The report prepared by the External Reviewers will be used by the Arkansas Department of Higher Education (ADHE) to verify the student demand and employer need for the program, the appropriateness of the curriculum, and the adequacy of program resources. The report should not include a recommendation to ADHE on program continuation or program deletions.

The External Reviewers written report must include a summary of each area examined and should provide examples that document the conclusions. The questions below should be used by the reviewers as a guide in preparing the summary for each area. Responses to the questions should not be simply “yes” or “no.”

I. Review of Program Goals, Objectives and Activities

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

The School of Computer Information Systems lists seven educational objectives. The goals listed are all appropriate for this School. Through their course work offerings and their interaction with industry, it appears that these objectives are met. Here is a listing of the seven objectives and a brief narrative:

1. To educate baccalaureate-level professionals in computer information systems with both the professional competence and diversity of background to assume positions with a variety of information management organizations, such as private industry, educational institutions, and public agencies.

2. To provide an educational and professional basis for successful work performance and for assuming increasing administrative and managerial responsibilities.

These are appropriate goals. Their curriculum should accomplish these goals. They have clearly documented how they are assessing their program, through Student Surveys, Alumni Surveys, Employer Surveys, and Career Outcomes.
3. To provide students the option of a minor in computer information systems.

4. To provide post-baccalaureate students in other academic disciplines the opportunity to develop and enhance computer information systems competence for career development by completing an advanced certificate in computer information systems.

The School offers both a minor and the advanced certificate in computer information systems. The minor is not that unusual and is an appropriate offering for many programs of this type. The advanced certificate is outside the norm, but is also a very valuable offering and provides an opportunity for people to develop their skills in these areas.

5. To provide students the opportunity to acquire professional and academic competence in computer information systems necessary to be nationally competitive in graduate studies.

6. To foster general education, a professional curriculum, and a collegiate environment that attracts and retains academically strong and professionally motivated students.

7. To promote an educational environment in which a strong orientation toward academic performance is encouraged, and where dedication to the profession and its ethics is developed.

I believe through their curriculum and the faculty's extracurricular activity with the students that their students are both professionally and academically prepared for graduate programs. The report indicates that in the past three years, seven students have graduated and intended to go on to graduate school. By my calculations that's approximately 10% of the graduates. The report also indicates that in the future that information regarding graduate school will become part of the advisement process.

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

The faculty is taking an active role in assessing the proper direction of the program and ensuring that the program goals are being met, as evidenced
from adjustments being made to the program and from meetings that they conduct reviewing the various assessment instruments they utilize.

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

Their curriculum prepares the students for advancement. In this particular field, CIS, it is critical that the students not just learn a specific skill (COBOL, Database Management, etc.), but that they learn how to learn. They must be able to adapt to new technologies that will evolve over time. I believe that the exposure the students get from working through the curriculum should develop the skills for them to adapt to new technologies.

D. Is there sufficient student demand for the program?

They point out in their report that their enrollment numbers peaked in 2002, then started a decline. They attribute the decline to population decreases in their market area, industry changes, and funding opportunities drying up.

I would add to their reasons for the decline. The area of CIS experienced an unprecedented growth leading up to the early 2000’s. This flood of new entrants could not be sustained and there was a pull back. This decline appears to have stabilized and with the current job projections from the Bureau of Labor Statistics, I would anticipate an increase in enrollments. The trend in the enrollment numbers is not unusual for a program of this type. Most of the CIS programs around the nation are experiencing a similar cyclical trend. As evidenced from similar programs, enrollments are slowly beginning to increase.

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

The primary resource requirement would be the faculty to teach the courses and in the case of UAM, to advise the students. I believe given the number of courses and the class sizes that the required resources are justified. They are adapting to changes in demand by modifying their schedules and course offerings to match what their majors require as well as adjusting their curriculum to accommodate other programs of study.
Another major resource would be computers and lab space. Given the price of computers this should not be a major problem. They have outlined in their report the amount of lab space provided (4 computer labs/3 lecture rooms) and the computer replacement policy in place (every 4 years) with older computers being utilized by the networking class and the PC Maintenance class.

