Graduate Programs - I

List of Programs

Program areas are in italics; concentrations are indented below the programs.

THE CHARLES V. SCHAEFER, JR. SCHOOL OF ENGINEERING

Chemical, Biomedical and Materials Engineering Department

- Biomedical Engineering, M.Eng., Ph.D.
- Chemical Engineering, M.Eng., CH.E., Ph.D.
  - Chemical Engineering
  - Polymer Engineering
- Materials Engineering, M.Eng., Ph.D.
  - Microelectronics and Photonics Science and Technology (Interdisciplinary)

Civil, Environmental and Ocean Engineering Department

- Civil Engineering, M.Eng.*, C.E.*, Ph.D.*****
  - Geotechnical/Geoenvironmental Engineering
  - Structural Engineering
  - Water Resources Engineering
- Construction Management, M.S. (Interdisciplinary)*
- Environmental Engineering, M.Eng.*, Ph.D.*****
  - Environmental Process
  - Groundwater and Soil Pollution Control
  - Inland and Coastal Environmental Hydrodynamics
- Maritime Systems, M.S.*
  - Environmental Engineering
  - Structural Engineering
  - Management
  - Marine Transportation
- Ocean Engineering, M.Eng.*, Ph.D.*****
  - Coastal Engineering
  - Hydrodynamics
  - Naval Architecture
  - Oceanography

Electrical and Computer Engineering Department

- Computer Engineering, M.Eng., CP.E., Ph.D.
  - Computer Systems
  - Data Communications and Networks
  - Digital Systems Design
  - Image Processing and Multimedia
  - Software Engineering
- Electrical Engineering, M.Eng., E.E., Ph.D.
  - Computer Architecture and Digital System Design
  - Microelectronics and Photonics Science and Technology (Interdisciplinary)
  - Signal Processing for Communications
  - Telecommunications Engineering
  - Wireless Communications
• *Networked Information Systems, M.Eng.*
  — Data Communication Networks
  — Information Networks
  — Multimedia Information Systems
  — Multimedia Technologies
  — Network Systems Technologies
  — Networked Information Systems: Business Practices
  — Business Practices
  — Secure Network Systems

**Mechanical Engineering Department**

• *Mechanical Engineering, M.Eng.**, M.E.**, Ph.D.**
  — Manufacturing Systems
  — Product Design
  — Thermal Engineering
• *Integrated Product Development, M.Eng.**
  — Armament Engineering
  — Electrical and Computer Engineering
  — Manufacturing Technologies
  — Systems Reliability and Design
• *Product Architecture and Engineering, M.Eng.**

**Systems Engineering and Engineering Management**

• *Engineering Management, M.Eng., Ph.D.
  • Systems Engineering, M.Eng., Ph.D.

THE ARTHUR E. IMPERATORE SCHOOL OF SCIENCES AND ARTS

**Chemistry and Chemical Biology Department**

• *Chemical Biology, M.S.
  — Bioinformatics
• *Chemistry, M.S., Ph.D.
  — Analytical Chemistry
  — Chemical Biology
  — Organic Chemistry
  — Physical Chemistry
  — Polymer Chemistry

**Computer Science Department**

• *Computer Science, M.S.***, Ph.D.****
  — CyberSecurity
  — Quantitative Software Engineering
• *Quantitative Software Engineering, M.S.*

**Humanities and Social Sciences Department**

• Professional Communications
• Cognitive Science

**Mathematical Sciences Department**
• Applied Mathematics, M.S.
• Mathematics, M.S., Ph.D.
• Stochastic Systems Analysis and Optimization, M.S.
• Financial Engineering, M.S.

Physics and Engineering Physics Department

• Engineering Physics, M.Eng.
  — Engineering Physics
  — Engineering Physics (Applied Optics)
  — Engineering Physics (Solid State)
  — Microelectronics and Photonics Science and Technology (Interdisciplinary)
• Physics, M.S., Ph.D.
  — Physics

THE WESLEY J. HOWE SCHOOL OF TECHNOLOGY MANAGEMENT

• Executive Master of Business Administration in Technology Management, E.M.B.A. in TM
• Executive Master of Technology Management, E.M.T.M.
• Master of Business Administration in Technology Management, M.B.A. in TM
  — Engineering Management
  — Financial Engineering
  — Global Technology Management
  — Information Management
  — IT in Financial Services Industry
  — IT in Pharmaceutical Industry
  — Project Management
  — Telecommunications Management

• Management, M.S.
  — General Management
  — Global Innovation Management
  — Human Resource Management
  — Information Management (also Ph.D.)
  — Project Management
  — Technology Management (also Ph.D.)

