

Academic Program Review

By Dr. Stephen P. Prisley

Responses to each question are indicated by italics.

I. Review of Program Goals, Objectives and Activities

- A. Are the intended educational (learning) goals for the program appropriate and assessed?

The educational goals for the program are generally well defined and appear to be assessed. Some of the objectives (2, 3, and 4) are merely to provide opportunities to the students; in which case the existence of the program and degree offerings alone are evidence that these objectives are met.

- B. How are the faculty and students accomplishing the program's goals and objectives?

Faculty of the program accomplish these goals through the maintenance of a very well-designed curriculum, ongoing offerings of appropriate classes, and monitoring of students progress. Students completing courses and degrees represent their contribution to meeting program objectives related to supplying a workforce.

- C. How is the program meeting market/industry demands and/or preparing students for advanced study?

The placement record of students completing this program offers evidence that the program is well designed to prepare students for professional employment in the field. It is difficult to tell from data provided in the program review whether there is unmet demand for graduates, or to what degree graduates of this program go on for graduate education elsewhere.

- D. Do course enrollments and program graduation/completion rates justify the required resources?

It is difficult to answer this question without context (are the resources and results comparable to other programs within the state?). However, the recent enrollment decline would be a real concern if it persists. Programs such as this elsewhere in the country frequently encounter cyclical enrollment patterns, and this may just be the declining part of the cycle. However, it would seem worthwhile to monitor closely and make efforts to reverse the trend to ensure that program resources continue to result in satisfactory numbers of graduates.

II. Review of Program Curriculum

- A. Is the program curriculum appropriate to meet current and future market/industry needs and/or to prepare students for advanced study?

The curriculum is well-designed, challenging, and thorough. It is commendable in the broad background it provides, the emphasis on communication skills (often lost in technical curricula), and the depth of technology courses.

- B. Are institutional policies and procedures appropriate to keep the program curriculum current to meet industry standards?

It appears the program relies on a broad and competent faculty to ensure that the curriculum remains current. The faculty are clearly involved in research and professional societies where they can maintain currency in emerging issues and topics. That said, there appears to be no other formal mechanism for ensuring currency. My department has found it beneficial to enlist the help of an external advisory board composed of professionals working in various fields to review and comment on curricula.

- C. Are program exit requirements appropriate?

Yes- the capstone experience described in the review document is an excellent mechanism for integrating and applying knowledge gained throughout the program, and serves as a robust and rigorous exit requirement.

- D. Does the program contain evidence of good breadth/focus and currency, including consistency with good practice?

Yes. Examples include the requirement of surveying students to take some coursework in remote sensing and programming, and for GIS students to take coursework in surveying, government, and law.

- E. Are students introduced to experiences within the workplace and introduced to professionals in the field?

A formal mechanism for exposure of students to professionals and profession work outside the University is not described. However, it is noted (p. 81) that "Personnel at federal, state, industrial, and private levels are readily available and routinely assist with teaching, research, and extension activities". In addition, the capstone experience appears to provide "real-life" work experience to students.

- F. Does the program promote and support interdisciplinary initiatives?

Because the field of SIS is inherently interdisciplinary, this program does promote and support interdisciplinary initiatives. Students are exposed to disciplines of programming, law, ethics, business, and a wide array of interdisciplinary applications for this technology.

- G. Does the program provide respect and understanding for cultural diversity as evidenced in the curriculum, in program activities, in assignment of program responsibility and duties; in honors, awards, and scholarship recognition; in recruitment?

The program, through required coursework, echoes the aspects of the Professionalism Statement of UA Monticello, which includes appreciation for ethnic and gender diversity in the workplace.

III. Review of Academic Support

- A. Does the program provide appropriate quality and quantity of academic advising and mentoring of students?

Advising of students appears to be part of standard faculty duties reflected in their annual evaluation. No specific mention is made of advising of SIS students apart from the normal advising duties within the School of Forest Resources.

- B. Does the program provide for retention of qualified students from term to term and support student progress toward and achievement of graduation?

The program makes strong efforts, particularly in the first year when students are vulnerable, to retain students by offering substantial support- computer orientations, introductory courses with “how to succeed” material, involvement in student clubs and activities, etc.

IV. Review of Program Faculty

- A. Do program faculty have appropriate academic credentials and/or professional licensure/certification?

Yes; the program faculty are well-qualified and professionally engaged. Most hold the terminal degree in their field. They seem current on licenses/certification where appropriate.

- B. Are the faculty orientation and faculty evaluation processes appropriate?

Yes; the annual faculty evaluation process is more disciplined and rigorous than many institutions I am familiar with, including my own.

- C. Is the faculty workload in keeping with best practices?

The faculty workload appears to be high in terms of numbers of courses taught annually, at least for institutions that hold expectations for faculty to obtain extramural funding for research activities.

