

SOUTHERN UTAH UNIVERSITY
Applied Science Department
Academic Outcomes Assessment Plan
Academic Year 2002-2003

Expanded Statement of Institutional Purpose

The Applied Science Department reflects the mission of the School of Applied Science and Technology (SAST) that was accepted in 2002 as commensurate with the mission, vision and goals of the university. Because of the unique configuration of the department, there are sub-missions for each division including Agriculture (AGSC), Family and Consumer Science (FCS), Information Systems Applications (ISA), and the Geographic Information Systems (GIS/GPS) program. The composite mission of the Department of Applied Science is to provide certificate, associate, and baccalaureate opportunities in AGSC, FCS, GIS/GPS, and ISA to those students whose interests are primarily applications oriented. The department is also involved in related scholarship of application, secondary licensure (FCS and Business Education), industry certifications, and service activities. Through well educated, professionally qualified faculty and staff, excellent physical resources (classes and labs), and generous experiential learning opportunities, the department can demonstrate how its mission embraces each of the five university mission items that “provide students a personalized learning environment to foster meaningful experiences involving the mind, heart and hands.”

AGRICULTURE DIVISION
Academic Outcomes Assessment Plan
Academic Year 2002-2003

Mission Statement

The mission of the Agriculture Division is to offer all students the opportunity to understand the discipline of agriculture as an applied science and a model for the principles of bioeconomics. The agriculture program is to be closely allied to the concept of service to the agricultural community. Recognizing the diversity of agriculture, faculty will continue to articulate partnerships with colleagues and programs across the university campus. The agriculture program will demonstrate teaching excellence by maintaining a faculty of well-educated and experienced agriculturalists. The agriculture program will promote a strong hands-on structured learning atmosphere and provide opportunities for independent inquiry and scholarship of application by students.

Goals Statement

1. Through a broad offering of one, two and four-year programs, the agriculture division will prepare students for one of a number of careers in agricultural science and industry, farm and ranch management, and related public or private service.

2. The agriculture division will prepare students to pursue advanced degrees or admission to a professional school upon completion of their work in the agriculture program at SUU.

Intended Outcomes/Objectives

1. Students will demonstrate knowledge and applications-based competency in their particular certificate program, degree and emphasis (i.e., Certificate in Livestock Farm Management; AAS in Livestock Farm Management; BIS in Agricultural Science and Industry with an emphasis in agribusiness, animal science, plant science, or general agriculture; preveterinary studies).
2. Students will use scientific methodology, employ critical thinking skills and apply appropriate tools/methods/theories to address problems, carry out investigations, and meet the challenges of providing food, fiber, by-products, and recreational opportunities to others.
3. Students will communicate effectively using terminology appropriate to the discipline.
4. Students will express satisfaction with their learning experience and be well prepared for post-graduation plans and opportunities.

Assessment Criteria and Activities

All agriculture students will be required to receive a grade of C- or better in all courses applied to program completion and meet university requirements for graduation. The agriculture division maintains contact with the agricultural science and agribusiness community outside the university through ongoing meetings with an advisory committee. To the greatest extent possible, committee recommendations are integrated into curriculum and management of agricultural resources. The agriculture division has developed an exit questionnaire that will reflect both student satisfaction with the program and identify those courses (in the student's estimation) that satisfy the stated goals of the agriculture division.

Assessment criteria and activities that are aligned with specific outcomes and objectives are listed below.

1. Students will be required to receive a passing grade of C- or better in all courses applied to program completion based on assessment measures applied to each course. Course embedded activities and co-requisite labs will enable students to demonstrate their competency in applications appropriate to each course.

2. (a) Several agriculture classes have laboratories or are lab intensive courses. Labs are graded separately (from corequisite lectures) and involve student projects requiring them to gather data, analyze results, and reach reasonable conclusions in order to satisfy course requirements.

(b) Interested students may engage in independent undergraduate research, directed studies, and/or experiential learning activities, such as internships and practicums.

(c) Several theories, protocols, and standard practices will be applied and reinforced through hands-on applications.
3. (a) At least one course at each level requires a significant writing component.

(b) Several laboratory courses require written and oral reports, and abstracts.

(c) Student directed study projects and undergraduate research projects require an oral presentation before an audience of faculty, staff, and peers.
4. (a) The exit survey will indicate that at least 75% of graduating students will agree that the quality, availability and diversity of course and lab offerings were appropriate.

(b) At least 75% of graduating students will agree that they are well prepared for post-graduation plans.

