

**Ferris State University  
College of Technology  
Construction Technology &  
Management Programs**

**ACADEMIC PROGRAM  
REVIEW REPORT**

**AAS, Building Construction Technology  
AAS, Civil Engineering Technology  
BS, Construction Management**

**June, 2011**

**2011 ACADEMIC PROGRAM REVIEW REPORT  
AAS BETM, AAS CETM, and BS CM PROGRAMS**

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# **Section 1**

## **Program Overview**

## **Construction Technology & Management Academic Program Review**

### **Section 1: Program Overview**

The following section is intended to acquaint the readers with the programs' goals, mission and history, as well as explaining the relevance of the programs in today's market, their value to the university community, and their plans for expansion and improvement.

- (A) Program Goals: The Mission Statement of the Construction Technology & Management Programs is, "To educate students in Building Construction Technology, Civil Engineering Technology and Construction Management through a broad-based foundation of appropriate technical and general education courses that will provide them with highly competitive skills and knowledge, construction related employment opportunities at graduation, and the potential for advancement in their careers." This mission was written through faculty and administrative consensus.

The goals of the faculty and staff support the mission statement. It is the goal of the faculty to be the premier construction education center in the country. The new Granger Center is arguably the finest construction education facility in the world. Its laboratories and computer facilities greatly enhance the delivery of education. In addition, a proactive Advisory Committee has been instrumental in offering programmatic input. Finally, continued compliance with the standards of the American Council for Construction Education (ACCE), the world's premier construction accrediting organization, insures that the programs remain current and viable.

The goals of the programs have changed little since the last program review. The faculty is still considering the creation of a Masters degree in Construction Management, as well as the possibility of offering the Bachelor of Science degree on-line.

It is believed that the programs are in compliance with the mission of the university. Students receive a practical education that typically results in employment, and their skills prepare them to be immediately useful to their employers.

- (B) Program Visibility and Distinctiveness: The Construction Technology & Management programs have a number of distinct characteristics. First, Ferris is one of only three accredited Construction Management (CM) programs in the State of Michigan. The other two are in southeast Michigan, making Ferris the only ACCE accredited program north of Grand Rapids. Unlike most traditional CM programs, Ferris has two associate degree programs (Building Construction Technology and Civil Engineering Technology) which not only stand alone, but

also make up the first two years of the Construction Management program. These two-year programs attract a number of students who initially feel that they only wish to pursue an associate degree. However, a large number subsequently choose to stay and earn the Bachelor of Science degree in CM. The enrollment in all programs has steadily increased during the past decade, but, due to demographics and the Michigan economy, has dropped during the last two years. Therefore, the faculty and Coordinator have undertaken an aggressive approach to student recruitment.

Another unique feature of the CM program is that it is being offered in Grand Rapids to working professionals who wish to attend night school. A new cohort will begin in fall, 2011. They are offered three evening classes per week, and can graduate in just over two years.

There are only two other institutions in the state that have accredited Construction Management programs. They are Michigan State University and Eastern Michigan University. Other schools, such as Western Michigan University, Northern Michigan University and Michigan Technological University, have construction programs, but are not accredited. The MSU program was derived from a primarily residential program. The EMU program is more closely aligned with the Ferris program, as it is primarily a commercial construction program educating people to be general contractors and project managers. Both the EMU and MSU programs primarily recruit from southern and southeast Michigan, and thus are not considered a detriment to enrollment at Ferris. Neither is considered by this faculty group to be superior to Ferris in any way.

There are two-year associate degree construction programs in other institutions across the state. For example, several schools have Civil Engineering Technology (CETM) programs which, like the Ferris program, are primarily related to the highway industry. The Building Construction Technology (BCTM) program is quite unique, as there are very few associate degree programs aimed at light commercial construction. Regardless, demand for graduates exceeds the number of available graduates every year. Only a handful of BCT graduates choose to leave Ferris, but 100% typically find work. The rest continue in the CM program. However, the BCTM program acts as an important recruiting tool for students unsure they want a 4-year degree. The CETM program is very unique because students are invited to earn certifications as Aggregate Technicians and Bituminous Technicians through the Institute for Construction Education and Training (ICET) while still at Ferris. There are typically multiple jobs waiting for every graduate, and employers desperate to hire Ferris CETM graduates. However, most CETM students continue and earn the CM degree.

A couple of things stand out when comparing the Ferris construction programs with competing schools in the state. First, although most students ultimately stay to earn a Bachelor of Science degree, the Associate degree programs are a great recruiting tool. Secondly, when our faculty attends annual meetings of the

Associated Schools of Construction (ASC), they realize the importance of staying in step with industry needs. Currently, to stay ahead of the competition, we are developing classes in Virtual Design and Construction and BIM to meet the needs of students and industry.

