The Bachelor of Science degree in Integrated Science and Technology is a new degree program that provides an alternative to traditional programs in science, technology, and engineering. It is integrated in two ways. Individual courses have subject matter from different disciplines integrated into new configurations, moving beyond single-subject courses. In addition, the program itself integrates subjects into a unified sequence of courses that provides a conceptual whole for students. To accomplish this the IST program brings together faculty and subject matter from engineering, chemistry, physics, biological sciences, computer and information science, mathematics, English, communication studies, management and medicine to create a unique degree program.

For more information, please contact:

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IST Department
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(304) 696-6498
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www.marshall.edu/isat

CAREER OPPORTUNITIES

The IST degree prepares graduates for a wide range of careers that call for a solid scientific and technological background, excellent communication skills, the ability to work effectively in teams, and the flexibility to adapt to changing work conditions.

Careers that will attract IST graduates may well be in areas such as product design, manager of quality and standards, technology relationship manager, information technology, materials manager, product management, quality assurance manager, product service manager, environmental consultants, manager of scientific conferences, inventory management, ecology laboratory manager, director of technical development, director of risk control, service technical specialist, and many more.

The key to careers for IST graduates is the idea of flexibility. IST graduates will not be limited by training in a narrow specialization. IST graduates will have the wide range of skills mentioned earlier: skills in communications, skills in leadership, skills in teamwork. They will have knowledge of the social, political, business, and ethical issues that influence science and technology in today’s world.
Integrated Science & Technology

The IST degree program has the following objectives:

- To create a more effective method of engaging students by presenting the value and excitement of science and technology in today’s world;
- To provide for the development of communication skills throughout the curriculum, thus enhancing each students’ potential for successful employment;
- To demonstrate the importance of science and technology to the needs of society and relate the issues of society to those engaged in science and technology;
- To integrate the use of computers and expert systems as a curriculum tool to teach decision-making, information gathering, and communication;
- To provide a broad, interdisciplinary curriculum that will more fully prepare graduates for changing employment opportunities;
- To create future employees who have solid backgrounds in science and technology as well as the communication and people skills necessary to work in a flexible and changing work environment.

PROGRAM COMPONENTS

The Integrated Science and Technology Program has four major components:

- General Education core that includes communications courses combining writing and speaking skills, "connections" courses that examine the relationships between science and society, courses in liberal arts, fine arts, natural or physical sciences, social sciences, and a public service experience.
- Core courses consisting of analytical methods, instrumentation, and four "Issues" courses that cover living systems, chemistry, production, and energy.
- Strategic Sector courses, taken in the junior year, that prepare students for their concentration.
- Concentrations—which replace the traditional major.

Total Program Hours: 120 (40 upper-level hours)

MAJORS IN IST

There are currently four majors in the Integrated Science & Technology Department. With most of the majors, students chose an area of emphasis or specialization. They are:

Computer & Information Technology
- Computer Application Development
- Computer Forensics
- Game Development
- Web Application Development

Biotechnology

Integrated Science & Technology
- Environmental Assessment & Policy

Environmental Science
- Transportation Technology

Natural Resources & Recreation Management

Why IST?

This innovative department offers degrees that are designed to meet the needs of today’s employers. It is a "hands-on" program of study that emphasizes practical skills and knowledge leading to employment in the work force or to further education.

Guided by an Advisory Board of professionals in each field of study, the IST faculty have created a truly interdisciplinary and integrated program of study that goes far beyond the single subject traditional science degree programs. Each of the IST majors and concentrations are guided by one principle: prepare students for a career.