College of Integrated Science and Engineering

Dr. Robert A. Kolvoord, Dean
Dr. Jeffrey D. Tang, Associate Dean

Phone: (540) 568-2705
Location: 701 Carrier Drive,
Harrisonburg, VA 22807

MSC: 4116
Website: http://cise.jmu.edu

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  Head
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  Dr. Eric H. Maslen, Academic Unit Head

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Mission
The College of Integrated Science and Engineering encompasses programs whose common focus is solving problems that impact the world at large through both the application of science and technology and the consideration of the social context in which the problem sits.

Over the past several decades, remarkable developments in science and technology have altered our lives and our society, bringing both great opportunities and challenges. Continued prosperity and societal harmony depend on the integration of scientific knowledge, the creative use of engineering design, technical capabilities in computing and other fields, the application of ethical principles and an understanding and appreciation of cultural commonalities and differences. Consequently, there is a need for individuals who understand the importance of specialization, as well as cross-disciplinary connections, and also the integration of knowledge for practical application. These individuals must have the flexibility to be able to operate in an environment of uncertainty and complexity, the drive to seize such opportunities as they arise and the vision and creativity to create new opportunities as needed. Our faculty is dedicated to producing graduates with a scientific and technical knowledge base and a matching set of interpersonal, organizational and technical skills. To this end, our faculty members not only educate our students, they also inspire and serve as role models.

The college places importance on carrying out its role within the community of Academic Affairs, working collaboratively with other colleges and supporting division-wide programs and priorities.

Mission Statement
The College of Integrated Science and Engineering, by supporting its constituent academic programs, seeks to build a community of students, faculty and staff who share a common purpose of improving our world through the cultivation of integrated sciences and engineering.

Goals
The goals of the College of Integrated Science and Engineering are:

- To promote a student-centered focus in teaching, scholarship and service that encompasses excellence, collegiality and professionalism.
- To foster, among both faculty and students, life-long professional development, personal growth, and commitment to ethical behavior.
- To contribute to the betterment of society at local, regional, national and global levels with a focus on sustainable solutions.
- To prepare students to enter professions of value to our community, through the study of applied science and engineering within a social context, or to undertake advanced study.
- To support a community of faculty that pursues high-quality, innovative and cross disciplinary instruction, scholarship and service.
- To emphasize innovation.
- To encourage partnerships both within and outside the university.

Academic Programs
Students may select from a variety of majors, minors, programs and concentrations that are available through the departments in the College of Integrated Science and Engineering. Programs offered include the following:

Majors
- Engineering
- Geographic Science
- Intelligence Analysis
- Integrated Science and Technology
- Computer Science
- Biotechnology

Minors
- Computer Science
- Environmental Information Systems
- Environmental Management
- Environmental Science
- Environmental Studies
- Geographic Science
- Integrated Science and Technology
- Materials Science
- Science, Technology and Society
- Telecommunications
- Urban and Regional Studies

Cross Disciplinary Programs, Outreach Programs, Partnerships and Academic Centers
The College of Integrated Science and Engineering highly values partnerships with the community. These partnerships and our outreach programs are integral to our academic programs and assist us in fulfilling the responsibility we feel to serve our community. CISE values the impact of experiential activities on the enrichment of student learning. A listing of CISE centers, outreach programs and partnerships may be found on the CISE website at http://cise.jmu.edu/.

Graduate Programs
The College of Integrated Science and Engineering offers the following graduate degrees:

- Computer Science (M.S.)
  - Information Security
  - Digital Forensics
- Computer Science – Fifth Year Format (M.S.)
  - Information Security
  - Digital Forensics
- Integrated Science and Technology (M.S.)
- Integrated Science and Technology (M.S.) – joint degree program with the University of Malta

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