(c) Students will rate those courses that (in their opinion) best served their choice of agriculture division goals stated under that section of this document.

(d) At least 75% of students who actively seek employment in the field will have jobs within 6 months of graduation.

Implementation

1. (a) The current catalog states: “Any course taken with a grade below a C- must be retaken and a better grade achieved. If a grade improvement of C- or better is not earned after repeating the course, the student may petition division faculty for a grade waiver.

(b) Course embedded activities and labs will allow students to demonstrate competence in applications appropriate to the content area.

(c) Student achievement, as measured by grades and progress toward degree or certificate completion, will be reviewed and discussed during advisement sessions and again by the advisor and the department chair when graduation worksheets are presented for signature.

2. (a) Agriculture faculty will design structured labs and communicate their needs to professional staff who will accommodate student hands-on learning through setting up laboratory exercises. Agriculture personnel will make extensive use of resources at the university farm and ranch, and use on-campus resources that are shared with the biology department.

(b) Faculty will, where appropriate, facilitate students interested in undergraduate research projects and directed studies by using university farm and ranch resources and off-campus venues (with prior approval).

(c) Agriculture personnel are expected to take interns at the university farm or supervise them at approved off-campus workstations. These will require an entry contract and an exit cooperator evaluation before credit is granted and a grade assigned.

(d) Ongoing dialog between agriculture personnel and colleagues at other schools, and with the advisory committee will identify and update skills and knowledge required of today's agriculture program graduates.

(e) Faculty will subscribe to and read the Journal of the National Association of Colleges and Teachers of Agriculture to stay current on curriculum trends in the field.
3. (a) A reasonable ability to express one's self with clarity and use proper terminology will be a significant grading component of at least one course at each level.

(b) Agriculture laboratory courses will have required written lab reports and/or abstracts which will be a significant grading component of the class.

(c) Students who enroll in undergraduate research, or directed studies projects will be required to present their findings to an audience of faculty, staff and/or peers. At least one (by faculty assignment) upper division plant science laboratory and one upper division animal science laboratory will require student presentations to the instructor and peers.

(d) Students will be encouraged to enroll in AGSC 1990, Agricultural Leadership, and assume a committee chair, officer, or project facilitator role in order to communicate with peers and direct activities of others.
4. (a) The applied science secretary/advisor will inform students of the requirement to complete the exit survey before commencement. Both the advisor and the chair will keep a record of eligible students in order to schedule the survey before they leave campus.

(b) Faculty will record student employment achieved prior to graduation. In cooperation with SUU career services, faculty records will be combined with post-graduation tracking to assess employment success within 6 months of graduation.

FAMILY & CONSUMER SCIENCES DIVISION
Academic Outcomes Assessment Plan
Academic Year 2002-2003

Mission Statement

Education in Family and Consumer Sciences (FCS) empowers individuals and families to manage the challenges of living within a family and working in a diverse global society. Our mission is to prepare individuals for family life and careers by providing opportunities to develop needed knowledge, skills, attitudes and behaviors. This is accomplished in a nurturing educational environment that is rich in exposure to the varied academic content of the discipline and solid in practical application of theories related to the disciplines encompassed within the field of FCS. Central to our focus as a division is superior teaching, including courses taught in traditional classrooms, laboratories and internships/co-op/student teaching experiences.

The primary aim of the FCS program is to provide high quality undergraduate education to students and meaningful service to the communities served by the university. The division offers teacher certification in secondary schools and trains students in the areas of nutrition and food science, early childhood development, and interior design.

Goals Statement

1. The goal of the Family and Consumer Sciences Division at SUU is to prepare individuals for family life and careers in early childhood development, interior design, teaching in the secondary schools or entrance into graduate school.
2. The curriculum of the FCS division consists of a careful blend of classroom courses in theory, methodologies and histories of the disciplines as well as laboratory experiences incorporating hands-on applications of these principles.
3. The intent of the FCS faculty and curriculum is to produce well-rounded graduates who are conversant with the material in the FCS field and who can also proficiently apply that material.

Intended Outcomes/Objectives

1. Students will demonstrate their knowledge and mastery of their particular discipline (i.e., nutrition and food sciences, early childhood development, interior design).
2. Students will be satisfied with the learning experiences afforded them by the division.
3. Students will be prepared for post-graduation opportunities.

