University of North Alabama
Academic Department Review Guidelines

1. Title Page

   a) Computer Information Systems
   b) Paulette Alexander and Signature of Chair
   c) July 30, 2008

2. Five-Year Departmental Enrollment and Faculty Data

   ➢ Review Five-Year report for trends, patterns, and/or significant changes.

Departmental Assessment

The University of North Alabama is committed to ongoing, integrated, and institution-wide research-based planning and evaluation processes. To this end, each department, as a whole, should be evaluated to ensure that departmental goals, strategies, and projected outcomes are congruent to and support the institution's mission and strategic plan.

Specifically, the department should show that it 1) incorporates a systematic review of institutional mission, goals, and outcomes; 2) this review results in continuing improvement in departmental quality; and 3) the departmental goals support the institution's mission and strategic plan.

The CIS Department engaged in a two year intensive undergraduate program review process which culminated in a complete revision of its course structure, individual courses, and major requirements for the CIS undergraduate majors. The entire process was documented and published as a case study (Alexander, P. & Gossett, C. (2009). "Information Systems Curriculum Design Processes" in M.R. Syed, *Handbook of Research on Modern Systems Analysis and Design Technologies and Applications*. Minnesota: Idea Group, Inc.). The revised curriculum became effective Fall 2006.

In keeping with the University's strategic goal to offer high quality programs and the priority item "focus on accreditation issues and opportunities," the Department submitted to review for ABET accreditation of its undergraduate programs. The program (learning) outcomes are specified by ABET and must be regularly assessed. Tables 1 and 2 (attached) include the statement of the outcomes, our detailed assessment plan, and the

current status of that plan. All outcomes are assessed during a three year cycle and we are presently completing the second year of this cycle. Our ABET site visit was in October 2007 and updates have been submitted in accordance with ABET procedures since then. The Computing Accreditation Commission of ABET met in mid-July to consider final action and notification of our accreditation until 2010 was received on August 22, 2008. The accreditation requires that we submit a reaccreditation report in 2009 addressing additional actions based on our assessment cycle.

In addition to our program for undergraduate CIS majors, the CIS Department leads and provides specific subject area curriculum for the graduate and undergraduate Business and Marketing education majors. A CIS Department faculty member also serves as subject area advisor to Business and Marketing Education students and provides consultative services to the College of Education and the State Department of Education.

Undergraduate students in a number of other major disciplines either elect to take a minor in CIS or have prescribed supporting courses in the CIS department. The most notable of these disciplines is geography. The two departments work closely together in advising students and assuring appropriate student placement and scheduling.

Our graduate concentration has approximately fifty (50) unduplicated students. The program is under continuous review and, beginning in fall semester 2008, includes a requirement of three (3) courses from the available list of graduate courses. Prior to fall 2008, four (4) CIS courses were required for the concentration. The reason for this change is that the MBA core was increased from 7 required courses to 8 and the desire was to hold the overall program to 33 semester credit hours (11 courses). The continuous review process is established to assure that our offerings reflect current business and technology needs of students in the MBA program who wish to specialize in Information Systems.

3. Assess the department as it relates to students

➢ Enrollment

During the process of the curriculum revisions, the department experienced little or no growth in undergraduate student enrollment, as was expected. We had previously not experienced a massive downturn in enrollment as had been experienced nationally and regionally in our disciplines. During the same time period our graduate enrollment has skyrocketed, due in part to the general growth of the MBA program and in part to some revisions in course offerings. These course revisions were based on conversations with many students concerning their particular needs for courses in a CIS concentration.

Enrollment in undergraduate CIS courses and majors was impacted by changes in curriculum in a couple of ways. First, students are required to complete the MA 112 requirement before entering courses in the CIS major. Additionally, students must complete the first two major courses (sophomore level) before continuing to the upper

division courses in the major. These changes have required that students in other majors who in times past had enrolled in upper division courses as electives seek other elective courses. And majors which had included some of our courses within their prescribed course options list have chosen other avenues for their students. Only majors within the geography department continue to expressly require that their students take courses in CIS. A related issue is a fairly strict adherence to the new prerequisite sequence for the upper division courses. The purpose of this change is to assure the depth required for ABET accreditation.

The second impact on enrollment results from a change to a 30 hour major. No electives are available within the major, but many of the students choosing the Enterprise Information Systems option often do take courses available as part of the End User Computing option. With the Fall 2008 semester, it is expected that almost all of the students who enrolled under pre-2006 catalogs have either graduated or changed catalogs and will be expected to adhere to the new curriculum requirements.

➢ Degree productivity

The ratio of undergraduate majors to degrees conferred has not varied significantly during the period under review and has been only slightly higher than four every year in the study period. Assuming that students in this four year degree program are distributed proportionately among the four classifications, a ratio of four would indicate a stable pattern of graduation with minimal retention or failure to graduate issues.

Data are not included on the Five-Year Departmental Evaluation Data spreadsheet regarding graduate degree productivity specific to the CIS concentration.

➢ Student services

The CIS Department faculty engage in a wide range of advising and career planning services. These include organizing a group advising session each semester, allowing some sharing of ideas and plans for course registration among students while providing faculty support so that needed courses are available to students and scheduling problems are attended to early. The department has prepared planning documents for students which include four year plans for each major option, prerequisite charts showing graphically the sequencing of all required courses in both options, transfer plans showing the usual pattern of transfer credits from Alabama Community Colleges and Northeast Mississippi Community College. These documents are available in the office and on the department's pages within the College of Business Website.

Faculty advising assignments for CIS are made on the basis of cohorts. That is, students entering during a single semester are all assigned to the same advisor. The student cohort can then expect the advisor to be familiar with the details of the single particular catalog that those students are assigned. The assignment rotates so that those students are assigned their same advisor for their entire time in the program and the

advisor gets to know the students and their needs and career interests. This process has been positively received by students, in sharp contrast to the situation when faculty turnover caused students to experience reassignment to different advisors in order to balance the load among the faculty. Since previous assignments were based on last name of the students and without regard to catalog year of the student, faculty were required to become familiar with a multiplicity of catalogs. This created the potential for confusion and advising errors.

In support of career planning, CIS faculty have led the effort in publishing an annual resume book for students graduating from the College of Business. The resume book is completely voluntary on the part of the students and is compiled electronically and produced in paper form for distribution each summer. After the initial distribution of paper and electronic copies, the electronic version is maintained and distributed as requests come in throughout the year. The feedback from students and employers alike has been uniformly positive regarding the CoB Resume books. Additionally, the CIS Department faculty sponsored and advised the CIS Club. The CIS Club provided students with opportunities to acquire leadership, social, and in-demand technical skills which enhance the scope and quality of career placement opportunities.

> ➢ Outcome information including student performance on licensure/certification exams, job placement of graduates, student, alumni and employer surveys

The department is in the process of gathering information to respond to this question through work with the Office of Career Services and the Office of Institutional Research, Planning, and Assessment. The plan will be carried out according to Table 3 as submitted to ABET.

No licensure exams exist for our graduates and certifications are varied and are not mandatory.

