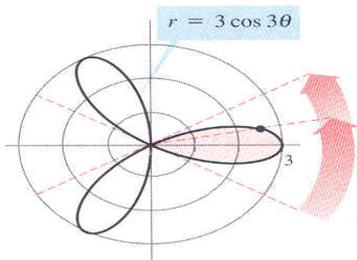## The UNIVERSITY and the BATON ROUGE COMMUNITY

Southern University and A & M College is a fully accredited university offering opportunity for education for over 7000 students. The University has a Junior Division and six colleges and schools.

In 1879, a group of individuals sponsored a movement in the LA State Constitutional Convention that resulted in the establishment of an institution "for the education of persons of color" in the city of New Orleans. This institution was chartered in 1880. In March 1914 the institution was moved to its present site, Scotlandville, Louisiana. A rich history of excellence has continued here at Southern University throughout the years.

Over the years, the Baton Rouge Community has offered Southern students vast opportunities in Academic, Industrial and Legislative environments. Being a leading center for the petrochemical business, students in scientific areas have immediate opportunities to get exposure in their chosen disciplines. Baton Rouge is also blessed with a mild climate which permits an abundance of outdoor and cultural activities.

$r = 3\cos 3\theta$

MATH/PHYSICS MASTER OF SCIENCE WITH CONCENTRATION IN MATHEMATICS

Students may pursue study for the M.S. degree in Mathematics and Physics with a mathematics concentration and an emphasis in Pure and Applied Mathematics or in Mathematics for In-service Teachers. A program emphasizing Pure and Applied Mathematics is recommended for those persons whose goal is to either work in Private or Government industry, to pursue the PhD degree in mathematics, or to do university teaching. A program emphasizing mathematics for teachers is recommended for those middle and high school teachers who desire to enhance their instructional experiences. The student's program emphasis will be exhibited through the student's selection of elective courses.

Qualities That Characterize Our Programs

- Educational environment that is both challenging and nurturing
- Solid foundation for the University's Ph.D. program in **M**athematics and **S**cience **Ed**ucation (SMED)
- Low faculty/student ratio to aid in providing proper instruction and services
- Diverse faculty and student population

Faculty Specialties

Our faculty is specialized in several areas; namely:

- Abstract Algebra
- Real Analysis
- Complex Analysis
- Differential Geometry
- Finite Group Theory
- Mathematics Education
- Probability and Statistics
- Representation Theory
- Statistics
- Numerical Analysis w/Optimization

$$\int_{-\infty}^{\infty} e^{-x^2}\, dx = \sqrt{\pi}$$

$$f(x) = a_0 + \sum_{n=1}^{\infty}\left(a_n \cos\frac{n\pi x}{L} + b_n \sin\frac{n\pi x}{L}\right)$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Admission Requirements

In addition to meeting the general admission requirements of the Graduate School, applicants for regular admission must hold a B.S. degree in mathematics. Additionally, applicants for admission must be approved by the department.

Applicants having deficiencies in mathematics but showing promise as determined by the Graduate Committee of the department, may enroll in a mixed program of graduate and undergraduate courses approved by the

Graduate Committee for the purpose of removing deficiencies in undergraduate mathematics. All deficiencies must be removed before a student can become a candidate for the M.S. degree in Mathematics and Physics. Students admitted on the provisional/conditional basis cited above will receive credit toward the Master of Science degree in Mathematics and Physics for all graduate work successfully completed during the provisional/conditional period upon regular admission of the program.

Master of Science (M.S.) Requirements

A total of 33 semester hours are required for a master's degree in Mathematics and Physics. Six of the 33 hours must be earned either by writing a thesis or by completing a Special Project/Capstone project. The 33 semester hours include a required common core of six semester hours, regardless of the program chosen, as follows:

- ➢ MATH 500 – Foundations of Mathematics and Physics

and

- ➢ MATH 533 – Computational Linear Algebra I

Program Options

Each program has two options: Thesis Option and Non-Thesis Option.

Thesis Option

Students who choose to write a thesis must defend it in an oral examination.

Non-Thesis Option

Students who choose not to write a thesis must complete a Capstone Project/Final Project Report and pass a comprehensive examination administered by the Graduate Committee.

Financial Aid

The department has a limited number of assistantships. Students who are awarded an assistantship pay their regular tuition, but out-of-state fees are waived.

All persons desiring further information should contact:

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SOUTHERN
UNIVERSITY
And
Agricultural & Mechanical College

*Department
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Mathematics, Physics & SMED
Master's Degree Program
in Mathematics and Physics
with* <u>*Math Concentration*</u>

Dr. Katrina Cunningham
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Baton Rouge, Louisiana