

*Computer Science (CS) and
Information Technology (IT)
Programs*

**Department of Computer Science
William Paterson University**

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Department of Computer Science (Hennings Science Hall East)



Department Highlights



- ❑ CS program is accredited by ABET (Accreditation Board for Engineering & Technology)
- ❑ CS and IT Curriculum conform to ABET & ACM/IEEE national standard
- ❑ Small class size with direct faculty attention
- ❑ Computing facilities and research labs: state-of-the-art and fully networked computing systems
- ❑ Undergraduate research opportunities
- ❑ Lab assistants program/tutoring program/MaCS scholars program
- ❑ Work/study and internship opportunities
- ❑ Department/Faculty/Student profiles

CS and IT Degrees

❑ **CS**

- ❑ Focus on the science, math, and engineering of computers and associated technologies (Synthesis & Analysis)

❑ **IT**

- ❑ Focus on computers, networking, security, and associated technologies (Deployment & Application)

- ❑ **CS Minor (20 credits)**

- ❑ **CIS Minor (18/19 credits)**

Curriculum: CS and IT Degree Requirements

- ❑ **Prepare students for a professional career or graduate study**
- ❑ **Computer Science**
 - ❑ https://academiccatalog.wpunj.edu/preview_program.php?catoid=18&poid=3568
- ❑ **Information Technology**
 - ❑ https://academiccatalog.wpunj.edu/preview_program.php?catoid=18&poid=3567

Small Class Size

- ❑ Emphasis on faculty-student interactions
- ❑ Most classes are capped at 27 (with lab computers) or 30 (maximum)
- ❑ Upper-level classes average around 15 students
- ❑ Almost all major classes are taught by full time faculty, a few major classes are taught by adjuncts with expertise in the specific topic

Computing facilities

- ❑ Three classroom labs, Cisco Networking Lab, one open lab, and a Computer Science Research Center
- ❑ Three teaching computer labs in Atrium and many other computer labs on campus (e.g., Math Dept., Cheng Library) for general access
- ❑ Department owns and operates several Dell PowerEdge servers as virtual machine server hosted various operating systems (e.g., Ubuntu, Windows, Kali Linux), database (MySQL) server, as well as web server
- ❑ Lab computers are replaced every 3 years
- ❑ Extensive variety of software, IDE's, compilers, VM's...
- ❑ Fully networked (wired and wireless) environment

Research Labs

- ❑ **Cybersecurity Research Lab (CRL)**
 - ❑ Coordinator: Dr. Kiho Lim
 - ❑ Website: <https://cs-cit.wpunj.edu/cs/Research/CRL/>

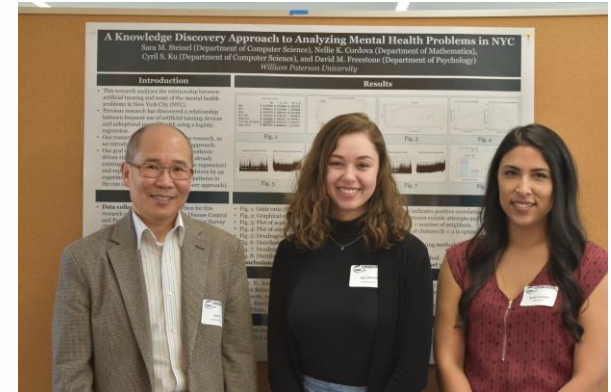
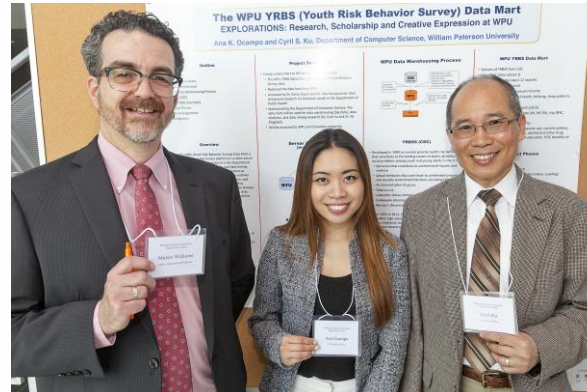
- ❑ **Data Science Research Lab (DSRL)**
 - ❑ Coordinator: Dr. Cyril S. Ku
 - ❑ Website: <https://cs-cit.wpunj.edu/cs/Research/DSRL/>