4. Assess the department as it relates to faculty

> ➢ Teaching productivity and activities designed to enhance teaching and the curriculum

During Fall 2007, the CIS Department organized two-day Project Management workshop for all College of Business faculty, with special attention to the needs of CIS faculty. A consultant who is a faculty member from Carnegie Mellon University and who is certified in project management by the Project Management Institute conducted the workshop. This is a topic heavily used in all aspects of our curriculum.

Also during Fall 2007, the CIS Department engaged a team of three faculty members from the English Department to conduct a one day workshop on writing, in support of the written communication learning outcome assessment. The English department team provided helpful hints concerning some tools available for establishing grading rubrics, avoiding and checking for plagiarism, giving instructions in assignments,

and communicating expectations to students. Each faculty member reported actions which would be taken to incorporate lessons learned at the workshop in their class plans the following semester.

During Spring 2008, the CIS Department held a one day workshop in Creative Suite 3, an Adobe product which has been added to the University's software license inventory. This new software has been requested for several years, but cost and licensing restrictions have prevented our acquiring this software previously. Now that it is available it will allow us to significantly upgrade several applications courses, specifically those in the End User Computing major option. Trainers from a software training company with expertise in the particular software package conducted the workshop, which was also attended by Computer Services and Educational Technology Services staff members.

➢ Research productivity

Table 4 summarizes the research productivity of the CIS department using a table format prescribed by AACSB.

➢ Service, including service to public schools

Faculty in the CIS Department are involved in a wide range of service activities, including serving on and chairing many Shared Governance Committees and University search committees, serving on economic development boards in our community, serving our public school systems and other public agencies in a variety of professional pro bono roles and paid consultative roles.

➢ Faculty development plans

Faculty development plans are developed each Spring by all full time faculty members and submitted to the Department Chair for review and comment and then finalized before the end of the Spring semester. CIS faculty development plans include work toward completion of doctoral degrees by three faculty members, work toward achieving AACSB Professionally Qualified status by one faculty member, and maintenance of AACSB Academically Qualified status by all other full time faculty members. Maintaining currency in the discipline is an important goal and is achieved through attending professional development workshops and seminars, scholarly conferences and meetings, active participation in professional organizations, academic research, and professional service.

5. Assess the department as it relates to facilities and resources

Address the adequacy of resources and support services to address the goals and objectives of the program.

➢ Library

Library resources are adequate for our programs.

➢ Laboratories

As long as we maintain a pattern of replacement of the computers, printers, and other equipment, and as long as we have timely support from Computer Services, our present laboratories are adequate. Efforts are underway to build a networking/projects lab off line which will complete our package of laboratories essential to the support of our curriculum. The final action report from ABET noted the excellence of our technology infrastructure to support our programs.

➢ Equipment

Equipment available to our faculty, staff, and students is presently adequate for our program needs, as long as our current replacement patterns prevail so that all faculty, staff, and students have current technology available.

➢ Space

Present space is sufficient for our programs.

➢ Support personnel

The Department has a full-time secretary and student workers budgeted at 60 hours per week (40 hours per week in support of our operation of 6 computer labs) and 20 hours per week in support of office activities. This direct support, together with the general support from the College of Business, is sufficient for our programs at present.

6. List any notable achievements by the department

➢ Departmental achievements

ABET Accreditation.

➢ Student achievements

Students have regularly competed successfully at state and National Phi Beta Lambda Competitions . This year's CIS major winners at state level include:
First Place:
        Sammi Jo McConnell – Information Management
        Jerrod Terry – Database Design and Applications
        Jason Parker – Website Development
        Chris Latham – Future Business Teacher competition
        Chris Latham – Business Communication

Second Place:
>   Sammi Jo McConnell – Computer Applications
>   Anand Udeshi – Cyber Security

Two of these students placed in the national competition as follows:
>   Future Business Teacher - 5th place - Chris Latham ($100 cash award from South-
>   Western Publishing Co.)
>   Database Design and Applications - 7th place - Jerrod Terry

During the spring 2008 semester, seven teams from CIS 660 (e-Commerce) competed in the Google Online Marketing Challenge. The teams were divided into three geographical regions: (1) the Americas, (2) Europe, the Middle East, and Africa, and (3) Asia and the Pacific. Fifty semi-finalist teams were selected from each region, which represents 9% of the teams entered. Three of the 50 semi-finalist teams from the Americas were from UNA.

The challenge required the pairing of each student team with a local business that has some kind of web presence. Each team was given $200 to spend on a Google Adwords campaign on behalf of their chosen business. Students devised their online marketing strategies, analyzed their performance, and modified their campaigns based on their analysis during the course of their six week campaigns. Over 1600 student teams from 47 countries competed in the contest. Results were judged based on campaign statistics and submitted reports judged by a panel of international academics.

The UNA semi-finalist teams were
- CIS 660-I03—Vildan Ozerturk, Donna Smith, Chad Sanders, Lauren Humphrey, and Adam Benge worked with Mr. Robert Rohling, owner of PartyPaperDirect.com in Sheffield.
- CIS 660-01—Sudeep Uprety, Subeksha Poudel, Killol Chauhan, Rochak Mainali, and Bijay Shahi worked with Sarah Knight, owner of Addiction Clothing Boutique (shopaddiction.net).
- CIS 660-01—Matthew Maclachlan, Neha Patel, Nigamkumar Patel, and Rajesh Thapa, also from CIS 660-01, worked with Mr. Bill Pitner, manager of Story and Lee Furniture (storyandlee.com).

More details can be found at http://www.google.com/onlinechallenge/

> Grants and other funds generated by department

A team led by Dr. Yingping Huang received a University Research Grant for $2000 in 2006 for an intrusion detection system and has enabled research on intrusion detection algorithms.

Students in the CIS 486 Projects class in Summer 2008 worked on a USDA-grant-funded project in GIS/geodatabase design and implementation for the City of Florence Urban Forestry Department. The students were paid a salary for their work and were

screened through normal Human Resources processes for city employees. Two of the three CIS 486 students continued to work on the project after the conclusion of the class.

  ➢ Other awards and distinctions

Several students and faculty have been named to membership in Delta Mu Delta (business honorary) in recent years.

7. How has the department responded to previous program review recommendations?

  ➢ Itemize each major recommendation and state the response

This is the first program review under this policy. Previously our ABET accreditation team reported some deficiencies, concerns, and weaknesses which imply recommendations for the program. The deficiency was that the program had not made improvements based on program outcome assessment resulted from the newness of the program and has been corrected as shown in Table 2 attached. Concerns related to the newness of the program as well and are being addressed as we further develop the course structure for the capstone course. The ABET team identified a weakness related to the fact that we have very limited faculty resources for the size of our undergraduate programs, graduate programs, and research and service expectations.

  ➢ Summarize how previous program review results have been used to inform any of the following that apply: The refinement of mission and goals/objectives; program planning, development and improvement; and budgeting decisions.

This is the first program review under this policy.

8. State the vision and plans for the future of the department

  ➢ Provide a vision statement of where the department would like to be in five years; assuming only costs to continue, with no additional state resources

The CIS Department will certainly seek to maintain the ABET accreditation which we have worked so hard to achieve and to meet all of the requirements associated with AACSB academically/professionally qualified faculty. Intellectual contributions and service to the University, the community and the discipline will also be continued.

