



# Roanoke College

## Department of Mathematics, Computer Science and Physics

### Tenure-Track Position Available: Assistant Professor of Mathematics

#### **The Official Announcement**

The Department of Mathematics, Computer Science, and Physics invites applications for a tenure-track appointment in Mathematics at the Assistant Professor level starting August, 2010. A Ph.D. in Mathematics is required. The successful candidate must have a strong interest in teaching a wide range of undergraduate courses in a liberal arts setting. Evidence of potential for highly effective classroom teaching is required. A commitment to scholarly activity and student research is expected. Roanoke College is a nationally ranked residential liberal arts college affiliated with the Lutheran Church (ELCA), located in the beautiful Roanoke Valley of Virginia. A Phi Beta Kappa institution, Roanoke College is an equal opportunity employer and actively seeks diversity among its faculty, staff, and students. Women and members of under-represented groups are especially encouraged to apply.

To apply, submit a letter of application, curriculum vitae, teaching and research statements, copies of graduate and undergraduate transcripts, and at least three letters of recommendation (at least one must address teaching) to Dr. Roland Minton, Chair of the Department of Mathematics, Computer Science, and Physics, Roanoke College, 221 College Lane, Salem, VA, 24153. Please indicate whether you will attend the Joint Meetings in San Francisco, where we will be interviewing. Review of applications will begin November 27, 2009. All completed applications received by that date will be given full consideration.

#### **More About the Position**

The Department of Mathematics, Computer Science, and Physics offers three strong major programs, one in each discipline. The department provides many service courses for the college's core curriculum and various disciplines such as the sciences and business administration. The department also offers minors in each discipline and a concentration in statistics.

The mathematics major is a rigorous traditional major that requires students to take calculus, discrete mathematics, linear algebra, probability, differential equations, abstract algebra, real analysis, a senior seminar, and several electives. The electives currently offered in mathematics include topology, complex analysis, vector calculus, numerical analysis, applied differential equations, and a topics course designed to allow faculty members to offer topics not covered in regular courses. Students are encouraged to pursue independent study research projects as part of their course work. The College supports a very active summer research program for students.

Students graduating with a major in mathematics continue their studies in graduate school, start teaching careers, and enter industry in a variety of roles. Recent graduates have been accepted into graduate programs at such schools as Cornell University, Johns Hopkins University, Indiana University, Georgetown University, and North Carolina State University. Other recent graduates have earned their doctorates from Emory University, Virginia Tech, the University of North Carolina at Chapel Hill, the University of Alberta and Clemson University.

### **The Department's Role in General Education**

Roanoke College is in its first year of implementation of a new general education curriculum, called Intellectual Inquiry (INQ). The mathematics faculty is fully integrated into the curriculum through its primary offerings of INQ 240, INQ 241, more specialized mathematics courses, Intensive Learning courses in the college's May term, and potential courses for INQ 110, the freshman seminar. The service courses currently offered by mathematics faculty include:

INQ 240 Statistical Reasoning. This is a required course for most non-mathematics majors, and is a topics based introduction to statistics. Sections have different themes for the development of basic statistical reasoning, including health, the weather, social justice and gun control.

INQ 241 Mathematical Reasoning. This course is one of several options for fulfilling a general education requirement. Its precursor, Math 101, was a popular choice for this requirement. This course is a themed course for improving the students' mathematical, quantitative, and computational reasoning abilities. Current themes include voting, efficient scheduling, and government.

MATH 111 Mathematical Models for Management Sciences. This course is required for business majors, and includes a light introduction to linear programming and differential calculus.

MATH 112 Concepts and Techniques of Calculus. This course is primarily taken by biology majors, and covers differential and integral calculus with a focus on applications in biology.

MATH 121 Calculus. This course is required of majors in the department's three disciplines and chemistry. Differential and integral calculus are developed, with a 1.5-hour weekly "lab" to explore applications using Mathematica.

MATH 122 Calculus. The second semester of calculus emphasizes infinite series and begins to develop vector-values functions and functions of two variable. There is a 1.5-hour weekly "lab" to explore applications using Mathematica.

### **Responsibilities**

The normal teaching load at Roanoke College is 6 courses per year (equivalent to 9 hours per semester) plus one May term Intensive Learning course every third year. Of the 6 courses each year, a faculty member can expect to teach some service courses in the Intellectual Inquiry curriculum, some introductory-level major courses and some upper-level major courses. Interested faculty members also teach courses on topics of interest to them in the Honors program. These have included mathematics and art, and chaos theory. May term courses offered by mathematics faculty include The Science of Sports, Visualization of Data, The Tainted Truth, and The Mathematics of Gambling.

In addition to teaching, faculty members are expected to be engaged in curriculum development, student advising, and an active scholarship program. Student involvement in independent study projects as part of the faculty member's scholarship program is strongly encouraged. Internal grants for such projects is available.

The current make-up of the department is:

- Roland Minton, Ph.D. Mathematics (Clemson)
- Adam Childers, Ph.D. Mathematics (Virginia Tech)
- Jane Ingram, Ph.D. Mathematics (Maryland)
- Chris Lee, Ph.D. Mathematics (Clemson)
- Karin Saoub, Ph.D. Mathematics (Arizona State)
- Jeff Spielman, Ph.D. Mathematics (Bowling Green)
- Dave Taylor, Ph.D. Mathematics (University of Virginia)
- Kathy Bauman, M.A. Mathematics (Virginia Tech)
- Jan Minton, M.S. Mathematics (Clemson)
- Bryan Snare, M.S. Mathematics (Appalachian State)
- Claire Staniunas, M.S. Mathematics (Virginia Tech)
- Rama Balasubramanian, Ph.D. Physics (Old Dominion)
- Adrienne Bloss, Ph.D. Computer Science (Yale)
- Durell Bouchard, Ph.D. Computer Science (University of Pennsylvania)
- Matt Fleenor, Ph.D. Physics (University of North Carolina)
- Richard Grant, Ph.D. Physics (Old Dominion)
- Phil Nelson, Ph.D. Physics (Virginia Tech)
- Bonnie Price, M.S. Physics (University of North Carolina)
- Anil Shende, Ph.D. Computer Science (SUNY Buffalo)

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