- (C) Program Relevance: Attached in the appendix is a labor market analysis from the U.S. Department of Labor and also from the official State of Michigan website. According to the U.S. Department of Labor data, the opportunities and salaries for Construction Managers (CM's) are expected to increase through 2018. Median salaries are \$82,300 nationally and \$78,800 in Michigan. Employment opportunities are expected to increase 17% nationally by 2018, and 9% in Michigan.

Jobs for Civil Engineering Technicians (CETM's) and Construction Inspectors (including Building Construction Technicians) are also expected to increase at the average rate of all professions, according to the Department of Labor. The State of Michigan shows median earnings of \$47,300 in Civil Engineering Technology, and an expected increase of 15% in job opportunities by 2018. Construction Inspectors have median earnings of \$51,000.

The field of construction has a major need for graduates in the upcoming years, according to information from our advisory committee members, employers of our students, and construction professional organizations affiliated with our programs (such as the Associated General Contractors and the Michigan Asphalt Paving Association). Due to a great need for repair and replacement of infrastructure during the next few decades, it is anticipated that the demand for construction graduates and skilled craftsmen may exceed the available supply. In the Ferris CETM program, there is a large demand for qualified technicians, and not enough graduates to fill the positions.

The programs respond to emerging issues in the discipline, changes in the labor force, changes in employer needs and other factors of change in a variety of ways. First, the programs have an energized and dynamic Industry Advisory Committee that identifies the changing needs of the industry. These could include such things as computer software usage and communication skills, but also include new concepts in the industry, such as BIM and Superpave. Secondly, the Construction Management Program (which includes the two associate degree programs) is accredited by the American Council for Construction Education (ACCE), which is the premier accrediting body for construction programs in the United States and abroad. ACCE is comprised of both educators and industry representatives. These people are constantly examining and changing ACCE's curriculum requirements to reflect the current needs of industry. Therefore, the accreditation of the Ferris Construction Management program is a testimonial to its relevance.

The programs also respond to the changes in students' needs in several ways. Currently, all upper level Construction Management courses are offered at night in Grand Rapids to allow working professionals to continue their educations.

Students come to Ferris to pursue degrees in construction for a variety of reasons. First, an active student recruitment program made a number of students in career technical centers aware of their educational opportunities. Secondly, the Ferris construction programs have an excellent reputation as being some of the best in the country, so many parents and teachers are recommending Ferris to students. The Graduate Exit Survey and Student Program Evaluation indicate that students and graduates appreciate the hands-on, laboratory intensive coursework offered at Ferris.

- (D) Program Value: The Ferris Construction programs, its facilities and personnel are a benefit to the University community in a variety of ways. First, they account for nearly 300 paying student customers, which is a significant percentage of the College of Engineering Technology's enrollment. The programs attract transfer students externally and from within the university, and provide support courses for the Architectural Technology and Surveying Engineering programs. Faculty members in the Construction programs are very active in a variety of ways. Some are involved in the faculty senate. Others work with student organizations, such as the Associated Constructed Students. Another has been very involved with the Admissions office in recruiting activities.

With the construction of the Granger Center, the students in the construction programs have the finest educational facility in the country. The building has laboratory facilities that are second to none, including four computer labs with user friendly work stations and the latest software. Students also have access to the facility and computers at almost any time of the day and in the evenings. In addition, program faculty members are very involved with the students as academic advisors, as professional organization advisors, and as coaches for student competition teams.

The Faculty Survey is included in Section 2 of this report. The survey indicates that faculty members feel the new Granger Center is an excellent facility. In general, the concerns of the faculty are primarily related to resources. They feel that 25% release time is inadequate for the program coordinator to do an effective job. In addition, they cite a lack of adequate financial and secretarial resources. In general, the Construction Department faculty believes that the Construction programs at Ferris provide a relevant education to students, and adequately prepare them for careers in the industry. Graduates are prepared to go to work and immediately be an asset to the firms hiring them. This opinion is derived from employer and advisory committee feedback. Many of the employers who hire our graduates, from prestigious firms such as Rockford Construction, Walsh Construction, and Whiting-Turner, return every year to hire more people, and indicate that Ferris is providing superior graduates.

The programs, faculty and facilities have benefited entities external to the university in a variety of ways. First, faculty are very involved in professional organizations. These include the Associated General Contractors, the Associated Builders and Contractors, the Michigan Asphalt Paving Association and several others. Members attend meetings and have memberships in a variety of committees. One faculty member is a member of ACCE (The American Council for Construction Education), and has traveled on accreditation site visits to other institutions. Several members are active in the Associated Schools of Construction, including a Regional Director, and have coached student competition teams at the regional and national levels. At least four members regularly do consulting or provide continuing education presentations to outside groups and organizations.