With existing resources, the CIS Department will expect to continue to provide two major options at the undergraduate level and an Information Systems concentration at the graduate level. Each year both programs will be reviewed for any needed changes to the structure or content of the program courses. In addition, we provide one core course at the graduate level (CIS 625) and a course that is included within the

undergraduate general education requirements of almost all programs University-wide (CIS 125). We are presently proposing the addition of a second undergraduate course to our service offerings which would be required of all CoB majors. To do this within existing resources will require significant attention to scheduling and likely will cause us to limit our offerings of sections of the three specialty courses in each to only once a year. This will require that faculty advise students very carefully and that students become careful planners—a skill which is essential to professionals in our discipline anyway. As the courses in our present undergraduate curriculum mature, it is likely that additional courses will be offered online. While addition of online offerings will add to our flexibility, the nature of our material will dictate against relying too heavily on that option.

Within existing resources, we would expect to maintain a maximum of 200 undergraduate majors and 50 graduate concentrations and to graduate near one-fourth of those numbers each year. Growth in the major areas beyond those numbers will require the addition of faculty beyond the budgeted number, because we are limited in the number of seats (computer workstations) in our face to face classes.

> ➢ Provide a vision statement of where the department would like to be in five years, if additional state resources are available

A host of options are available to us if more faculty and laboratory resources are available. For example, there is great interest in the development of a curriculum, or at least some elective courses, in the areas of security, privacy, information assurance, and software quality assurance. These disciplines are quickly emerging as keys to large enterprise-wide systems and demand is already evident for personnel with knowledge in these areas. New faculty and new laboratory facilities would have to be deployed to implement these options.

ABET presently accredits programs in the areas of Information Technology and Computer Science in addition to Information Systems. As the University continues to develop it is possible that a need could be documented for an Information Technology program which could be associated with our Department and separately accredited, sharing some resources with CIS and some with Computer Science. While not a proposal at this point, this is probably an option worth considering as the University continues to grow and prosper.

9. Program Overview

   ➢ Brief overview of program

   The Computer Information Systems major is composed of two major options: Enterprise Information Systems and End User Information Systems. The Enterprise Information Systems option emphasizes activities enabling students to work in organizations developing information systems, including networks, large web applications and database systems. The End User Information Systems option prepares students to provide day-to-day support in smaller information systems environments. The types of support include help desk, user training, and tech support for pcs and office-type applications and use of end-user applications to develop local (usually departmental and small organization) projects including databases, spreadsheets, web applications, desktop publishing applications, and local area networks. The market for CIS majors in our immediate area is largely for End User Computing majors, but students who are willing to relocate to larger markets find significant opportunities in both categories.

   ➢ Mission statement for the program: Reference its relationship to college and institutional mission, as well as state priorities where appropriate

   The UNA mission of engaging in teaching, research, and service in order to provide educational opportunities for students, an environment for discovery and creative accomplishment, and a variety of outreach activities meeting the professional, civic, social, cultural, and economic development needs of our region in the context of a global community is closely related to the College of Business mission. The mission of the College of Business is to prepare students to become successful professionals capable of leading organizations in a diverse, dynamic global economy. The College emphasizes teaching excellence and provides a learning environment in which the College contributes to student development and to the business community through professional involvement and applied intellectual contributions.

   Within this context, the mission for the CIS program is to prepare students to become successful information systems professionals capable of performing a variety of technical and leadership roles within information systems organizations in a diverse,

dynamic global economy. Like the College of Business, the CIS Department emphasizes teaching excellence and provides a learning environment in which the faculty and programs contribute to student development and to the business community through professional involvement and applied intellectual contributions

> ➢ Goals and objectives of the program relative to teaching, research and public service, and assessment of program performance in relation to them

Teaching goals:
- all faculty will provide up-to-date information to students and
- all students (during the program) will be provided opportunities for practicing the learned skills in both the classroom environment and in the real world.

Research goals:
- All AQ and PQ faculty will participate in research activities yielding intellectual contributions which will at least maintain their AQ or PQ status for AACSB.
- All other faculty will participate in some research activities according to their specific professional development plans

Service goals:
- The CIS Department will maintain an intellectual contribution profile which exceeds the requirements of AACSB standards
- All full time faculty will participate in university service, community service, advising, and service to the discipline which will qualify each individual for participating faculty status in compliance with AACSB standards

> ➢ Student Learning Outcomes of the program: Student learning outcomes should identify in behavioral terms the broad skill area students should master as a result of the program by the time they graduate. *A matrix indicating which courses address each of the outcomes identified may be included*

Table 5 identifies the student learning outcomes prescribed by ABET and adopted by the CIS faculty as appropriate for our undergraduate programs and the courses within our program which contribute to the outcomes. During the Fall semester 2008, we will revisit this matrix, which was noted by ABET to indicate that courses were spreading too thin, having so many different goals being addressed by each course. The recommendation was that we identify fewer course goals and focus the attention within the courses on the identified goals, thereby assuring more depth of understanding of the specified goal.

➢ Governance structure of the program

The faculty of the Department are organized based on routine teaching responsibilities. All members of the graduate faculty function as a graduate curriculum committee. And all 10 members of the full time faculty serve as a committee of the whole for undergraduate curriculum matters. Each course has a lead faculty member/course coordinator. The course coordinator is responsible for coordinating the identification of course objectives and their alignment with the program objectives. Recommendations for textbooks, assessment, or other items pertinent to the content of the course are handled through the course coordinators. Changes in catalog descriptions, including prerequisites and published offering schedules are also managed through the course coordinators, in consultation with the full faculty when appropriate. For decisions affecting the courses within each separate option, the faculty who teach those courses form a subcommittee to make recommendations to the full faculty. Similarly, all who routinely teach the service courses serve as a subcommittee for handling matters pertinent to each service course. Attached is a table showing the current course coordinator assignments (Table 6).

➢ Admissions requirements (including limited access requirements if applicable)

Beginning with the Fall 2006 semester, students were required to complete MA 112 (or equivalent) as well as CIS 125 before enrolling in the CIS major courses. Further the new curriculum required that students complete both required 200-level CIS courses before proceeding to the upper division CIS courses. After a period of managed transition, these requirements are firmly in place and, based on anecdotal evidence, seem to have made a difference in the level of performance of the students.

Beginning Fall 2008, the College of Business has established admission requirements for admission to each major. These include a 2.0 grade point average and completion of specified general education coursework. As indicated on Table 7, these courses would typically be completed during the freshman and sophomore years and are often completed at community colleges. Some additional courses must be completed immediately after application for admission to the College of Business major. These additional courses are also typically completed during the sophomore year.

➢ Degree requirements (including limited access requirements if applicable)

Both CIS options are 128 hour degree programs leading to a BBA. The General Education and Major Core requirements are the same as those of all business majors. The CIS major is a 30 credit hour major, with 21 hours being required by both options. The remaining 9 hours are prescribed for each of the two options. The attached four-year plan (Table 7) shows in summary the requirements for each major and how they differ.

➢ Curriculum (including common prerequisites)

Table 9 shows graphically all prerequisites for all courses required of CIS majors, including general education courses and business core courses. The content of the courses required of all CIS students is developed based on the content prescribed by ABET in its curriculum standards.

