

**Department of Computer Science
College of Science and Health
William Paterson University**

Student Retention Plan 2012-2013

Retention is a complicated issue and there are many factors involved. One of the factors that we can do as a department is to give our students a good experience in their college career. Many activities were carried out during past academic years to give our students good experiences in learning, research, seminars, student activities, etc. Listed below are the on-going activities and initiatives conducted by the Computer Science Department to enrich the college experience of our students as part of our retention effort.

- Annual welcoming party for new CS students – We hold such welcoming function every fall semester where new CS students meet with all the CS faculty members, learn about the department, and acquaint with their fellow students.
- Department website is constantly being updated with the latest information. All brochures and forms (e.g., Curriculum Control Sheet, CS 2150 Proficiency Exam Application Form, Microsoft DreamSpark Premium Application Form, Internship Application Form, etc.) are all available on the web. All important information for our students is available on our department website.
- Communication – The department chairperson uses the Student Query Pad feature in WPCconnect to connect with all the CS majors and minors for important departmental news and job/internship opportunities whenever they are available.
- Four different types of seminar are conducted throughout the academic year to enrich the intellectual pursuit of the CS students. The four types of seminar are:
 - Computer Science Colloquium
 - ACM/Computer Science Society Lecture Series
 - Special Seminar
 - Computer Science Student Seminar Series – this is a seminar conducted by the students as a result of faculty/student research, independent study, or internship experience
- Tutoring program – Every semester we hire about 4 or 5 excellent junior or senior students as tutors/mentors for many courses, especially the 2000 and 3000 level courses.
- Lab assistance program – We have about 3 or 4 students each semester who joined the Department Lab Director to maintain all the computing equipment in our department. They also conduct certain networking experience in our research labs.
- Student research – Students are encouraged to participate in faculty/student research in several major research groups in the CS Department: digital signal processing research, network administration and virtualization, etc.
- Student club activities – We have the UPE Computer Science Honor Society, the ACM Student Chapter, and the SGA Computer Science Society. The membership is to open to all CS majors except UPE membership which is selected by the honor society. Student officers of these organizations conduct activities include lecture series and field trips. UPE has an induction and award ceremony every year.

- Academic advisor – We tried to have an advisor stay with the students for over their entire academic career years at WPU.
- Student engagement – Faculty are very involved in encouraging students to apply for various types of awards/scholarships (e.g., Student Workers Fund, Student Undergraduate Research Program, CfR Summer Research Grant), participate in faculty research, co-author papers with faculty.
- Early alert system – Faculty are encouraged to use the university online early alert system to monitor students' academic progression.
- Scheduling initiative – Schedule wider expanse of hours (e.g., 8 AM, evening, Friday classes) to address particular student needs. The cycling of courses for the next five years is posted and available on the department website.
- Curriculum and course improvement – As part of the ABET/CAC accreditation effort, the CS Department has several initiatives in place:
 - New course development – more real-world oriented experience and practical orientation perspectives (e.g., CS 3990 Net-Centric Computing, Computer and Network Security) courses.
 - Course coordination – multi-section courses are coordinated to have common coverage and common exam. Bridge topics between courses (e.g., introduce UML in CS 2400 to prepare students for the larger software project design in CS 3500).
 - Course binders – each major course has a binder with syllabus, homework, quizzes, exams, projects, instructor assessment that the Department Curriculum Committee scrutinizes (part of the ABET accreditation effort).
- Assessment – To assess student achievement and satisfaction, five different types of surveys are conducted and the results are evaluated for retention and for improvement of many aspects in our program:
 - Student Course Evaluation – This is the standard form of course/teacher evaluation and the results are compiled by IR&A (Institutional Research and Assessment).
 - Pre- and Post-Semester Survey – This is course based (qualitative and subjective) survey conducted by our faculty (course level). The data will be used quantitatively and objectively to assess our program outcomes (program level). The results are compiled and accessible by faculty members in our secured departmental ABET accreditation website.
 - Senior Exit Survey – This survey is given to our graduating seniors to ask about their experience in our program.
 - Alumni One-Year Survey – This survey is conducted by IR&A for alumni one year after graduation.