

MSQA and MSSyE News

The Newsletter of the Quality Assurance and Systems Engineering Graduate Programs at
Southern Polytechnic State University

Fall 2003

Quality Assurance Program – <http://www.msqa.edu>
Systems Engineering Program – <http://www.spsu.edu/mssye>

Key Dates:

Below are key dates for Fall Semester

Sept 1	Labor Day Holiday
Sept 12	Spring Graduation Petitions Due in Dept. Office
Sept 20	Fall Semester QA 7504 Presentations
Oct 9	Last day to withdraw with a "W"
Nov 2-25	Advanced Registration
Nov 26-30	Thanksgiving Holiday – no classes
Dec 1	New Graduate Student Orientation
Dec 4	Advanced Registration Fee Deadline
Dec 4	Last Day of Classes
Dec 6-10	Final Exams
Dec 10-Jan 12	Standard Registration
Dec 13	Fall Commencement
Jan 7	First day of classes - Spring Semester
Jan 12	Last day to pay fees for Spring Semester

Got A Question?

If you need information or assistance, please contact:

Dr Richard Monroe,
Systems Engineering and MSQA Program Coordinator
770-528-7245
rmonroe@spsu.edu
Office: M 120

QA 7604 or QA 7504

Whether you are pursuing the Engineering & Technology or Quality Systems concentrations within the Quality Assurance program, you now have a choice of which project course you take: QA 7604 or QA 7504.

QA 7504 Research Methods is geared to distance learning students. The course takes two semesters to complete and is offered Fall and Spring semesters.

QA7604 Project is taught over the course of one semester, and about 50% of the course is held on campus.

General Stats:

	QA 7504	QA 7604
Course Title	Research in Quality	Applications in Quality
Credit Hours	4	4
Semesters Required	2	1
Location	2 weekends on-campus	50% on-campus
Next Offering	Spring 2004	Spring 2004

Once you have completed 20 semester hours, please contact Richard Monroe to discuss your project. No one is permitted to register for these courses until they have spoken with Richard regarding the ground rules.

New!

Systems Engineering Graduate Program

Launched in Fall 2003, the Systems Engineering Program at Southern Polytechnic University is the very first of its kind in the state of Georgia. The objective of the graduate program is to help professionals enhance their development of systems thinking as well as their ability to apply system analysis techniques in a real-world environment.

According to Dr Monroe, Systems Engineering Graduate Program Coordinator, "Systems Engineering is an interdisciplinary field. Systems engineers are charged with the responsibility for coordination and integration of huge, complex projects. Computer systems are one example which most people may think of first but major construction projects – buildings, dams, etc; transportation systems; aircraft and aerospace and other defense systems are also examples of large complex systems that require a holistic systems approach. From those examples you can also see how civil, mechanical, aerospace and industrial engineers become key players in the systems engineering field."

The program offers three levels of completion:

- 1. A Graduate Certificate in Systems Engineering**
This initial series of four courses gives a conceptual understanding of systems engineering as a process. It is geared to middle and senior management who have oversight responsibilities in the systems engineering arena.
- 2. An Advanced Graduate Certificate in Systems Engineering**
These next four courses are designed to bring students with work responsibilities for managing and maintaining standards in systems engineering activity to a basic level of competence, using current standards and practices in the systems engineering process.
- 3. A Master of Science Degree in Systems Engineering**
The final four courses to obtain the MS include systems reliability and a System Engineering Workshop along with two approved electives.

For more information visit <http://www.spsu.edu/mssye>.

Registration for QA 7504

Students taking the research methods course, QA 7504 need to be aware of the registration process. The course is offered fall and spring semesters. Students must register for the course along with their other courses and attend a weekend workshop during the first semester in which they are enrolled. At the end of the first semester the student is issued a grade of IP. During the following fall or spring semester the student attends a second weekend workshop, however they do not actually enroll in the course. At the end of the second semester, pending successful completion of the project, the student receives his or her grade. It is a four-credit course that you register for only once. Spring semester enrollees finish the following fall. Fall semester enrollees finish the following spring. This spring's workshop is scheduled for March 27th in the SPSU Student Center

Research in Quality – Fall 2003

QA 7504, Research in Quality, met on Sept 20th. The day was filled with interesting presentations of student's research. Below is a description of a few of the students' projects.

Paulette Denault-Bryce completed her QA 7504 project on the topic of "Procedure Slimming-a Six Sigma Initiative". Her project demonstrated how savings and other benefits can be derived by tackling an area that is often neglected by many organizations – documentation and procedures. By removing or deactivating unneeded procedures, work instructions and obsolete procedures, Paulette was able to save an estimated \$67,000 for her organization.