➢ Associated institutes and centers

None

➢ Involvement of external constituents in establishing goals, objectives, learning outcome and curriculum

The CIS Department has established an Industry Advisory Board which will meet twice annually to review the goals, objectives, learning outcomes and curriculum and will serve as a sounding board for changes in each of these areas. In addition, faculty are constantly in contact with alumni and employers, including internship sponsors, to gain feedback in these areas. It is our goal to expand the use of the University's surveys of employers and alumni to more effectively gauge the opinions of these constituencies.

➢ Community college articulation where appropriate

The department has a working relationship with community colleges in the area, in addition to the articulation agreement through the State of Alabama. The department has provided a transfer version of our four year plan for undergraduates from Alabama Community Colleges and from Northeast Mississippi Community College, indicating the specific courses in their curriculum which will transfer into curriculum. These are difficult to keep updated, but seem to be much appreciated by parents of students who have a clear interest in the efficient transition from the community college to UNA CIS. These are also appreciated by the CIS advisors at the community colleges. (Table 7 and 8)

➢ Program productivity including number or majors and degrees conferred

The latest data in the tables below reflect data from the year that the new program was initiated, but students were graduating under provisions of the old program. The decline in majors in 2005-07 is, we believe a direct reflection of the fact that students knew that our program was in transition. Our preliminary headcount information shows that for 2007-08 the number of majors is back to around 200, which is our target enrollment. Changes in the admission requirement at the College level could have some impact, but it is premature to speculate concerning the magnitude of the impact. Graduation rates seem stable for the period.

Number of Unduplicated Majors
(Summer, Fall, and Spring Semesters Combined)

Bachelor	2002-03	2003-04	2004-05	2005-06	2006-07	Average
Status						
Full-Time	176	179	185	138	111	157.80
Part-Time	89	82	81	103	81	87.20
Total	265	261	266	241	192	245.00
FTE Students	205.67	206.33	212.00	172.33	138.00	186.87

Number of Degrees Conferred

Bachelor	2002-03	2003-04	2004-05	2005-06	2006-07	Average
Degrees Awarded	51	53	65	56	44	53.80

10. Program Evaluation

➢ Describe briefly the means of assessing student learning outcomes, and recent improvements based on the results of such assessment. Means of assessing outcomes may include but are not limited to standardized tests, capstone course/program examinations, analyses of theses, portfolios and recitals

Attached is a summary table (Table 2) indicating the status of the assessment process for each CIS program learning outcome. As indicated, assessment of program outcome f was completed last year and actions have been taken to make improvements related to problems identified through that assessment. Data were collected to assess program outcomes a, b, c, i, and j during the last academic year. Below is a summary of the preliminary analysis of some of those data. Further work on identification of areas of weakness and improvement actions will continue into the fall semester 2008. Work will begin on data collection in the fall semester for the assessment of the remaining objectives.

To assess Program Outcome c, the CIS 456 students in the Spring and June Summer 2008 sessions were assigned case studies in addition to their other assignments. The students worked on these case studies individually and they all came up with different Web design solutions to the case studies. The total score on the rubric was 300 and the overall average for the students in the two classes was 282. Of the 45 students in this advanced-level class in the End User Systems CIS major for the Spring and Summer semesters, 26 (58 percent) were able to successfully complete the cases with a high level of performance and 5 (11 percent) scored below our performance "satisfactory" expectation of 240.

To assess Program Outcome c, the CIS 486 students in the Fall 2007 section were assigned completion of a major system project with several graded components. This

project was a real life project for a local business. The total score on the final project assessment rubric was 20 and the overall average for the students in the class was 17. Of the 10 students in this capstone class for all CIS majors, 3 (30 percent) successfully completed the project with a high level of performance and 1 (10 percent) scored below our "satisfactory" performance expectation of 16.

Based on these results, the primary problem area we identified is the percentage of individual students who are performing on a less than satisfactory level on these measures. While our preference would be to have no students in that category, realistically we would like the percentage to be below 10 percent on each measure. Two actions already in place should have an impact on this result in the future.

First, when our new program was initiated, we added a requirement that the pre-calculus algebra course be completed before any CIS major courses could be taken and that the Introduction to Programming and the Information Systems in Organizations course be completed before entering the advanced courses. These courses were significantly revised in Fall 2006, but we are still graduating a few students who are under old catalogs and did not have the advantage of these courses. Virtually all of those students are graduated at this time and further evaluations should show improvements based on these results.

Second, the College of Business has instituted admission requirements for all Business majors, including all CIS majors. This requirement goes into effect with the Fall semester 2008 entering freshman class. We believe this will also have a positive impact on appropriate placement of students who might be performing poorly because of inappropriate major selection.

Work still continues during the fall semester on the other direct measures related to the 2007-2008 assessment plan components. The CIS Industry Advisory Board will be asked to evaluate and score the projects from one class and give feedback concerning areas for improvement in both the content of the assignments and the student performance.   When this is completed (we have set a working deadline of September 30, 2008), all of the material will be consolidated into one report, and reviewed by the entire departmental faculty for determination of additional actions.

> Describe briefly the department's continuous improvement plan utilized to assess and improve the program on an on-going basis. Summarize improvements made as a result of the continuous improvement plan

Because of the dynamic nature of the IS discipline and the ever changing nature of computing technology, curriculum changes and specific content changes are necessary annually. Members of the department look for new ideas in academic publications and conferences, through a variety of online resources, and through discussions among themselves. The faculty meet frequently to discuss what is happening in the technology world and how it might be brought to the classroom. Students, alumni, employers, and advisory board members are consulted frequently. This year there will be a focus on formalizing and documenting some of these inputs from constituents.

> ➢ Provide a brief analysis of the grade distribution patterns of courses and delineate an action plan for improvement where appropriate.

The table below shows the summary grade distribution for spring 2008. The most striking item within this distribution is the number of Ws (over 10% overall) in each category. The faculty will hold discussions to determine the cause of this and will seek to determine whether this indicates a problem needing correction. Other aspects of the grade distribution will also be evaluated during the next review cycle.

Spring 2008 Grade Summary
Number of students by course category and letter grade

	A	B	C	D	F	W	I	Total
CIS 125	149	63	39	12	29	40	1	333
Undergrad	88	81	26	1	3	19	0	218
Grad	133	62	6	0	1	20	0	222
Total	370	206	71	13	33	79	1	773

11. Program Recommendations

> ➢ Identify recommendations for improvement of the program.

a) Recommendations for changes, which are within the control of the program, including curricular changes if appropriate

None

b) Recommendations for changes that require action at the Dean, Provost, or higher levels

A proposal will be submitted this month to change the prerequisite structure for CIS 236. This course currently is a co-requisite of CIS 225, but in the interest of better scheduling and meeting student needs we are developing a proposal which would require that CIS 236 have the same prerequisites as CIS 225, i.e., CIS 125 and MA 112 or any Area 3 math class. This will require action of the College of Business Administrative and Curriculum Committee and University Curriculum Committee.