- ❑ **Digital Signal Processing Lab (DSPL)**
 - ❑ Coordinators: Dr. Bogong Su and Dr. Weihua (Daisy) Liu
 - ❑ Website: <https://cs-cit.wpunj.edu/cs/Research/DSPRL/>

Faculty-Student Research

- ❑ **Many students involved in research with faculty members**
 - ❑ CfR (Center for Research) and Student Worker Funds in College of Science & Health
 - ❑ External grants from NSF
 - ❑ Independent Study, Honors College thesis, etc.
- ❑ **Students presented their research papers/posters with professors in conferences, recent examples:**
 - ❑ Explorations at WPU
 - ❑ IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference
 - ❑ Annual Meeting of the Eastern Psychological Association
 - ❑ Sigma Xi Annual Conference at St. Joseph University

Student Research Presentations



Work/Study and Internship Opportunities

- ❑ Many of CS and IT majors work part-time with the Instruction and Research Technology (IRT) as Technology Assistants
- ❑ Our department offers lab assistant positions to manage and administer our servers
- ❑ Students with excellent academic records and strong communication skills are hired by our department as tutors
- ❑ Students who perform academically relevant internship can get course credits through CS 3950 (for CIT majors) or CS 4950 (for CS majors)

MaCS (Math & Computer Science) Scholars Program

- ❑ A five-year \$1 million S-STEM grant from NSF (National Science Foundation), started in Spring 2021
- ❑ **Director and Co-Director for Math:**
 - ❑ Dr. Jyoti Champanerkar and Dr. Paul von Dohlen
- ❑ **Co-Directors for CS and IT:**
 - ❑ Dr. Cyril S. Ku and Dr. Weihua (Daisy) Liu
- ❑ Supporting low-income and academically talented Math, CS, and IT students with scholarships and culturally responsive mentoring
- ❑ Improve retention and graduation rates
- ❑ Perform research on the relationship between retention for low-income students and strength-based, culturally responsive mentoring
- ❑ Program information:
 - ❑ <https://www.wpunj.edu/cosh/mac-scholars-program/>

Student Population and Organizations

❑ **Student population:**

- ❑ **CS Major: 237, CS Minor: 20 (Fall 2022)**
- ❑ **IT Major: 158, CIS Minor: 19 (Fall 2022)**

- ❑ Department is a member of NCWIT (National Center for Women & Information Technology) academic alliance
- ❑ IEEE (Institute of Electrical and Electronics Engineers) Computer Society Student Chapter
- ❑ UPE National Honor Society (chartered in May 1988)

Full-Time Faculty

- ❑ **Abdelrahman Elleithy**, Ph.D., University of Bridgeport
- ❑ **Erh-Wen Hu**, Ph.D., Polytechnic Institute of New York
- ❑ **Cyril S. Ku**, Ph.D., Northwestern University
- ❑ **Kiho Lim**, Ph.D., University of Kentucky
- ❑ **Weihua (Daisy) Liu**, Ph.D., University of Kentucky
- ❑ **John Najarian**, Ph.D., City University of New York
- ❑ **Gilbert Ndjatou**, Ph.D., City University of New York
- ❑ **Bogong Su**, Ph.D., Tsinghua University, China

- ❑ <https://cs-cit.wpunj.edu/cs/faculty/>

Summary

- ❑ Affordable education
- ❑ Quality programs
- ❑ Stimulating learning environment
- ❑ Caring faculty members
- ❑ Many levels of support systems to help you succeed
- ❑ Excellent career opportunities:
 - ❑ <https://money.usnews.com/money/careers/slideshows/the-25-best-jobs>

More Information?

- ❑ **For more information:**
 - ❑ Call CS Department at (973) 720-2649
 - ❑ E-mail the Department Chair, Dr. John Najarian at NajarianJ@wpunj.edu
- ❑ **Visit Computer Science website:**
 - ❑ <https://cs-cit.wpunj.edu>