• Information Systems, M.S.
  — Computer Science (Interdisciplinary)
  — E-Commerce
  — Entrepreneurial IT
  — Financial Services
  — Global Innovation Management
  — Human Resource Management
  — Information Management (also Ph.D.)
  — Information Security
  — Integrated Information Architecture (Interdisciplinary)
  — Pharmaceuticals
  — Project Management
  — Quantitative Software Engineering (Interdisciplinary)
  — Systems Engineering (Interdisciplinary)
  — Telecommunications Management

• Telecommunications Management, M.S.
  — Business Track
  — Global Innovation Management
  — Management of Wireless Networks
  — On-line Security, Technology and Business
  — Project Management
INTERDISCIPLINARY

Interdisciplinary, M.S.**, M.Eng.**, Ph.D.**

All Interdisciplinary students select two Program Areas.

* GRE is only required for international students and those applying for a fellowship or assistantship.
** GRE is recommended but not required.
*** GRE is required for international students, those applying for a fellowship or assistantship and those without an academic Computer Science background.
**** GMAT or GRE is required for Ph.D. students, international students and those applying for a fellowship or assistantship.
***** GRE is required.

Graduate Certificate Programs

All credits earned toward Graduate Certificates may be applied toward a Master's degree.

Most Graduate Certificates are four graduate courses.

THE CHARLES V. SCHAEFER, JR. SCHOOL OF ENGINEERING

- **Chemical, Biomedical and Materials Engineering Department**
  Customized programs are available.
  - Biomedical Engineering
  - Microdevices and Microsystems (Interdisciplinary)
  - Microelectronics (Interdisciplinary)
  - Pharmaceutical Manufacturing Practices (Interdisciplinary)
  - Photonics (Interdisciplinary)

- **Civil, Environmental and Ocean Engineering Department**
  - Atmosphere and Environmental Science and Engineering
  - Construction Accounting/Estimating
  - Construction Engineering
  - Construction Law/Disputes
  - Construction/Quality Management
  - Environmental Compatibility in Engineering
  - Environmental Hydrology
  - Environmental Process
  - Geotechnical Engineering
  - Hydraulics
  - Inland and Coastal Environmental Hydrodynamics
  - Soil and Groundwater Pollution Control
  - Structural Engineering
  - Surface Water Hydrology
  - Water Resources Engineering
  - Water Quality Control

- **Electrical and Computer Engineering Department**
  - Computer and Communications Security
  - Digital Signal Processing
  - Digital Systems and VLSI Design
  - Information Networks
  - Information Systems Security
— Microdevices and Microsystems (Interdisciplinary)
— Microelectronics (Interdisciplinary)
— Multimedia Technologies
— Networked Information Systems
— Photonics (Interdisciplinary)
— Satellite Communications Engineering (Interdisciplinary)
— Secure Network Systems Design
— Wireless Communications
— Wireless Computing

• Mechanical Engineering Department
  — Advanced Manufacturing
  — Air Pollution Technology
  — Computational Fluid Mechanics and Heat Transfer
  — Design and Production Management
  — Ordnance Engineering
  — Pharmaceutical Manufacturing Practices (Interdisciplinary)
  — Power Generation
  — Product Architecture and Engineering
  — Robotics and Control
  — Structural Analysis and Design
  — Vibration and Noise Control

• Systems Engineering and Engineering Management Department
  — Agile Systems Engineering and Design
  — Economic Systems
  — Engineering Management
  — Systems and Supportability Engineering
  — Systems Design and Operational Effectiveness
  — Systems Engineering and Architecting
  — Telecommunications Systems Engineering
  — Value Chain Enterprise Systems

THE ARTHUR E. IMPERATORE SCHOOL OF SCIENCES AND ARTS

• Chemistry and Chemical Biology Department
  — Analytical Chemistry
  — Bioinformatics
  — Biomedical Chemistry
  — Chemical Biology
  — Chemical Physiology
  — Laboratory Methods in Chemical Biology
  — Polymer Chemistry

• Computer Science Department
  — Computer Architecture and Software Design
  — Computer Graphics
  — CyberSecurity
  — Database Systems
  — Distributed Systems
  — Elements of Computer Science ♦
  — Quantitative Software Engineering
  — Software Design
  — Theoretical Computer Science

• Humanities and Social Sciences Department
  — Cognitive Science
  — Professional Communications

• Mathematical Sciences Department
  — Applied Statistics
THE WESLEY J. HOWE SCHOOL OF TECHNOLOGY MANAGEMENT

— E-Commerce
— Engineering Management
— Entrepreneurial IT
— Global Innovation Management
— Human Resource Management
— Information Management
— Information Security
— IT for Financial Services Industry
— IT for Pharmaceutical Industry
— Management of Wireless Networks
— Project Management
— Technology Management
— Telecommunications Management

‡ No credit is given toward the Master of Science in Computer Science for CS 550, CS 580, CS 590 and Ma 502.

Corporate Site Graduate Programs

ADP – Parsippany, NJ (99 Jefferson Rd.)