TABLE 1

	Learning Outcomes	CIS Core Courses		CIS Advanced Courses – Advanced Common Courses					Enterprise Information Systems			End User Computing Systems			External Assess-ments	Assess-ment Cycle (year)
		225	236	330	366	376	406	486	315	445	466	350	446	456		
f	An ability to communicate effectively with a wide range of audiences		X*					X			X*	X*		X*	CAAP; ***Faculty	2006-2007
a	An ability to apply knowledge of computing and mathematics appropriate to the discipline						X	X			X			X	CAAP	2007-2008
b	An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution						X	X			X			X	Adv. Bd. Rep.	2007-2008
c	An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs						X	X	X		X			X	Adv Bd. Rep.	2007-2008
i	An ability to use current techniques, skills and tools necessary for computing practice.						X	X			X		X		Adv Bd. Rep.	2007-2008
j	An understanding of processes that support the delivery and management of information systems within a specific application environment							X			X			X	**EBI	2007-2008
d	An ability to function effectively on teams to accomplish a common goal						X	X			X	X			Peer Review	2008-2009
e	An understanding of professional, ethical, and social responsibilities							X			X			X	**EBI	2008-2009
g	An ability to analyze the local and global impact of computing on individuals, organizations, & society		X					X			X			X	**EBI	2008-2009
h	Recognition of the need for and an ability to engage in continuing professional development										X		X		**EBI	2008-2009

Program Outcome Assessment Cycle and Locus of Assessments (revised 1/20/2008)

Embedded Assessments: CIS Course Number

* For the communications outcome: CIS 236 First cycle only; CIS 350, 466 and 456 included after first cycle

** ETS MFAT for Business Disciplines is planned for Spring 2008 and the EBI survey is planned for Spring 2009

***Faculty from the Departments of English and Communications

TABLE 2

UNA CIS Program Assessment Cycle (repeats every three years) and Status of Assessments					
Program Outcomes		External Assessments	Embedded Assessments	Assessment Cycle (year of first assessment)	Completion Status as of July 11, 2008	Actions Taken
f	An ability to communicate effectively with a wide range of audiences	CAAP; ***Faculty	CIS 236	2006-2007	Completed as scheduled	Adjustments to course content in CIS 236 and 330 to clarify expectations; additional assignments to enhance learning; and rubric improvements to enhance assessment reliability
a	An ability to apply knowledge of computing and mathematics appropriate to the discipline	CAAP	CIS 315, 406, 456, 486	2007- 2008	Embedded assessment data collected; data analysis underway	
b	An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution	Ind. Adv. Bd.	CIS 456, 406, 486	2007- 2008	Embedded assessment data collected; data analysis underway; Industry Advisory Board to meet in Sept 2008	
c	An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	Ind. Adv Bd.	CIS 456, 406, 486	2007- 2008	Embedded assessment data collected; preliminary data analysis complete; Industry Advisory Board to meet in Sept 2008	Problem area identified: the percentage of students identified as performing below satisfactory is slightly higher than our acceptable threshold
i	An ability to use current techniques, skills and tools necessary for computing practice.	Ind. Adv Bd.	CIS 315, 456	2007- 2008	Embedded assessment data collected; data analysis underway; Industry Advisory Board to meet in Sept 2008	
j	An understanding of processes that support the delivery and management of information systems within a specific application environment	EBI	CIS 456, 466, 486	2007- 2008	Embedded assessment data collected; data analysis underway	
d	An ability to function effectively on teams to accomplish a common goal	Peer Review	CIS 406, 486, 350, 466	2008-2009	Data collection to occur in fall 2008 and spring 2009	
e	An understanding of professional, ethical, and social responsibilities	**EBI	CIS 350, 406, 486	2008-2009	Data collection to occur in fall 2008 and spring 2009	
g	An ability to analyze the local and global impact of computing on individuals, organizations, & society	**EBI	CIS 236	2008-2009	Data collection to occur in fall 2008 and spring 2009	
h	Recognition of the need for and an ability to engage in continuing professional development	**EBI	CIS 466,446	2008-2009	Data collection to occur in fall 2008 and spring 2009	

TABLE 3

Program Objectives: 5 years after graduation, Computer Information Systems graduates should be:	Measures			
Contributing to the economic development and society through the development and management of computer information systems for business and research.	Entry positions in field	Community involvement and service		
Advancing in their careers in organizations using computer information systems skills and understanding of business and contemporary technological issues.	Entry positions in field	Promotions		
Continuing their professional development through professional study and research.	Graduate school	Certifications and Awards	Training for specialization and new technologies	Professional society memberships
Exhibiting leadership in their chosen career.	Communication skills	Interpersonal skills	Teamwork skills	Management skills
Sources of Data	Assessment Schedule Details			
University Alumni Survey (Individual program data has previously not been included, but plans are underway to include this data).	Conducted by UNA Office of Research every 3 years	Next one scheduled for Fall 2007	Last one completed Fall 2004	Sample results included in supplemental materials
University Employer Survey (Individual program data has previously not been included, but plans are underway to include this data).	Conducted by UNA Office of Research every 3 years	Next one scheduled for Fall 2009	Last one completed Fall 2006	Sample results included in supplemental materials
Advisory Board Analysis of Survey Responses Advisory board: will be asked to help design new questions for both surveys. This is a new activity.	After tabulation of survey results above	First opportunity will be Fall 2010	Graduates from inaugural class will have graduated	Surveys will involve students who entered during the transition to the new program

TABLE 4

SUMMARY OF FACULTY QUALIFICATIONS and INTELLECTUAL CONTRIBUTIONS
Dept. of Computer Information Systems

Name	Highest Earned Degree & Year	Date of First Appointment to School	% of Time Dedicated to School's Mission	Acad Qual	Prof Qual	Other	Number of Contributions in last 5 years[1]						Normal Professional Responsibilities
							Learning & Pedagogical Scholarship		Discipline-Based Scholarship		Contributions to Practice		
							PRJ	OIC	PRJ	OIC	PRJ	OIC	
Alexander, Paulette	PhD 2001	Aug-81	100%	Yes				3		3		3	ADM, SER, RES, GR
Bailey, Robert	ABD 2005 (PhD 2008?)	Jan-99	100%	Yes								2	UG, SER, RES
Crabtree, John	PhD 2007	Jul-07	100%	Yes								3	UG/GR, RES, SER
Davis, Ron	MBA 1999 (PhD in prog.)	Aug-03	100%			Yes		3		1			UG, RES, SER
Gossett, Carol	MBA 1994	Aug-96	100%			Yes		1	1			1	UG, RES, SER, ADM
Huang, Yingping	PhD 2005	Aug-04	100%	Yes					3	3	2	3	UG/GR, RES, SER
Jiang, Zhengrui	PhD 2005	Aug-05	100%	Yes					3	3	2	3	UG/GR, RES, SER
Nickels, David	PhD 2005	Aug-07	100%	Yes						3		1	UG/GR, RES, SER
Parris, Joan	PhD 2002	Aug-02	100%	Yes			2	3		1			UG/GR, RES, SER
Williams, Jackie	EdS 1998 (ABD 2008)	Aug-00	100%	Yes				1					UG, RES, SER
Chandler, Renee	MBA 2006	Aug-07	21%		Yes								UG
Colburn, Jon Matt	MBA 2005	Aug-99	28%		Yes								UG
Lin, Y. *	PhD 1995	Aug-05	9%		Yes				2	1			GR
McGee, John	MMIS 1999	2002-COB 2000-UNA	14%		Yes			1					UG
Parkhurst, Lerita	MBA 2003	Aug-06	21%		Yes								UG
Peters, Pam	MEd 1994 (MBA in prog)	Jan-07	14%		Yes								UG
Pi, S. *	PhD 1999	Aug-03	18%		Yes				2				GR
Simpson, Jill	ABD 2008	Aug-04	21%	Yes									UG
TOTAL CIS				9	3	6	2	12	11	15	4	16	

