The pure definition of math is the study of quantity, structure, space, and change. The profession of mathematics encompasses much more than the basic problem-solving foundation students are taught before college. Students majoring in college math develop strong transferable skills in critical thinking, problem diagnosis, and computer skills that make math applicable to a wide variety of professions. Professionals may work in a wide scope of areas within mathematics including the government, market research, industry, computers, insurance, securities, banking, and education.

The 40-41 credit Bachelor of Arts in Mathematics or Applied Mathematics programs at William Paterson University are housed in the College of Science and Health. Both Applied Mathematics and Mathematics include 27-28 credits of required courses, 9-10 credits of electives, and special electives for those students who wish to pursue teacher certification. Required courses include Calculus, Linear Algebra, and Logic & Methods of Higher Mathematics.

WPUNJ Mathematics: http://www.wpunj.edu/cosh/departments/math/

WPUNJ Admissions: http://www.wpunj.edu/admissions/undergraduate/academic-programs/programs_detail.dot?id=125972

Interests & Skills:
* Numerical computation skills
* Problem solving skills
* Being able to work both in a team and independently
* Attention to detail
* Ability to analyze and interpret data
* Ability to organize information logically
* Efficiency
* Computer literacy

Work Environment:
People working within the field of mathematics have a number of options in terms of work environment. Mathematics professionals may choose to work in public schools, colleges and universities, government agencies, manufacturing firms, corporations, computer firms, financial institutions, insurance firms, banks, research firms, and brokerage firms. Some job titles may require further education or certification beyond a bachelor’s degree.

Possible job titles:
* Accountant
* External Auditor
* Air Traffic Controller
* Hydro Geologist
* Artificial Intelligence Programmer
* Information Scientist
* Biostatistician
* Market Research Analyst
* Computer Consultant
* Media Buyer
* Computer Sales Representative
* Network Programmer
* Computer-Aided Design Technician
* Physicist
* Cost Estimator/Analyst
* Quality Assurance Analyst
* Data Processing Manager
* Risk Analyst
* Econometrician
* Statistician
* Estate Planner
* Aerospace Engineer
* Financial Consultant
* Applied Science Technologist
* Software Engineer
* Banking/Credit/Investment Manager
* Investment Banker
* Compensation/Benefits Administrator
* Math Teacher
* Computer Facilities Manager
* Mortgage Broker
* Computer Scientist
* Operations Research Analyst
* Cartographer
* Purchasing/Control Agent
* Data Control Administrator
* Research Analyst
* Demographer
* Satellite Communications Specialist
* EDP Auditor
* Actuary
* Financial Auditor
* Applications Program
* Hydrologist
* Astronomer
* Inventory Control Specialist
* Commodity Manager
* Mathematician
* Computer Engineer
* Meteorologist
* Computer Programmer
* Numerical Analyst
* Consumer Loan/Credit Officer
* Production Manager
* Cryptographer
* Rate Analyst
* Database Manager
* Robotics Programmer
* Economist
* Systems Engineer

“Pure mathematics is, in its way, the poetry of logical ideas.”
- Albert Einstein
*Engineer
*Urban Planner
*Weight Analyst
*Securities Broker
*Systems Analyst
*Underwriter
*Transportation Planner
*Textbook Editor
*Environmental Technologist
*Technical Writer
*Tax Investigator
*Professor

WPUNJ Alumni:
Math Teacher (several alumni)  Various local districts in New Jersey
Senior Technology Scientist  Educational Testing Service
President  BP Electrical Contracting Company Inc.
Math/Computer Supervisor, 6-12  Edison Public Schools
Management Analyst  PM-TMAS
Computer Analyst  Dominion Data Processing
Financial Analyst  MCA Inc
Electrical Inspector  Kearfott Guidance & Navigation
Customer Service Representative  Datek Online
Underwriter  State Farm Insurance
Process Engineer  Howmet Corporation

Enhance Your Qualifications:
Successful students tend to seek out opportunities to enhance their qualifications through a variety of means. Within mathematics, some suggestions may include learning computer programs, gaining experience through internships or part-time jobs, joining a professional organization, joining or becoming a leader in a campus organization such as the Math Club, attending networking functions, considering a minor such as economics, statistics, or computer science, and looking into the possibility of teacher certification or graduate school.

Related Web Sites:
American Mathematical Society  www.ams.org
Association of Women in Math  www.awm-math.org
National Council of Teachers of Mathematics  www.nctm.org
Mathematical Association of America  www.maa.org
American Statistical Association  www.amstat.org
Society for Industrial and Applied Math  www.siam.org
Occupational Outlook  www.bls.gov/oco/
Industry Information  www.vault.com
Job Search and Salary information  www.rileyguide.com
Occupation Information  online.onetcenter.org

Other sources:
Please drop by the Career Development and Advisement Center to learn more about careers in mathematics. The career library carries career-specific books and counselors are available to answer any further questions you may have. Visiting the Mathematics Department on campus may also prove valuable in addressing questions.

Compliments of:
The Career Development and Gloria S. Williams Advisement Center
http://ww2.wpunj.edu/career-advisement
973-720-2281/2653/2559

UPDATED 7.18.13