V. Review of Program Resources

- A. Is there an appropriate level of institutional support for program operation?

There is strong financial and administrative support for the program operation. Technology support (hardware, software, network storage, audio-visual, network connectivity) also seems very strong.

- B. Are faculty, library, professional development and other program resources sufficient?

It is clear that faculty vacancies have increased the teaching/advising load on remaining faculty. However, it is understandable that needs must be balanced against enrollment. Library, writing center support, tutoring programs for students- all of these provide evidence of strong University support.

VI. Review of Program Effectiveness

- A. Indicate areas of program strength.

The technical competence and leadership of the SIS faculty are clearly an area of strength for this program. In addition, the curriculum is thorough and well-designed. The capstone course offered to the SIS students is an excellent experience. The level of technical and administrative support provided to this program is also a strength.

- B. Indicate the program areas in need of improvement within the next 12 months; over the next 2-5 years.

It appears to this reviewer that improving program enrollment is an immediate issue. One hypothesis for declining enrollment that was put forward in the review document was competition with other in-state educational institutions. Perhaps partnerships or exchanges or other collaborative arrangements could ensure that the SIS program remains a valued contributor to the public university mission in the state.

Another noted area of possible improvement would be better tracking and contact with program alumni. Job placement data could be crucial in evaluating program effectiveness, and it would seem to be important at the School and University level, in addition to the SIS program.

Creation of an external advisory board comprised of professionals in the businesses and agencies that hire graduates might be an effective way to ensure that the curriculum adapts to meet changing needs, and can build support for the program outside of the University.

- C. Indicate areas for program development based on market/industry demands that have not been identified by the institution.

If UAM is at all like our experience, we are constantly having to reach beyond traditional markets for our students. Environmental non-governmental organizations (The Nature Conservancy, Ducks Unlimited, etc.) and regional planning associations have been effective partners and have had high levels of interest in students with geospatial technology backgrounds. Similarly, federal agencies outside traditional (USDA) areas- such as USGS, EPA, National Geospatial Intelligence Agency, and others- are likely employers and supporters.

In terms of important areas that are not covered in the SIS program- I see no obvious gaps or omissions.

VII. Review of Instruction by Distance Technology (if program courses offered by distance)

N/A

- A. Are the program distance technology courses offered/delivered in accordance with best practices?
- B. Does the institution have appropriate procedures in place to assure the security of personal information?
- C. Are technology support services appropriate for students enrolled in and faculty teaching courses/programs utilizing technology?

- D. Are policies for student/faculty ratio and faculty course load in accordance with best practices?
- E. Are policies on intellectual property in accordance with best practices?

VIII. Review of Program Research and Service

- A. Are the intended research and creative outcomes for each program appropriate, assessed, and results utilized?

It is unclear to me to what extent the SIS program is intended to produce research results. Heavy teaching loads likely preclude high levels of research involvement. While some research outcomes are provided in the report (research expenditures in the budget and publications in the faculty CV's) they are not summarized as such in the program review document.

- B. Are the intended outreach/service/entrepreneurial outcomes for each program's initiatives appropriately assessed and results utilized?

There is brief mention of outreach programs (workshops and short courses) but I did not find summary or assessment information (numbers of courses taught, numbers of attendees, or course evaluation results).

IX. Local Review Comments

- A. How is the program meeting market/industry demands and /or preparing students for advanced study?
- B. What program modifications are needed?

X. Report Summary

- A. Include reviewer comments on the overall need for the program graduates/completers in the local area, region, and/or nation over the next 5 years.

The field of geospatial information technology (GIS, remote sensing, GPS, and surveying) is an area of high demand and is expected to

continue to be so. Graduates of a program such as UAM's SIS program can find employment in a tremendously wide array of agencies, businesses, and other organizations. Placement of these graduates is typically high. Furthermore, the demand for these graduates is widespread- national and international.

In addition, the expertise embodied in the SIS faculty is likely of high demand in research collaborations and supporting roles for other programs.

- B. Include reviewer comments on overall program quality, state program review process, etc.

The UAM SIS program seems to be well-designed, thoughtfully constructed, and effectively supported. The current challenge of declining enrollment should not be taken as an indication of lack of need for the specific program focus areas, or declining public demand for graduates with these skills. Rather, other dynamics (such as competition for students within the state) are more likely at play. The challenge will be to maintain program excellence while finding ways to capitalize on whatever unique opportunities the SIS program provides that cannot be obtained elsewhere.

Please submit your final report electronically no later than 4 weeks from your initial reading/visit to:

ray@uamont.edu

and

eubanksr@uamont.edu

R. David Ray, Provost

Ranelle Eubanks, Associate Vice Chancellor
for Academic Affairs