

## **Report of Use of Assessment Results Integrated Science and Technology**

Because the ISAT program is in only its fifth year, this is the first assessment report that responds to student exit surveys. Student exit surveys from 2003-2004 and 2004-2005 indicate marked growth and improvement in the ISAT program and demonstrate areas for future enhancement. The program has not yet received results from the alumni and employer surveys.

### **Goals and Outcomes:**

#### **Goal 1**

Students will acquire a common body of knowledge in mathematics, science, and technology appropriate to the needs of business and industry.

#### **Expected Outcomes**

1. At least 60% of the graduates surveyed in the exit survey will indicate they were satisfied or very satisfied that their graduate coursework developed their ability to see relationships, similarities, and distinctions among ideas.
2. At least 60% of the graduates surveyed in the Survey of Graduate Alumni will indicate they were satisfied or very satisfied that their graduate coursework developed their ability to see relationships, similarities, and distinctions among ideas.
3. At least 60% of the graduates surveyed in the Exit Survey will indicate they were satisfied or very satisfied that their graduate coursework developed their ability to effectively use mathematical thinking and mathematical reasoning skills.
4. At least 60% of the graduates surveyed in the Employers' Survey will indicate they were satisfied or very satisfied that ISAT graduate's ability to effectively use mathematical thinking and mathematical reasoning skills.

#### **Assessment:**

Of the respondents to the 2003-2004 survey, only 25% were satisfied or very satisfied with the effectiveness of beginning courses in preparing them for advanced courses, while this number grew to 83.4% in 2004-2005.

Of the respondents to the 2003-2004 survey, only 50% were satisfied or very satisfied with the quality of instruction in advanced courses, while this number grew to 83.3% in 2004-2005.

Of the respondents to the 2003-2004 survey, only 50% were satisfied or very satisfied with the opportunities for collaboration with other students on class projects, while this number grew to 100% in 2004-2005.

Of the respondents to the 2003-2004 survey, only 25% were satisfied or very satisfied with the use of appropriate technology in the classroom, while this number grew to 75% in 2004-2005.

Of the respondents to the 2003-2004 survey, only 50% were satisfied or very satisfied with the facilities and equipment for courses, while this number grew to 67.6% in 2004-2005.

Students in both years commented on the lack of discipline-specific courses. The program is currently addressing that issue and has developed one new core course and three mathematics courses. Faculty members in physics are now also developing courses.

## **Goal 2**

Graduates will be able to effectively apply their knowledge of mathematics, science, and technology to the problems of business and industry.

### **Expected Outcomes**

1. At least 70% of the graduates surveyed in the Survey of Graduate Alumni will indicate they were satisfied or very satisfied their graduate coursework prepared them to apply mathematical, scientific, and technological knowledge in business and industry.
2. At least 70% of the graduates surveyed in the Employer Survey will indicate they were satisfied or very with ISAT graduate's ability to apply mathematical, scientific, and technological knowledge in business and industry.
3. At least 70% of the graduates surveyed in the Survey of Graduate Alumni will indicate they were satisfied or very satisfied their graduate coursework prepared them to collaborate with other professionals to identify problems, obtain relevant information, analyze alternatives, and implement appropriate solutions.
4. At least 60% of the graduates surveyed in the Employers' Survey will indicate they were satisfied or very satisfied with the ISAT graduate's ability them to collaborate with other professionals to identify problems, obtain relevant information, analyze alternatives, and implement appropriate solutions.

### **Assessment:**

Assessment of this goal requires responses from alumni and employers. As the number of graduates increases, this information should become available.

### **Goal 3**

Students will develop applied research skills in an interdisciplinary setting.

1. At least 75% of the graduates surveyed in the Alumni Survey will indicate they were satisfied or very satisfied that their graduate coursework improved their ability to find analyze, organize, and present information in an effective manner.
2. At least 75% of the graduates surveyed in the Alumni Survey will indicate they were satisfied or very satisfied that their graduate coursework improved their ability to apply logic and critical thinking skills.
3. At least 75% of the graduates surveyed in the Alumni Survey will indicate they were satisfied or very satisfied that their graduate coursework prepared them to critically assess outcomes of research and incorporate findings into professional requirements.
4. At least 75% of the graduates surveyed in the Exit Survey will indicate they were satisfied or very satisfied that their graduate coursework prepared them for the completion their thesis.

#### **Assessment:**

Assessment of objectives 1-3 requires responses from alumni and employers. As the number of graduates increases, this information should become available. Assessment of objective #4 indicates some improvement from 2003-2004 to 2004-2005 and suggests room for advancement.

Of the respondents to the 2003-2004 survey, only 50% were satisfied or very satisfied with the opportunity for meaningful interaction with faculty in research or other scholarly activity, while this number grew to 83.3% in 2004-2005.

Of the respondents to the 2003-2004 survey, 50% were satisfied or very satisfied with the relevance of courses, while this number grew slightly to 58.4% in 2004-2005.

Of the respondents to the 2003-2004 survey, 50% were satisfied or very satisfied with the “real-world” experiences, exposure, examples, etc. in or out of the classroom, while this number grew slightly to 58.3% in 2004-2005.

Of the respondents to the 2003-2004 survey, 50% were satisfied or very satisfied with the facilities and equipment for courses, while this number grew slightly to 58.3% in 2004-2005.