* China program faculty

TABLE 5

		Faculty Submitting Goals	Williams	Bailey	Davis	Alexander and Crabtree	Gossett	Williams	Bailey	Jiang, Parris and Parkhurst	Davis	Huang	Gossett	Parris	Huang	Bailey
		CIS Course Number	125	225	236	315	330	350	366	376	406	445	446	456	466	486
		Program Outcomes														
a	An ability to apply knowledge of computing and mathematics appropriate to the discipline		1, 2, 3, 4, 5, 6, 7	3,6	1	1,3,4,6		1, 2, 3, 4	3,5	1,2,3,4,5,6,7,8,9	1	4	1	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	6	1
b	An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution		8, 12	3,6	2, 3		2	1, 4	2,7	2,4,5,6,7,8,9	2	1,2,3,4	1, 2, 3, 4, 5, 6, 7, 8	4, 5, 6, 7, 8, 9, 10, 11, 12	1	2,4,6
c	An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs		8, 12	1,2,3	2, 3		1, 3	1, 4	1,3	2,7	2, 3	6	2	2, 4, 9 10, 11, 12	1	1,3,6
d	An ability to function effectively on teams to accomplish a common goal			11	8		5	3	3,9		6	7			2	7
e	An understanding of professional, ethical, and social responsibilities			3	4	2	6	5	8			5		14	3	2
f	An ability to communicate effectively with a wide range of audiences		9, 10, 11	8,1	7		4	2, 3	9		5	7	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 4, 6, 7, 9, 13	1,2	8
g	An ability to analyze the local and global impact of computing on individuals, organizations, and society		13	6	4, 5		7, 11		8			5		14	4,6	3,5
h	Recognition of the need for and an ability to engage in continuing professional development		14	6	6	5	9	1, 4	6		4	8	8		5	1,4
i	An ability to use current techniques, skills and tools necessary for computing practice		14	4,5,7,9,10	1	7	8, 10	1, 4	4,5,6,7	1,2,3 4,5,6 7,8,9	1	2,3,4	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 4, 5	6	1,3,6
j	An understanding of processes that support the delivery and management of information systems within a specific application environment				1,2,3, 4,5,6, 7,8		8							6	4	

TABLE 6

CIS Department
Lead Faculty/Course Coordinator
2008-2009

Lead Faculty	Undergraduate		Graduate	
Alexander	376	EMB 406		EMB 506
Bailey		486		
Crabtree	225	315	615	660
Davis	406			
Gossett	330	446		
Huang	445	466	625	
Nickels	236		627	685
Parris	366	456	556	BE
Williams	350	125		

TABLE 7

UNIVERSITY OF NORTH ALABAMA
College of Business
2008 - 2009

COMPUTER INFORMATION SYSTEMS MAJOR OPTIONS
Enterprise Information Systems or End User Computing Systems
Four Year Plan

		First Semester				Second Semester			
			Grade	Quality Points				Grade	Quality Points
FRESHMAN	EN 111 or EN 121	3 hrs.			EN 112 or EN 122	3 hrs.			
	MA 100 OR MA 112*	3 hrs.			MA 112 OR QM 295*	3 hrs.			
	*Natural Science w/lab***	4 hrs.			*Natural Science w/lab***	4 hrs.			
	HI 101 or HI 101-H or HI 201	3 hrs.			HI 102 or HI 102-H or HI 202	3 hrs.			
	CIS 125	3 hrs.			EC 251	3 hrs.			
	TOTAL	**16 hrs.**			*TOTAL*	**16 hrs.**			
SOPHOMORE	EN 231 or EN 233	3 hrs.			EN 232 or EN 234	3 hrs.			
	COM 201 or COM 210	3 hrs.			QM 292	3 hrs.			
	QM 291	3 hrs.			AC 292	3 hrs.			
	AC 291	3 hrs.			BL 240	3 hrs.			
	EC 252	3 hrs.			*CIS 236*	3 hrs.			
	CIS 225	3 hrs.			*Fine Arts Elective****	3 hrs.			
					CAAP & apply to CoB major	0 hrs.			
	TOTAL	**18 hrs.**			*TOTAL*	**18 hrs.**			
JUNIOR	QM 295 OR *General Elective**	3 hrs.			MG 330	3 hrs.			
	MK 360	3 hrs.			*300/400 Level Elective*	3 hrs.			
	CIS 315 or *CIS 350*	3 hrs.			General Elective	3 hrs.			
	CIS 330	3 hrs.			*CIS 366*	3 hrs.			
	MG 382W	3 hrs.			*CIS 376*	3 hrs.			
					Apply for Graduation				
	TOTAL	**15 hrs.**			*TOTAL*	**15 hrs.**			
SENIOR	FI 393	3 hrs.			MG 498	3 hrs.			
	MG 420	3 hrs.			*300/400 Level Elective*	3 hrs.			
	CIS 406	3 hrs.			*Non-business Elective*	3 hrs.			
	CIS 445 or *CIS 446*	3 hrs.			*CIS 466* or *CIS 456*	3 hrs.			
	*International Elective*****	3 hrs.			*CIS 486*	3 hrs.			
	TOTAL	**15 hrs.**			*TOTAL*	**15 hrs.**			

*as appropriate, based on SAT or ACT score and high school courses. Subsequent courses chosen, based on whether MA 100 is included in the student's program of study.

**FROM PRESCRIBED LIST

***FROM PRESCRIBED LIST; foreign language if pursuing B.A.

Must be completed or enrolled prior to application for CoB major admission

Must be completed before or immediately after admission to CoB major

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TABLE 8
UNIVERSITY OF NORTH ALABAMA
College of Business
2008 - 2009
COMPUTER INFORMATION SYSTEMS MAJOR OPTIONS
Enterprise Information Systems or End User Computing Systems
Alabama Community College Transfer Plan
(Community College Class Numbers Listed in Red)