Brian Tenney used his time well to combine his project with his responsibilities during active military duty by addressing the "Demobilization process improvement: Fort Bragg, North Carolina". His project resulted in a dramatic reduction in the total number of steps required to process personnel as they are demobilized from the Middle East.

Adel Gomez researched the role of the Quality Assurance department in achieving and maintaining compliance to the new FDA rule for Electronic Records and Electronic Signatures, which affects the pharmaceutical manufacturing industry. His project yielded a generalized approach for compliance to this Rule and identified specific areas in which Quality Assurance involvement was needed.

Graduation Petitions

In the semester prior to the one in which you graduate, you must file a graduation petition. If you are planning on graduating at the end of spring semester, this petition must be filed early in fall semester. A \$25 fee is assessed when you turn in your graduation petition.

Please check with Richard Monroe regarding the completion of the necessary paperwork (www.msqa.edu/forms.htm). Petitions for Spring Semester must be filed by August 30.

Introducing...

Dr Mary McShane Vaughn

Dr. Mary McShane Vaughn has a Ph.D. in Industrial and Systems Engineering and a Master of Science degree in Statistics from Georgia Tech. She received her undergraduate Industrial Engineering degree from General Motors Institute.

Her main research interests are Robust Experimental Design and Pricing Optimization Models. Prior to teaching at Southern Polytechnic, Dr. McShane Vaughn was employed as a quality engineer and statistician at General Motors, Kendall Healthcare, Consumers Union, Delta Air Lines and Manugistics. At Manugistics, Dr. McShane Vaughn was instrumental in developing a new Market Response Model Methodology used in price optimization (patent pending). She has consulted internationally, developing bid and promotion pricing optimization models for companies in Japan, Australia and the UK.

Dr McShane Vaughn taught QA 6612 Spring Semester 2003, Six Sigma Black Belt Concepts Summer 2003, and is teaching QA 6610 and QA 6611 this semester.

Next Semester she will be teaching QA 6611 and QA 6612.

Dr Ruston Hunt

Dr. Hunt received his Ph.D. in Mechanical and Industrial Engineering from the University of Illinois in 1981. He also holds an MSIE and BSIE from the University of Illinois. His graduate work focused on the development of general problem solving skills via computer-based training. At SPSU Dr. Hunt teaches graduate courses in Quality Assurance and Systems Engineering.

Dr. Hunt was an Assistant Professor in Industrial and Systems Engineering at Georgia Tech in 1981 and 1982. He left Georgia Tech to devote full time to Search Technology, Inc., a contract research firm that he co-founded while in graduate school. While at Search Technology for over 20 years, Dr. Hunt participated in applied research and development in the areas of Human Factors and Man-Machine Systems. Customers included NASA, Naval Air Warfare Center, Army Research Institute, Air Force Behavioral Technology Laboratory, Electrical Power Research Institute and many commercial firms both large and small.

Dr. Hunt's areas of interest include human-centered system design and evaluation. Since 1985 he has also served as an expert witness on product liability cases, primarily involving issues of product warnings.

New QA Course Offerings for Spring 2003

QA 6722 Human Factors in Quality Assurance

This Spring, Dr. Russ Hunt will be teaching QA 6722 – Human Factors in Quality Assurance. This course will be a comprehensive survey of topics involving the application of knowledge about human physiological and psychological strengths and weaknesses in the design and evaluation of engineered systems. The principles of human-centered design will be discussed as they apply to a wide variety of applications from consumer products to manufacturing to weapons systems. Graduate students in any engineering curriculum will find this material applicable.

QA 6660 – Six Sigma Black Belt Concepts

An ASQ Certified Six Sigma Black Belt, Dr Helen Bush, will be teaching the Six Sigma Black Belt Concepts course this spring. This course was first offered on campus Summer 2003 as a special topics course. QA 6660 will be offered on-line Spring semester 2004.

The course covers all major topics within the Six Sigma Black Belt body of knowledge and provides a focused preparation for taking the ASQ certification exam.

Pre-requisites for this course include QA 6602, QA 6610, QA 6611, QA 6612, and QA 6650.

Course Offerings Spring 2004

Quality Assurance

- QA 6600 Methods of Analysis - campus
 - QA 6602 Total Quality – internet
 - QA 6611 Advanced Statistical Methods - internet
 - QA 6612 Advanced Experimental Design – campus
 - QA 6660 Six Sigma Black Belt Concepts – internet
 - QA 6722 Human Factors in Quality Assurance – campus
 - QA 7504 Research in Quality –Internet
 - QA 7604 Applications in Quality - campus
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Systems Engineering

- SYE 6605 Introduction to Systems Engineering – hybrid
 - SYE 6610 Managing the Technical Effort involved with Systems Engineering - campus
 - SYE 6615 System Analysis and System Design - campus
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