Welcome to the TCNJ Mathematics and Statistics Department!

• One of 5 departments in the School of Science
  • Biology
  • Chemistry
  • Computer Science
  • Mathematics and Statistics
  • Physics

• 23 full time faculty

• Approx. 320 declared majors (70-80 students per graduating class)
What Distinguishes TCNJ Math/Stat?

- Undergraduate focused, small class sizes, strong curriculum
- Distinguished, engaged faculty who care about both teaching and research
- Opportunities for research and independent work

- Great facilities
- Supportive student culture
- Outstanding student/alumni achievements
Dr. Jana Gevertz
2016 Alder Award for Distinguished Teaching
1 of 3 winners nationally

Dr. Robert Cunningham,
2019-20 Fulbright Scholar – Caribbean
2016 Fulbright Specialist -- Anguilla

Dr. Nancy Hingston
2017 AMS Fellow,
Invited Speaker, 2014, International Congress of Mathematicians
Research Fields

Applied Mathematics
Mathematical Biology, Mathematical Modeling, Materials Science

Mathematics
Topology, Algebra, Number Theory, Analysis, Algebraic Geometry, Combinatorics

Mathematics Education
Teacher Knowledge, Teacher Preparation

Statistics
Biostatistics, Data Mining, Quality Control
Curriculum

- Bachelor of Science (Mathematics) with specializations in:
  Mathematics, Applied Mathematics, Data Science, Statistics

- Bachelor of Science (Mathematics Secondary Education) with tracks in:
  Mathematics Secondary Education (4-yr), Mathematics Secondary Urban Ed (5-yr), Mathematics Secondary Special Ed (5-yr)

- Bachelor of Science (Mathematics Teaching) (housed in School of Education) with majors in:
  Elementary Education, Early Childhood, Deaf & Hard of Hearing, Special Education, Urban Education, and combinations of the above!

- Minors:
Broad Course Offerings (beyond Calculus)

- Proof writing through Discrete Mathematics
- Linear Algebra: Theory and Applications
- Multivariable Calculus
- Perspectives on the Development of Mathematics
- Introduction to Financial Mathematics
- Sophomore Seminar
- Methods of Teaching Mathematics
- Statistical Inference
- Number Theory
- Cryptography and Coding Theory
- Abstract Algebra
- Real Analysis
- Topics in Linear Algebra
- Probability
- Linear Programming
- Complex Analysis
- Differential Equations
- Mathematical Biology
- Numerical Analysis
- Computational Mathematics
- Geometry
- Design of Experiments
- Sampling and Nonparametric Statistics
- Regression Analysis
- Applied Multivariate Analysis
- Data Mining and Predictive Modeling
- Statistical Quality Control
- Operations Research
- Advanced Calculus
- Topology
- Partial Differential Equations
- Mathematical Logic
- Computational and Bayesian Statistics
- Mathematical Statistics
- Various special topics and seminar courses
- Guided study
Small Class Sizes, Individualized Attention

- Class sizes
  - Largest class sizes are 25 – 33 for introductory courses
  - Intermediate level class sizes are 15-28
  - Upper level class sizes 12-18
  - Guided study class sizes 1-9
- Undergraduate research—typically 1-3 students/faculty member

You will never be in a class this big!
Signature Experiences: Internships

- **Finance:**
  - CIT, Bessemer Trust, TD Bank, Wells Fargo, Signature Bank
- **Insurance & Actuarial:**
  - Prudential, Metlife, Miravast, Willis Towers, Chubb
- **Data Science**
  - Dow Jones, BioClinica, Novo Nordisk
- **Consulting**
  - Fulcrum Worldwide, Castle Consulting
- **Other: Technology, Law, Healthcare**

**Benefits:**
- Gain Experience
- Get feel for different industries
- Learn new skills, build confidence
Signature Experiences: Research Opportunities

- Gain experience with independent learning, a good career skill for workplace and grad. school
- Earn academic credit
- MUSE (Mentored Undergraduate Summer Experience) Program at TCNJ
- Research Experiences for Undergraduates (NSF funded national programs)