Assessment Criteria and Activities

1. FCS students will pass their FCS classes with a minimum grade of C, as evaluated by assessment measures within each course. FCS courses will include activities that enable students to demonstrate a reasonable level of proficiency in the skills they have learned.
2. (a) At least 80% of graduating students will agree with the statement, “The quality, availability, and diversity of course offerings and lab experiences in my degree program were appropriate,” **OR** at least 80% of FCS majors enrolled in FCS 3400* will agree with the statement, “The quality, availability, and diversity of course offerings and lab experiences, is appropriate.”

(b) At least 70% of graduating students will give a rating of “Above Average” or “Excellent” to a selection of key FCS courses, **OR** at least 70% of FCS majors enrolled in FCS 3400* will give a rating of “Above Average” or “Excellent” to a selection of key FCS courses.
3. At least 80% of graduating students will agree with the statement, “I feel that my program has well prepared me for post-graduation plans.”

Implementation

1. (a) The minimum requirement of a C grade has been placed on all advisement worksheets, in the university catalog and will be reiterated in personal advisement sessions with the students. It will be reviewed again when the students’ papers are scrutinized for graduation.

(b) At the end of each semester all faculty will report group statistics (to division head) on grades earned in all classes taught.
2. Assessment will be through an exit survey administered to all graduating students (both associate and baccalaureate) by division advisor when graduation papers are approved. The survey will be completed before the chair signs the students’

graduation papers, **OR** assessment will be through a formative survey administered to all FCS majors enrolled in FCS 3400.

3. Assessment will be through a survey administered to all graduating students (both associate and baccalaureate) by the division advisor when graduation papers are approved. The survey will be completed before the chair signs the students' graduation papers.

* FCS majors typically take FCS 3400 approximately midway through their program.

GEOGRAPHIC INFORMATION SYSTEMS (GIS) PROGRAM

Academic Outcomes Assessment Plan

Academic Year 2002-2003

Mission Statement

As an interdisciplinary program, the GIS Program serves a variety of departments, degrees and affiliated entities throughout the SUU campus and surrounding communities. Central to the interdisciplinary nature of this program is providing access to spatial technologies accompanied with knowledge, theory, and hands on experience in order to foster a diversity of geographic research. Our mission is to prepare individuals to integrate spatial technologies into their chosen field of study by providing a learning environment that fosters undergraduate research and motivates individuals to develop required abilities. Students will be encouraged to gain further knowledge, increase awareness, and gain new perspectives in order to apply the science of geographic information.

The GIS Program offers a GIS certificate and continues to focus on educating individuals in support of various programs. These programs include, but are not limited to, biology, geology, history, sociology and political science, business and marketing, engineering technology, agriculture, information systems applications, computer science, criminology, university studies, education and geography. In addition, the GIS Program provides service to the library, facilities management, university and departmental administration, and the local and regional communities. The strength of our mission relies on the diversity and interdisciplinary nature of spatial technologies, which demands that we aim at continually discovering new methods for pedagogical articulation on and off campus.

Goals Statement

GIS oriented and student centered goals are as follows:

1. The goals of the GIS/GPS program are to prepare individuals for careers in their chosen field of study by increasing their ability to work with spatial phenomenon,

enhancing their professional development through undergraduate research and service learning, and ensuring confidence through skill building and awareness of opportunities.

2. The curriculum will provide high quality and current courses of study, implement new technologies and broaden offerings when and where appropriate.
3. The program will encourage participation in and use of geographic technologies at many levels and strengthen the role of GIS throughout the SUU service region.

Intended Outcomes/Objectives

1. Students will have the opportunity to demonstrate their knowledge and mastery of spatial technologies in their particular discipline.
2. Students will have the opportunity to practice the principles of geographic information science through laboratory experience, undergraduate research, internships and additional outside of class activities and discussions.
3. Students will have the opportunity to communicate the principles of geographic information science they have learned and practiced through oral and written means.
4. Students will be satisfied with the learning experience afforded them by the division.
5. Students will have the opportunity to be prepared for post-graduation options or meaningful and competitive employment opportunities.

Assessment Criteria and Activities

1. Minimum grade of “C” or better is required in each course used to complete the GIS certificate (including prerequisites), as evaluated by assessment measures within each course.
2. Course embedded activities will require critical, logical and analytical thinking.
3. Verbal, written and cartographic communication abilities are assessed through a capstone GIS research project. Students are required to present their projects to all other GIS students and faculty, and participate in the undergraduate research poster presentation or a professional conference presentation (either verbal or poster).
4. Software, hardware, technical skills as well as social, verbal communication abilities are assessed through a follow up letter and interview with the student internship supervisor or the supervising faculty when a student decides to

complete undergraduate research. A student must choose between one of the above options to complete the GIS certificate.

