship at North Carolina State University. At Rutgers, she was honored as one of the top doctoral students.*

The department is also recognized as a state leader in mathematics education, working with preservice and inservice teachers and education leaders in Texas.

*SHSU graduates, Dr. Sheila Cunningham and Mary Jadloski, work as the math coordinators for the Klein ISD and the Cypress-Fairbanks ISD, respectively.*



#### Master of Science in Mathematics

The Master of Science in Mathematics is a 36-hour program. With a balance of theory and applications, our graduates are prepared for a career in which both creative and critical thinking are required. Core classes in the MS program include a two-course sequence in abstract algebra, two courses in analysis, and a topology course.

#### Master of Science in Statistics

The Master of Science in Statistics is a 37-hour program with a thesis or non-thesis option. Most of our statistics students work closely with a faculty member on a thesis problem, preparing for either a Ph.D. program or a career in industry. Core classes in the MS in Statistics program include Mathematical Statistics, Design and Analysis of Experiments, Regression Analysis and Multivariate Analysis. Our alumni have successfully pursued doctoral studies at numerous universities including Baylor, SMU, Texas Tech, Ohio State and Virginia Tech. Graduates have gone on to successful careers at Eli Lilly, Sprint, Capitol One, Citi-Corp, J. C. Penney, Synergis and other corporations.

#### Master of Arts in Mathematics

The Master of Arts in Mathematics is a 36-hour program. Candidates for this degree are typically teachers in grades 6-12 who want to increase the depth and breadth of their mathematics background, seeking to be campus leaders, math curriculum coordinators or teach dual credit courses at their high school. Core classes consist of courses in abstract algebra, geometry, analysis, and probability/statistics. Some courses are offered at the University Center in The Woodlands.

#### Ph.D. in Mathematics Education

A proposal for a Ph.D. in Mathematics Education is awaiting approval at the Texas Higher Education Coordinating Board. Doctoral students would work closely with our nationally recognized mathematics education faculty. Doctoral research projects will enhance the teaching of mathematics from pre-kindergarten through grade 16, strengthening the nation's preparation for math and science in the future.

## Faculty Research

The Mathematics & Statistics Department is comprised of more than two dozen faculty members with degrees from all over the country. Diverse interests and academic backgrounds provide a broader perspective and better-rounded educational experience.

*Faculty members are involved in various, exciting areas of research including:*

**John Alford**, *Mathematical biology*  
**Yuliya Babenko**, *Approximation theory*  
**Ananda Bandulasiri**, *Statistical shape analysis*  
**Ferry Butar Butar**, *Small area estimation*  
**Max Coleman**, *Teaching and learning algebra*  
**Beth Cory**, *Dynamic visualization, calculus learning*  
**Rebecca Garcia**, *Commutative algebra*  
**Luis Garcia**, *Computational algebraic geometry*  
**Cecil Hallum**, *Multivariate analysis, linear models*  
**Melinda Holt**, *Biopharmaceutical statistics*  
**John Huber**, *Technology in learning/teaching math*  
**Bill Jasper**, *Math for ELLs, teacher preparation*  
**Jacqueline Jensen**, *Low dimensional topology*  
**Dustin Jones**, *Mathematics curriculum*  
**Joe Kirk**, *Function theory, complex analysis*  
**Brian Loft**, *Differential topology*  
**Mark Klespis**, *Text analysis, teacher preparation*  
**Jon Short**, *Topological groups*  
**Ken Smith**, *Algebraic combinatorics*  
**John Snow**, *Universal algebra*  
**Mary Swarthout**, *Teacher understandings*  
**Jianzhong Wang**, *Wavelet analysis*  
**Linda Zientek**, *Teacher quality & induction*

## Learning Outside the Box

As a graduate student, you will work with departmental faculty on cutting-edge research topics by combining your imagination with classroom knowledge.

Graduate students in mathematics and statistics have made valuable contributions to multimillion dollar research projects and have presented their work at scientific conferences. Our undergraduate research was featured in Focus, a magazine of the Mathematical Association of America; our graduate research programs often include generous wages or stipends. Some of the most recent research topics of our graduate students include:

- BAYESIAN ANALYSIS
- BIostatISTICS
- COMPUTATIONAL COMMUTATIVE ALGEBRA
- DATA MINING
- DISCRETE MORSE THEORY
- GALOIS THEORY
- GRAPH THEORY
- KNOT THEORY
- MULTIVARIATE ANALYSIS
- REMOTE SENSING
- STATISTICAL MODELING
- TOPOLOGICAL GROUPS

**“The science of mathematics... is a powerful tool of insight, as well as a unifying force between all the sciences.”**

**- The National Science Foundation**

## Teaching Assistantships

We have a variety of graduate assistantships available. Teaching assistants teach freshman classes or work in our tutoring lab. Supported students take three graduate classes per semester and receive stipends between \$9,800 and \$12,000. Additional scholarships (up to \$4,000) and summer stipends are available for select students.

The National Science Foundation recently awarded the department a five-year grant to support graduate study without an employment obligation. For more information, visit <http://www.shsu.edu/PEERS>.

## Sam Houston State University

Since 1879, Sam Houston State University has touched the lives of numerous graduates and helped shape the economic, social and cultural development of the state and nation. Steeped in tradition and Texas hospitality, the university offers the type of educational experience most often found at private institutions. The low student to faculty ratio allows for individual attention while our beautifully maintained campus and historic architecture provide a serene backdrop to high-tech facilities, equipment and amenities. Our tuition rates combined with exceptional faculty and academic programs is one of the best educational values in Texas.

## Department of Mathematics & Statistics

Sam Houston State University  
Box 2206

Huntsville, Texas 77341 - 2206

Website: [www.shsu.edu/~mth\\_www/](http://www.shsu.edu/~mth_www/)

*For more information, contact*

**Dr. Ken W. Smith, Chair**

Phone: 936.294.1563

Fax: 936.294.1882

Email: [KenWSmith@shsu.edu](mailto:KenWSmith@shsu.edu)

**Sam Houston**  
STATE UNIVERSITY  
*A Member of The Texas State University System*