Recent REU Experiences
- Williams College
- Univ. of Berkeley
- Summer Inst. Biosciences
- Sloan Kettering
- Univ. of Michigan
- Harvard University
- U. Mass -- Amherst
- Franklin & Marshall C.
- Wake Forest Univ.
- Lafayette College
- James Madison Univ.
Math/Stat student participation

- Budapest semesters in mathematics and mathematics education
- Study abroad in England (Oxford), Spain, Australia
- TCNJ courses in UK, Galapagos Islands
- Student teaching in Italy, Thailand, Netherlands
New Facilities

- High-Performance Computing Lab
- 2018 Department Renovation, Student Lounge
- STEM building
- 3D-printer
Vibrant Student Culture

- Math & Stat Club
- Pi Mu Epsilon Honor Society
- Association for Women in Mathematics
- Putnam Exam
- Garden State Undergraduate Mathematics Conference

- Council of Student Teachers of Mathematics
- Actuarial Club
- Student/Faculty events
Student Achievement

National Recognition

- **Goldwater Scholarships:**
  2014, 2015, 2016, 2018
  260 national scholarships in science given each year for students intending to pursue graduate work

- National Science Foundation Graduate Fellowships:
  2017, 2018 (3 awarded)

- 2018 National Education Trust Scholarship in Math. Ed (NCTM)

- 2019, 2020 one of 3 winners of NJ Distinguished Clinical Intern award
Most frequent areas of non-teaching employment

- Insurance and actuarial firms
- Pharmaceutical companies
- Consulting firms
- Data Analytics
- IT security
- Government agencies
- Educational testing and research

Median Salary (2019 grads): $72,500
Recent employers

Admiral Insurance Group
AON/Hewitt
Buck Consultants
Chubb
CSAA Insurance Group
Deloitte
Department of Defense
Digital Realty
Educational Testing Service
Ernst & Young
Everest Reinsurance Company
Facebook
Harlem Children's Zone
HCL Technologies
InsiderScore
Johns Hopkins University
Lockheed Martin
Mathematica Policy Research
Mercer
Metlife
Munich Reinsurance
National Security Agency
NRG Energy
Omnicom Media Group
Prudential Financial
RiverRoad Waste Solutions
State of New Jersey
United States Navy
Willis Towers Watson
Worthington Biochemical Corp
Teaching

K-12 (a sampling)
- West Windsor High School, NJ
- Robbinsville High School, NJ
- Princeton High School, NJ
- Marlboro Middle School, NJ
- South Brunswick HS, NJ
- Hunterdon School District, NJ
- Barnegat High School, NJ
- Glen Rock School District, NJ
- Lawrence High School, NJ
- Burlington City HS, NJ
- Westfield High School, NJ
- East Brunswick School District, NJ
- Moorestown High School, NJ

K-12 Administration
- Superintendent, Lenape Regional High School District
- Superintendent, Burlington Township School District
- Numerous mathematics supervisors
Graduate Schools

Mathematics, Applied Mathematics, Statistics, and Math Education (a sampling):
- Boston U.
- Brown U.
- Colorado State U.
- Drexel U.
- Georgia Tech
- Harvard U.
- Indiana U.
- Lehigh U.
- McMaster U.
- NC State U.
- NJIT
- NYU
- Ohio State U.
- Penn State U.
- Rice U.
- RIT
- Rutgers U.
- SUNY Albany
- SUNY Stony Brook
- U. Arizona
- U. Conn
- U. Florida
- U. Mass
- U. Michigan
- U. Minnesota
- U. Nebraska
- UNC
- U. Penn
- Villanova U.

Other graduate programs:
- Biology
- Biostatistics
- Chemistry
- Epidemiology
- Financial Engineering
- Law
- Mathematical Finance
- Medicine
- Music
- Oceanography
- Physics
Alumni in Higher Education

- Harvard University (Mathematics, Senior Preceptor)
- King’s College
- Montclair State U. (Mathematics Education)
- Rowan U.
- Stockton U.
- Temple U.
- TCNJ
- Union College
- U. Hawaii, Manoa (Ocean and Resources Engineering)
- U. Massachusetts, Framingham
- Westchester U. (Mathematics Education)
We Have Fun!
Questions?

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