They also indicate in their report that a limitation on the program was the amount of Internet bandwidth provided to the University. This problem has been recently addressed with the increase in bandwidth provided to the University.

An additional resource that the School is providing is their being part of the MSN Academic Alliance, which allows the student access to necessary software. This is also extremely beneficial to the students and their ability to learn the material.

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?

Their report adequately addresses the various course offerings and how they have adapted with the changing times in order to better prepare their students for future endeavors.

The Association for Computing Machinery (ACM), the world’s largest educational and scientific computing society, and the Association for Information Systems (AIS), the premier global organization for academics specializing in information systems, have jointly developed guidelines for IS curriculum. Their guidelines have evolved over time with the most recent update occurring in 2010. One of the notable modifications to the guidelines is the increase in emphasis towards enterprise architectures and IS project management. I see evidence of the project management in their Systems Analysis and Design and their capstone courses. ([http://www.acm.org/education/curricula/IS%202010%20ACM%20final.pdf](http://www.acm.org/education/curricula/IS%202010%20ACM%20final.pdf))
B. Are institutional policies and procedures appropriate to keep the program curriculum current to meet industry standards?

They indicate in their report how they have policies in place to monitor the demands of industry through alumni surveys, employer surveys, consulting, and their internship program. They have also indicated how they have made use of the information obtained from the surveys to adapt their curriculum.

They have also indicated how they have made use of their faculty's expertise to recognize areas of improvement and cited examples of how they have incorporated this into the curriculum.

C. Are program exit requirements appropriate?

The program exit requirements are typical with a minimum overall GPA requirement as well as a major GPA requirement.

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

Yes, as stated above, the faculty has maintained an active role in ensuring that the program stays current and that the students are developing the necessary skills to advance into the workplace or to further their educational endeavors.

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

Students’ experiences with the field of CIS are externally enhanced through the internship program that they have and through the Chi Iota Sigma Student Organization which stimulates interest in CIS by inviting speakers, pursuing job opportunities, and providing community service projects.

F. Does the program promote and support interdisciplinary initiatives?

Yes, the CIS program promotes and supports interdisciplinary initiatives as is evidenced by the offerings of a variety of courses for other schools and departments (i.e., School of Forest Resources, Geographic Information
Systems, School of Agriculture, School of Business, School of Education, School of Nursing, and the School of Social & Behavioral Sciences) at the University.

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?

III. Review of Academic Support

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

Each faculty member in the school is advising over 50 students on a one-on-one basis. This requires a great deal of time, but also ensures that the faculty is very well versed with the degree requirements of the program. The faculty spends an enormous amount of time outside of class in assisting students.

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

Advising and mentoring go hand in hand with retention, so in addition to the above observations, the School also works toward retaining students by offering various events, i.e., Weevil Welcome Days, Scholar’s Day, Parent/Family Appreciation Day, and CIS day. In addition to these activities I believe their active student organization also goes a long way towards retention.

IV. Review of Program Faculty

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

This program is primarily a teaching program. Emphasis appears to be placed on teaching, then service as it relates to improving the program. The majority of the faculty has master’s degrees. Most of the faculty appears to be
Professionally Qualified through previous work experience. It would be nice to have a few Academically Qualified individuals in the School to add some experience from that side of the educational process. Funding is available for professional development which the faculty make use of.

I would suggest an increase in some research activity.

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

As documented in their report, the new faculty orientation and faculty evaluation processes is quite extensive and effective. Their faculty evaluation processes is more comprehensive than most.

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

Workload in this case refers to teaching load and related service. I would say the teaching load is on the high side, which is probably pulling time away from doing research. Five courses for instructors and four courses for Professors with the possibility of overtime seem excessive, but is in-line with the University’s workload policy.

V. Review of Program Resources

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

The report indicates that when there is a need, that the administration will try and be supportive (e.g., the need for an additional faculty member and a larger broadband connection).

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

The amount allocated by UAM for professional development, $900/faculty every three years, appears to me to be low. Sometimes schools will take away from the amount allocated to professional development to increase salaries
and then assume the professional development expense will come from the individual. I don’t know if that’s the case here.

VI. Review of Program Effectiveness

A. Indicate areas of program strength.

The faculty’s commitment to the student is a strength. The faculty is not only teaching the course, but a great deal of time is spent outside of class working towards the betterment of the student.

