

"The best way to prepare (to be a programmer) is to write programs, and to study great programs that people have written. In my case, I went to garbage cans at the Computer Science Center and fished out listings of their operating system." - Bill Gates



CAREERS IN....

Computer science is the practical study and creation of programs, databases, systems, software and hardware, networks, and other means designed to help an individual or organization operate at peak efficiency. The majority of job functions in most organizations are becoming more and more computer dependent, and the expertise of computer science professionals is relied upon to maintain systems and find new ways to make them user-friendly, accessible, and effective. Structures called 'computers' include anything from a small laptop one carries to class, to robots, to large systems that process huge amounts of data in a nuclear engineering plant. Microcomputers also exist in wristwatches, telephones, cameras, and more.

The 47 credit Bachelor of Science in Computer Science program at William Paterson University is housed in the College of Science and Health. The major credits are divided into four areas: basic core courses, advanced core courses, computer science electives and additional math/science. Core courses include Computer and Assembler Language, Data Structures, Computer Logic & Computer Organization, and Discrete Structures.

WPUNJ Computer Science:

<http://cs-cit.wpunj.edu/cs/>

WPUNJ Admissions:

http://www.wpunj.edu/admissions/undergraduate/academic-programs/programs_detail.dot?id=124259

Interests & Skills:

- *Problem-solving skills
- *Ability to multi-task
- *Mathematical skills
- *Understanding of programming language concepts and operating systems
- *Excellent analytical ability and abstract reasoning skills
- *Ability to organize and systemize large quantities of data
- *Being detail-oriented
- *Interest in designing systems
- *Ability to work both in a team and independently

Work Environment:

People working within the field of computer science have a number of options in terms of work environment. Computer Science professionals may choose to work in the areas of programming, systems development, network technology, the internet, education, and non-technical areas such as product support, technical writing, and sales and marketing. Work environments include computer vendors, software and computer companies, all large organizations with IT/helpdesk departments, consulting firms, research labs, government agencies, research institutions, online service providers, retail stores, and schools. Some job titles may require further education.

Possible job titles:

- * Accountant
- * Systems Analyst
- * Research Analyst
- * Systems Engineer
- * Compensation/Benefits Administrator
- * Risk & Insurance Specialist
- * Engineering Lab Technician
- * Computer Teacher
- * Risk Analyst
- * Environmental Technologist
- * Estate Planner
- * Robotics Programmer
- * Applications Programmer
- * Network Programmer
- * Information Specialist
- * Numerical Analyst
- * Cost Estimator/Analyst
- * Physicist
- * Computer Consultant
- * Cryptographer
- * Computer Engineer
- * Data Control Administrator
- * ISO 2000 Specialist
- * Market Research Analyst
- * Contract Administrator
- * Commodity Manager
- * Manufacturing Technician
- * Inventory Control Specialist
- * Operations Research Analyst
- * Aerospace Engineer
- * Investment Banker
- * Air Traffic Controller
- * Computer Facilities Manager
- * Technical Writer
- * External Auditor

- * Computer Installation & Test Specialist
- * Production Support Specialist
- * Computer Marketing/Sales Rep
- * Software Development Specialist
- * Computer Programmer
- * Media Buyer
- * Computer Scientist
- * Econometrician
- * Computer-Aided Design Technician
- * Investment Manager
- * Consumer Loan/Credit Officer
- * Statistician

- * Database Manager
- * Applied Science Technologist
- * Mathematician
- * Psychometrician
- * Demographer
- * Underwriter
- * Astronomer
- * Urban Planner
- * Software Support Specialist
- * Value Engineer
- * Mortgage Researcher
- * Rate Analyst

- * Satellite Communications Specialist
- * Transportation Planner
- * Treasury Management Specialist
- * Artificial Intelligence Programmer
- * Public Health Statistician
- * Software Engineer
- * Purchasing/Contract Agent
- * Meteorologist
- * Quality Assurance Analyst
- * Economist
- * Hydrologist

WPUNJ Alumni:

Support Technician
Team Leader
Program Analyst
Systems Coordinator
Data Review/Data Validation Technician
Technical Analyst
Unix Sysys. Administrator
Chief Information Officer
Associate Certification
Technical User Representative
Technical Staff Member
Web Programmer
User Support Technician
Computer Consultant
Validation Technician
Senior Network Engineer
Software Engineer
System Operator

CIT Group
 Application Delivery-Union Camp Corporation
 Prudential Insurance Company of America
 Memorial Same Day Surgery Centers
 Chemtech Consulting Group
 Oracle
 Federal Reserve
 Afrinvest Limited
 Ernst & Young
 United Parcel Service
 AT&T
 Viewpoint
 Schomburg Charter School
 Collective Technologies
 Pfizer, Inc.
 I.D.T.
 Telcordia Technologies
 Salomon Smith Barney

Enhance Your Qualifications:

Successful students tend to seek out opportunities to enhance their qualifications through a variety of means. Within computer science, some suggestions may include getting involved in special project or research initiatives outside class; joining or becoming a leader in career-related campus organizations such as the Computer Graphics Club, Computer Society, and/or Association for Computer Machinery; joining a professional computer science association; learning as many computer programs as possible; reading scientific journals; attending conferences; working in a computer lab; gaining practical experience through an internship/practicum/job shadowing; looking into the possibility of graduate school; and attending networking functions.

Related Web Sites:

Internet Society	www.isoc.org
Association for Women in Computing	www.awc-hq.org
Independent Computer Consultants Association	www.icca.org
Computing Research Association	cra.org
Industry news and information	computerworld.com/careertopics/careers
Occupational Outlook	www.bls.gov/oco/
Occupation Information	online.onetcenter.org
Industry Information	www.vault.com
Job Search and Salary information	www.rileyguide.com

Other sources:

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

Compliments of:

The Career Development and Gloria S. Williams Advisement Center
<http://www.wpunj.edu/career-advisement>
 973-720-2281/2653/2559