</div>

	First Semester			*Second Semester*		
		Grade	Quality Points		Grade	Quality Points
FRESHMAN	EN 111 (ENG 101) or EN 121 — 3 hrs.			EN 112 (ENG 102) or EN 122 — 3 hrs.		
	MA 100 OR MA 112* (MTH 112) — 3 hrs.			MA 112 OR QM 295* (MTH 120 or MTH 125) — 3 hrs.		
	*Natural Science w/lab** * — 4 hrs.			*Natural Science w/lab** * — 4 hrs.		
	HI 101 (HIS 101 or HIS 111 or HIS 121) or HI 101-H or HI 201 (HIS 201) — 3 hrs.			HI 102 (HIS 102 or HIS 112 or HIS 122) or HI 102-H or HI 202 (HIS 202) — 3 hrs.		
	*Fine Arts Elective*** * — 3 hrs.			**CIS 125** *(CIS 130 or 146)* — 3 hrs.		
	TOTAL — 16 hrs.			**TOTAL** — 16 hrs.		
SOPHOMORE	EN 231 (ENG 251 or ENG 261 or ENG 271 or ENG 273) or EN 233 — 3 hrs.			EN 232 (ENG 252 or ENG 262 or ENG 272 or ENG 274) or EN 234 — 3 hrs.		
	COM 201 (SPH 106 or SPH 107) or COM 210 (SPH 226) — 3 hrs.			QM 292 (BUS 272) — 3 hrs.		
	QM 291 (BUS 260 or 271) — 3 hrs.			AC 292 (BUS 242) — 3 hrs.		
	AC 291 (BUS 241) — 3 hrs.			BL 240 (BUS 263) — 3 hrs.		
	MG 330 (BUS 275) — 3 hrs.			**CIS 236** — 3 hrs.		
	CIS 225 *(CIS 212)* — 3 hrs.			CAAP — 0 hrs.		
	TOTAL — 18 hrs.			**TOTAL** — 15 hrs.		
JUNIOR	EC 251 (ECO 231) — 3 hrs.			EC 252 (ECO 232) — 3 hrs.		
	QM 295 (MTH 120 or MTH 125) OR *General Elective* * — 3 hrs.			*300/400 Level Elective* — 3 hrs.		
	MK 360 (BUS 285) — 3 hrs.			MG 382W — 3 hrs.		
	CIS 315 *or* **CIS 350** — 3 hrs.			**CIS 366** — 3 hrs.		
	CIS 330 — 3 hrs.			**CIS 376** — 3 hrs.		
	General Elective — 3 hrs.			**Apply for Graduation**		
	TOTAL — 18 hrs.			**TOTAL** — 15 hrs.		
SENIOR	FI 393 — 3 hrs.			MG 498 — 3 hrs.		
	MG 420 — 3 hrs.			*300/400 Level Elective* — 3 hrs.		
	CIS 406 — 3 hrs.			*Non-business Elective* — 3 hrs.		
	CIS 445 *or* **CIS 446** — 3 hrs.			**CIS 466** *or* **CIS 456** — 3 hrs.		
	*International Elective**** * — 3 hrs.			**CIS 486** — 3 hrs.		
	TOTAL — 15 hrs.			**TOTAL** — 15 hrs.		

*as appropriate, based on SAT or ACT score and high school courses. Subsequent courses chosen, based on whether MA 100 is included in the student's program of study.

**FROM PRESCRIBED LIST [BI 101 (BIO 101), BI 102 (BIO 102), BI 111 (BIO 103), BI 112 (BIO 104), CH 101 & CH 101L (CHM 104), CH 102 & CH 102L (CHM 105), CH 111 & CH 111L (CHM 111), CH 112 & CH 112L (CHM 112), ES 121 & ES 121L (PHS 111), ES 131 (GLY 101), ES 132 (GLY 102), GE 111 (GEO 101 or GEO 220), GE 112 (GEO 102), PH 101 (PHS 112), PH 121 (PHY 120 or PHY 218), PH 241 (PHY 201), PH 242 (PHY 202), PH 251 (PHY 213), PH 252 (PHY 214)].

***FROM PRESCRIBED LIST; foreign language if pursuing B.A. [AR 170 (ART 170), AR 281 (ART 203), AR 282 (ART 204), FR 101 & FR 111 (FRN 101), FR 102 & FR 112 (FRN 102), FR 201 (FRN 201), FR 202 (FRN 202), GR 101 & GR 111 (GRN 101), GR 102 & GR 112 (GRN 102), GR 201 (GRN 201), GR 202 (GRN 202), MU 222 (MUS 101), PHL 201 (PHL 106), RE 221 (REL 151), RE 231 (REL 152), SP 101 & SP 111 (SPA 101), SP 102 & 112 (SPA 102), SP 201 (SPA 210), SP 202 (SPA 202), TH 210 (THR 120 or 126).

****BL 455 OR EC 463 OR FI 463 OR MG491 OR MK 491

TABLE 9
UNIVERSITY OF NORTH ALABAMA
College of Business
2008 - 2009 Draft
COMPUTER INFORMATION SYSTEMS MAJOR OPTIONS
Enterprise Information Systems or End User Computing Systems
Northeast Mississippi Community College Transfer Plan
(Community College Class Numbers Listed in Red)