The small class sizes also would be a strength, being able to work one-on-one with the student helps immensely with learning a technical subject.

The students’ success at the Arkansas Collegiate Programming Contest (top finishes over the past several years) is also indicative of the effectiveness of the program.

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

- An increase in intellectual contributions
- A tighter relationship with companies in the area could
  - Help with job placement of students
  - Possible source of funding for new technologies
- Keep better track of graduates could
  - Help with job placement of current students
  - Help with alumni donations to the school
- An increase in job placement could result in an increase in program enrollments

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

There is an increased emphasis being placed on ERP systems and also Project Management. I would suggest looking at ways of further incorporating these topics into existing courses or perhaps not offering so many programming courses and offering a course on ERP systems.
VII. Review of Instruction by Distance Technology (if program courses offered by distance)

A. Are the program distance technology courses offered/delivered in accordance with best practices?

The School is following the guidelines for distance learning set by the State of Arkansas and UAM.

B. Does the institution have appropriate procedures in place to assure the security of personal information?

Yes. The report indicates that UAM is following the guidelines set by the State of Arkansas security recommendations.

C. Are technology support services appropriate for students enrolled in and faculty teaching courses/programs utilizing technology?

Yes. The support services are clearly outlined in the report.

D. Are policies for student/faculty ratio and faculty course load in accordance with best practices?

From looking at the current semester’s enrollments for the on-line classes it appears that the capacities of the courses are set at the same limits as the on-campus courses.

I know that there is a growing trend among universities towards offering more on-line courses. Certain courses work out well being offered on-line. The more technical courses, like the CIS courses, typically do not. I would try and stick with the strengths of the program in offering small class sizes and a lot of one-on-one availability to the students.

E. Are policies on intellectual property in accordance with best practices?

From reading over Appendix G and how the School of CIS is making use of distance technology, it appears to me they would be following 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?

The level of service of the faculty is outstanding. Their service activities are typically oriented towards improving the school and providing the students and community additional opportunities.

The level of research is an area that could be improved on. This is easier said than done. The report indicates that they are aware of this, and the dilemma they face in doing more research. For the School of CIS, “time” is the primary constraint in doing more research. In this particular field, a great deal of time is spent keeping up with the ever changing technologies along with the devotion the faculty have towards the students. In order to do more research, something has to give. Do they take away from their strengths in order to do more research?

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

A large part of their assessment is through surveys of students, alumni, employers. They are making use of the information gathered in these surveys to look for areas of improvement.

Another informal assessment is in the faculty’s interaction with the students, alumni, and local businesses. The report indicates that they make use of the information gathered to improve the way they do things.

IX. Local Review Comments

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

The School is offering a curriculum leading to a major, or minor, or advanced certification in the area of Computer Information Systems. Their graduates are
getting jobs in their field or moving on to graduate school. As their report points out, they are making use of various assessment instruments to ensure they are “doing the right thing” and producing productive graduates that meets the needs of their constituents.

**B. What program modifications are needed?**

I would suggest looking into how they could integrate ERP subject matter into an existing course or looking into creating a new course devoted to this topic.

I would also suggest working on further improving the Schools relationship with area businesses. This has the potential of significantly improving student job placement, alumni relations, and curriculum review.

**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 Bureau of Labor Statistics projects that the area of Computer Information Systems Managers and many of the related fields will grow faster than the average of all occupations and the job prospects should be excellent. This area is projected to add hundreds of thousands of new jobs over the next 10 years. (http://www.bls.gov/oco/ocos258.htm). These jobs typically are the higher wage earning jobs.

Their job placement would indicate they are serving the local area businesses.

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

The overall program quality appears to be very good. They are graduating competent individuals who are becoming productive members of society and adding value to businesses. The School’s faculty seems to have a good
chemistry together. Their devotion to their job and to the students is apparent in their report.

The School is seemingly doing all the “right” things. They are assessing how they are doing with regards to all of their constituents (students, employers, community) and using that information to look for ways of improving an already effective program.

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

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and
eubanksr@uamont.edu Ranelle Eubanks, Associate Vice Chancellor for Academic Affairs