• M.S. in Information Systems (MSIS)

BAE Systems, CNI – Wayne, NJ

• Electrical Engineering (M.Eng. in Electrical Engineering)
• Systems Engineering (Graduate Certificate)

Boeing – Online for all Boeing locations

• Project Management* (M.S. in Management)

Bristol-Myers Squibb – Skillman, NJ (and Merrill Lynch employees)

• M.S. in Information Systems* (MSIS)

Citigroup – New York, NY
• M.S. in Information Systems* (MSIS)

Eric S. Smith Middle School – Ramsey, NJ
• M.S. in Information Systems (MSIS)

Ethicon – Somerville, NJ (and Johnson & Johnson Employees)
• Engineering Management* (Graduate Certificate)

Fort Monmouth – Eatontown, NJ
• Computer Engineering* (M.Eng. in Computer Engineering)
• Courses in Computer Science and CyberSecurity*
• Electrical Engineering* (M.Eng. in Electrical Engineering)
• Systems Engineering* (Graduate Certificate/M. Eng. in Systems Engineering)

General Dynamics – Florham Park, NJ
• Interdisciplinary program offered by Dept. of Physics & Engineering Physics (Graduate Certificate/M.S./M.E.)

Hanover Marriott – Whippany, NJ
• General Management (Graduate Certificate)
• M.S. in Information Systems (MSIS)
• Project Management (Graduate Certificate)

Headquarters Plaza Hotel – Morristown, NJ
• Executive Master of Technology Management (EMTM)

Holiday Inn – Tinton Falls, NJ
• Executive Master of Technology Management (EMTM)

Inn at Woodbridge – Iselin, NJ
• Executive Master of Business Administration in Technology Management (EMBA-TM)

ITT – Clifton, NJ
• Computer Science* (M.S. in Computer Science)
• Electrical Engineering* (M.Eng. in Electrical Engineering)
• Project Management* (Graduate Certificate)
• Systems Engineering* (Graduate Certificate)

Johnson & Johnson – New Brunswick, NJ
• M.S. in Information Systems* (MSIS)
Lockheed Martin – Moorestown, NJ

- Computer Science* (M.S. in Computer Science)
- CyberSecurity* (Graduate Certificate)
- Information Management* (Graduate Certificate/M.S. in Management)
- Project Management* (Graduate Certificate/M.S. in Management)
- Quantitative Software Engineering* (Graduate Certificate/M.S. in Quantitative Software Engineering)
- Software Design* (Graduate Certificate)
- Systems Engineering* (Graduate Certificate/M.Eng. in Systems Engineering)

Merck – Rahway, NJ (Rahway employees only)

- M.S. in Information Systems* (MSIS)

Merck – Whitehouse Station, NJ (White House Station employees only)

- M.S. in Information Systems* (MSIS)

Merck – Rahway, NJ (transmitted to Whitehouse Station, NJ and West Point, PA)

- M.S. in Information Systems* (MSIS)

Naval Air Engineering Station – Lakehurst, NJ

- Systems Engineering (Graduate Certificate/M.Eng./Ph.D. in Systems Engineering)

Pfizer – New York, NY

- M.S. in Information Systems* (MSIS)

Pfizer Global Manufacturing – Brooklyn, NY

- Project Management* (Graduate Certificate)

Picatinny Arsenal – Dover, NJ

- Integrated Product Development (M.Eng. in IPD)
- Mechanical Engineering (Graduate Certificate/M.Eng. in Mechanical Engineering)
- Quantitative Software Engineering (Graduate Certificate)
- Courses in Computer Engineering, Electrical Engineering and Systems Engineering

Schering Plough – Kenilworth, NJ

- Pharmaceutical Manufacturing Practices* (Graduate Certificate)

SETP – Columbia, MD

- Systems Engineering* (Graduate Certificate/M.Eng. in Systems Engineering)
UBS/PaineWebber – Weehawken, NJ

- M.S. in Information Systems* (MSIS)

Unilever Bestfoods North America – Englewood Cliffs, NJ

- M.S. in Information Systems (MSIS)

Verizon – Online via the Web and Web Conferencing for all Verizon locations

- Engineering Management* (Master of Business Administration in Technology Management (MBA-TM))
- Networked Information Systems* (M.Eng. in Networked Information Systems)
- Project Management* (M.S. in Management)
- Project Management* (Master of Business Administration in Technology Management (MBA-TM))
- Telecommunications Management* (Master of Business Administration in Technology Management (MBA-TM))
- Telecommunications Management* (Graduate Certificate/M.S. in Telecommunications Management)

Verizon Wireless – Bedminster, NJ

- Telecommunications Management* (M.S. in Telecommunications Management)

Verizon Wireless – Orangeburg, NY

- M.S. in Information Systems* (MSIS)

Verizon Wireless – Warren, NJ

- M.S. in Information Systems* (MSIS)

Program without asterisk: OPEN TO ALL STEVENS STUDENTS

* Program at this site is open only to employees of this company.