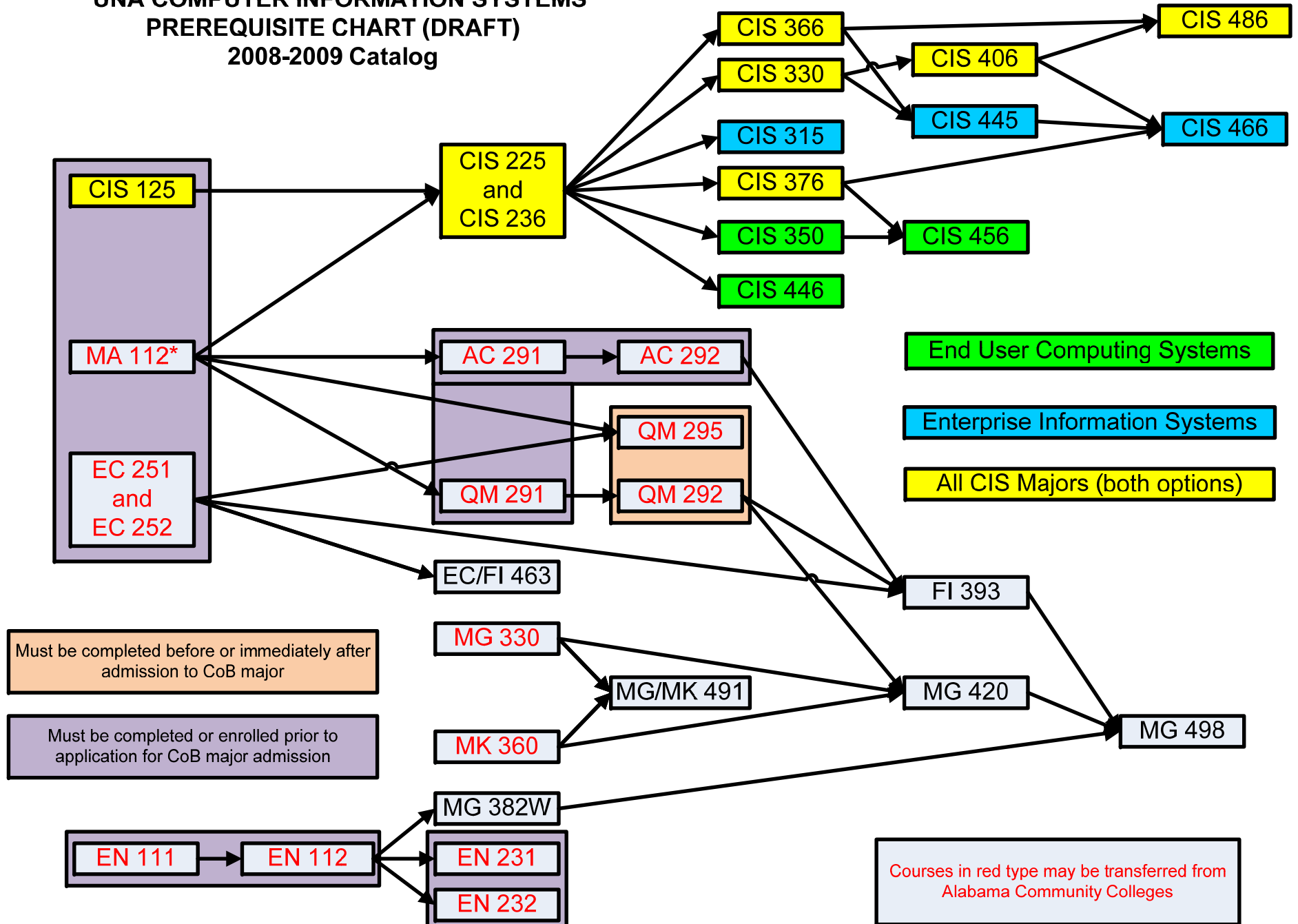|	*First Semester*		Grade	Quality Points	*Second Semester*		Grade	Quality Points
FRESHMAN	EN 111 (ENG 1113) or EN 121	3 hrs.			EN 112 (ENG 1123) or EN 122	3 hrs.		
	MA 100 OR MA 112* (MAT 1313)	3 hrs.			MA 112 (MAT 1313) OR QM 295* (MAT 1513 or MAT 1613)	3 hrs.		
	*Natural Science w/lab***	4 hrs.			*Natural Science w/lab***	4 hrs.		
	HI 101 (HIS 1113) or HI 101-H or HI 201 (HIS 2213)	3 hrs.			HI 102 (HIS 1123) or HI 102-H or HI 202 (HIS 2223)	3 hrs.		
	*Fine Arts Elective****	3 hrs.			*CIS 125 (CSC 1113 or CSC 1123)*	3 hrs.		
	TOTAL	**16 hrs.**			**TOTAL**	**16 hrs.**		
SOPHOMORE	EN 231 (ENG 2223 or ENG 2323 or ENG 2423) or EN 233	3 hrs.			EN 232 (ENG 2233 or ENG 2333 or ENG 2433) or EN 234	3 hrs.		
	COM 201 (SPT 1113) or COM 210	3 hrs.			QM 292	3 hrs.		
	QM 291 (BAD 2323)	3 hrs.			AC 292 (ACC 1223)	3 hrs.		
	AC 291 (ACC 1213)	3 hrs.			BL 240 (BAD 2413)	3 hrs.		
	MG 330	3 hrs.			*CIS 236*	3 hrs.		
	CIS 225	3 hrs.			CAAP	0 hrs.		
	TOTAL	**18 hrs.**			**TOTAL**	**15 hrs.**		
JUNIOR	EC 251 (ECO 2113)	3 hrs.			EC 252 (ECO 2123)	3 hrs.		
	QM 295 (MAT 1513 or MAT 1613) OR *General Elective**	3 hrs.			*300/400 Level Elective*	3 hrs.		
	MK 360	3 hrs.			MG 382W	3 hrs.		
	CIS 315 or CIS 350	3 hrs.			*CIS 366*	3 hrs.		
	CIS 330	3 hrs.			*CIS 376*	3 hrs.		
	General Elective	3 hrs.			**Apply for Graduation**			
	TOTAL	**18 hrs.**			**TOTAL**	**15 hrs.**		
SENIOR	FI 393	3 hrs.			MG 498	3 hrs.		
	MG 420	3 hrs.			*300/400 Level Elective*	3 hrs.		
	CIS 406	3 hrs.			*Non-business Elective*	3 hrs.		
	CIS 445 or CIS 446	3 hrs.			*CIS 466 or CIS 456*	3 hrs.		
	*International Elective****	3 hrs.			*CIS 486*	3 hrs.		
	TOTAL	**15 hrs.**			**TOTAL**	**15 hrs.**		

*as appropriate, based on SAT or ACT score and high school courses. Subsequent courses chosen, based on whether MA 100 is included in the student's program of study.

**FROM PRESCRIBED LIST [BI 111 (BIO 1134), BI 112 (BIO 1144), CH 101 (CHE 1313), CH 101L (CHE 1311), CH 102 (CHE 1413), CH 102L (CHE 1411), CH 111 (CHE 1213), CH 111L (CHE 1211), CH 112 (CHE 1223), CH 112L (CHE 1221), ES 121 & ES 121L (PHY 2254), PH 101 (PHY 2244), PH 121 (PHY 1214), PH 125 (PHY 1114), PH 241 (PHY 2414), PH 242 (PHY 2424), PH 251 (PHY 2514), PH 252 (PHY 2524)].

***FROM PRESCRIBED LIST; foreign language if pursuing B.A. [AR 170 (ART 1113), AR 180 (ART 2713), AR 281 (ART 2713), FR 101 & FR 111 (MFL 1113), FR 102 & FR 112 (MFL 1123), FR 201 (MFL 2113), FR 202 (MFL 2123), MU 222 (MUS 1113 or MUS 1123), PHL 201 (PHI 2113), RE 221 (PHI 1113), RE 231 (PHI 1133), SP 101 & SP 111 (MFL 1213), SP 102 & 112 (MFL 1223), SP 201 (MFL 2213), SP 202 (MFL 2223), TH 210 (SPT 1213 or SPT 2233)].

****BL 455 OR EC 463 OR FI 463 OR MG491 OR MK 491

UNA COMPUTER INFORMATION SYSTEMS
PREREQUISITE CHART (DRAFT)
2008-2009 Catalog

CIS 366 → CIS 486

CIS 330 → CIS 406 → CIS 486

CIS 366 → CIS 406

CIS 330 → CIS 445 → CIS 466

CIS 406 → CIS 466

CIS 125 → CIS 225 and CIS 236

CIS 225 and CIS 236 → CIS 366, CIS 330, CIS 315, CIS 376, CIS 350, CIS 446

CIS 315

CIS 376 → CIS 466

CIS 350 → CIS 456

CIS 446

End User Computing Systems

Enterprise Information Systems

All CIS Majors (both options)

MA 112* → CIS 225 and CIS 236

MA 112* → AC 291 → AC 292

MA 112* → QM 295

MA 112* → QM 291 → QM 292

EC 251 and EC 252 → QM 295

EC 251 and EC 252 → EC/FI 463

EC 251 and EC 252 → FI 393

QM 292 → FI 393

Must be completed before or immediately after admission to CoB major

Must be completed or enrolled prior to application for CoB major admission

MG 330 → MG/MK 491

MG 330 → MG 420

MK 360 → MG/MK 491

MG 420 → MG 498

FI 393 → MG 420

MG 382W → MG 420

EN 111 → EN 112

EN 112 → MG 382W

EN 112 → EN 231

EN 112 → EN 232

MG 382W → MG 498

Courses in red type may be transferred from Alabama Community Colleges

* Test score or MA100 required to qualify for MA112