R·I·T

OFFICE OF COOPERATIVE EDUCATION AND CAREER SERVICES

http://www.rit.edu/recruit

IMAGING SCIENCE

http://www.cis.rit.edu

PROGRAM OVERVIEW FOR EMPLOYERS

The discipline of imaging science focuses on the underlying principles of the capture, processing, transmission, display and perception of images of some object or physical phenomenon. These images may be obtained using electromagnetic or mechanical energy. A key focus of the curriculum at the Chester F. Carlson Center for Imaging Science is on imaging systems, emphasizing not only the understanding of the entire system, but also the comprehensive interactions of the system components. Graduates are actively recruited in areas such as imaging system design/development/testing, electro-optical imaging, image processing and analysis, imaging research and development, color and tone calibration and reproduction, optics, defense and intelligence research, environmental research, astronomy, medical diagnostics research and applications, and electronic imaging.

Degree(s) Awarded

Bachelor of Science
Master of Science and PhD (also available).

Enrollment

50 students in undergraduate program.

Cooperative Education Component

3 optional co-op work assignments.
Co-op students are able to work 3 months.

Salary Information (Avg/Range)

Co-op:	$17.00	$16.00 - $18.00
BS:	$72,000	$70,000 - $90,000
PhD:	$89,400	$70,000 - $102,000

Equipment & Facilities

The Center for Imaging Science was established at RIT to meet the growing need in government and industry for scientists with a broad understanding of imaging and imaging systems.
The Chester F. Carlson Center for Imaging Science is housed in a facility of approximately 75,000 square feet. The Center includes several fully equipped laboratories, including labs in visual perception, digital imaging and remote sensing, and optics. In addition, RIT is home of the Munsell Color Science Laboratory, an important resource for students in Imaging Science.

Student Skills & Capabilities

- Solid background in Calculus, Statistics, Programming, Physics and Optics
- Students have an understanding of imaging systems and the comprehensive interactions of system components.
- Advanced courses in optics, radiometry, color science, imaging systems analysis, digital image processing, detectors, and computation photograph.
- A senior research project in which the student works individually with a faculty member is required.
- Students are exposed to state-of-the-art technology, equipment, and research experiences and opportunities.
- Students are adept at technical writing, oral presentation, and production of technical videos.

Imaging Science

Course Sequence BS degree

First and Second Years:
Freshman Imaging Project
Introduction to Imaging Systems
Vision & Psychophysics
Programming for Imaging Science
Radiometry
Linear Algebra & Fourier Mathematics
Mathematical Methods for Imaging
Digital Image Processing I
University Physics I, II, III
Modern Physics
Project-Based Calculus I, II, III
Multivariable Calculus
Probability and Statistics
Science Electives
Liberal Arts (Core)

Third, Fourth and Fifth Years:
Digital Image Processing II
Imaging Science Laboratory
Detectors
Interactions Between Light & Matter
Color Science
Modulation Transfer Function
Noise & Random Processes
Research Practices
Geometrical Optics
Physical Optics
Professional Electives
Senior Project
Liberal Arts (Electives)

Employers of Imaging Science Co-op and Graduating Students:

BAE Systems, Boeing, Eastman Kodak Co., Edmund Industrial Optics, Google, Harris Corp., Heidelberg, Hewlett-Packard, IBM, ITT Industries Geospatial Systems, ITT Visual Information Solutions, Integrity Applications Inc., Lexmark, Lockheed Martin, MITRE, NASA, National Geospatial Intelligence Agency, National Radio Astronomy Observatory, National Reconnaissance Office, Naval Undersea Warfare Center, Science Applications International Corp., The Aerospace Corporation, Xerox.

Contact Us:

We appreciate your interest in hiring RIT co-op, graduating students or alumni. We will make every effort to make your recruiting endeavor a success. Call our office and ask to speak with Lisa Vasaturo, the program coordinator who works with the Imaging Science program. For your convenience, you can access information and services through our web site at http://www.rit.edu/recruit.

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