5. At least 75% of the graduating students will agree with the statement: "I believe that the GIS course work has prepared me and given me the skills to be competitive in finding a career or continue on to graduate school."

Implementation

1. To ensure quality as well as quantity in the respective courses, the faculty, division head and department chair will review all GIS curriculum syllabi.
2. Minimum 'C' grade along with required prerequisites are placed in the student catalog, advisement worksheets, and graduate worksheets and reiterated in personal advisement sessions with students.
3. An outgoing student survey is integrated into the student's final project write up, the oral presentation, the internship and/or undergraduate research advisor review letters, and the employment follow-up contacts.

INFORMATION SYSTEMS APPLICATIONS DIVISION Academic Outcomes Assessment Plan Academic Year 2002-2003

Mission Statement

The Information Systems Applications (ISA) Division supports the University Mission Statement by providing students with a personalized learning environment and encouraging superior teaching by the faculty. The role of the division is to afford students the opportunity for professional education and training in three distinct areas: networking and telecommunications, user support services, and business applied technology, as well as supporting the business education program.

Associate degrees are offered in Networking and Telecommunications, User Support Services, and Office Management*. The Networking and Telecommunications, and User Support Services degrees serve as an entry point to the baccalaureate degrees in Information Systems and serve as emphases in that degree.

One-year certificates are offered in the areas of Clerical Technology* and Information and Office Systems Technology.

*To be discontinued May 2003

Faculty members strive to provide superior teaching through continued professional development by maintaining memberships in appropriate professional organizations, attending regional and national conferences, receiving counsel from the ISA Advisory Committee, and updating knowledge and skills. Faculty members also present workshops to faculty and staff members at SUU and other schools and businesses.

Goals Statement

As indicated in the mission statement, the division's goal is to prepare individuals for employment in a variety of computer-related careers in the business world or entrance into a four-year degree in business education and/or information systems.

The curriculum of the ISA Division consists of a combination of theories, methodologies, applications, and hands-on laboratory experiences designed to develop individuals' skills. The intent of the courses offered is to produce a well-rounded graduate who is knowledgeable with the material in the ISA field and who can proficiently apply his/her knowledge.

The primary goal of the ISA Division is to provide high-quality associate-level education to students and meaningful service to the communities served by the university.

Intended Outcomes/Objectives

1. Students will be prepared for meaningful employment after graduation.
2. Students will demonstrate their knowledge and mastery of their particular discipline; i.e., networking and telecommunications, user support services, or information and office systems technology.
3. Students will recognize and be satisfied with the learning opportunities afforded them by the division. Students will know the options for, and be prepared for, baccalaureate opportunities.

Assessment Criteria and Activities

1. At least 75 percent of the graduating students will agree with the statement: "I believe that my program has well prepared me for career or baccalaureate plans."
2. (a) ISA students will pass each of their courses with a minimum grade of C-, as assessed by testing measures within each course. ISA courses will include activities that will enable students to demonstrate a reasonable level of proficiency in the skills they have learned.

(b) ISA students will be involved in completing secondary research, summarizing findings, and giving oral presentations.

- (c) Networking students will achieve certification in at least one industry certification exam such as A+, CNA, MCP, Network+, Server+, etc. and will be encouraged to complete the CNE or MCSE.
 - (d) User Support students will achieve industry certification (Microsoft Office User Specialist [MOUS]) in at least one software application such as Word, Excel, Access, etc.
3. At least 75 percent of the graduating students will agree with the statement: “The quality, availability, and diversity of course offerings within the ISA Division were appropriate.”

Implementation

1. Assessment will be through a survey administered to all graduating students by the division advisors at the time of graduation application review.
2. (a) The minimum requirement of a C- grade for each ISA course and a minimum GPA of 2.5 overall has been placed on all advisement worksheets and in the university catalog and is reiterated in personal advisement sessions with the students. The requirement will be reviewed again when the student’s graduation worksheets are evaluated for graduation.
 - (b) The faculty, division head, and department chair will review course syllabi to ensure that students are provided with an opportunity to perform secondary research, summarize findings, and give oral presentations when appropriate to the course and subject materials.
 - (c) Students will be required to provide document(s) to indicate completion of an applicable industry certification prior to graduation.
 - (d) Students will be required to provide document(s) to indicate completion of an applicable industry certification prior to graduation.
3. Assessment will be through a survey administered to all graduating students by the division advisors at the time of graduation application review.