The Program Coordinator and several faculty members have regularly made recruiting trips to high schools, career technical centers and community colleges across the state. During these trips, presentations are made to explain the need for construction graduates and the opportunities available to young people in this field.



## **Section 2**

# **Collection of Perceptions (Survey Results)**

**Construction Technology & Management  
Academic Program Review**

**Section 2: Collection of Perceptions (Survey Results)**

As specified by the Academic Program Review Guidelines, the following surveys are included:

- (1) Graduate follow-up survey (alumni)
- (2) Employer and Advisory Board survey
- (3) Graduate exit survey
- (4) Current student survey
- (5) Faculty survey

The tabulated results of each survey are attached.

**Ferris State University**  
**Construction Management Program**  
**2010 Alumni Survey**  
**Results, Summary and Conclusions**

**Introduction:**

In preparation for a fall, 2010 ACCE reaccreditation visit and the upcoming APR report, the FSU Construction Management program circulated an alumni survey to determine their perceptions and satisfaction with the program. Questions were asked about the relevance of coursework, both technical and general education, as well as their opinions of the faculty, the facilities and other areas of interest.

A total of 73 alumni returned the survey. Attached, please find a numeric summary of the results, a list of those program requirements that could be eliminated, as well as a similar list of topic areas which should be added to the curriculum. These written comments have been shortened or consolidated to make the report easier to read. The originals are available for inspection upon request.

**Results:**

Based on the survey, the majority of alumni (45) are employed as project managers or project engineers. 55 of 66 (83%) of those respondents reporting a salary make in excess of \$50,000 annually.

Students were asked to rate their satisfaction with all coursework in the curriculum, rating on a scale from 1 to 5, with 5 meaning that the student strongly agrees that they were properly prepared, and 4 meaning that the student agrees. A rating of 3 means that the student is neutral, and a 1 or 2 means that they disagree.

Generally, in almost all technical courses taught by the construction programs, the students seemed very satisfied. Those areas receiving an average grade of less than 4 included mechanical/electrical systems (3.61) and heavy civil courses (3.49). In those courses not taught by construction faculty, those receiving a grade of less than 4 included physical sciences (3.96), business principles (3.97) and general education (3.86).

The results also indicated that the Granger facility was excellent, that the program's faculty and staff were excellent teachers and advisors, and that they assisted the students in finding employment. The overall perception of the alumni was that the construction programs are excellent, and that they would enthusiastically recommend the FSU Construction Management program to their friends.

Alumni were also invited to comment on changes that could be made to the program, including topic areas to be deleted or things that could be added. Of the 73 respondents, 51 had no suggestions for areas to be deleted. A total of 4 suggested that calculus could be eliminated.

More suggestions were made regarding new areas that should be added or enhanced. A total of 18 suggested LEED and BIM coursework. 9 suggested more classes in mechanical/electrical systems. 8 wanted more written and oral communications. 5 suggested more classes dealing with subcontractor relations, and 5 more wanted more on change orders, punch lists and submittals. A full list of suggestions is contained in this document.

### **Summary and Conclusions:**

While nothing in the survey indicated a significant problem, there are several areas that could be addressed. Based on the numeric scores and written comments, it would appear that the program should enhance or provide more educational opportunities in the areas of mechanical/electrical systems and heavy civil education. This could be accomplished by changing the current mechanical/electrical systems course and by incorporating more civil projects into the core of the curriculum.

In addition, providing more opportunities for written and oral communications should be examined. Those responding about communications may not be aware that the program has previously addressed this issue based on advisory committee input.

Also, it has been strongly suggested in written comments that LEED and BIM education and training should be explored. This is actually being considered in a newly-initiated revision to our current CONM 423 course.

In conclusion, with some of the suggested changes listed above, it appears that the Construction Management program at Ferris is strong and viable, with excellent curriculum, faculty, staff and facilities.



The following pertain to facilities, faculty, and overall perceptions. Again, rate from 5 to 1.

- 23. 4.66 The Construction faculty were excellent academic advisors.
- 24. 4.51 The faculty in the Construction programs were excellent teachers.
- 25. 3.85 The faculty outside my program were excellent.
- 26. 4.81 The Granger Center is an excellent teaching facility.
- 27. 4.70 The equipment and facilities in Granger are excellent.
- 28. 3.33 Career Services was helpful in finding me employment.
- 29. 4.11 The Construction staff and faculty assisted me in finding employment.
- 30. 4.70 My overall perception is that the Construction programs are excellent.
- 31. 4.92 I would recommend the Construction programs to a friend.

32. Courses or topic areas in the curriculum which I feel could be eliminated are:

*Listed below is a summary of courses or content suggested for elimination, as well as the number of alumni who suggested them:*

- (a) 51: Nothing
- (b) 4: Calculus
- (c) 2: Framing
- (d) 2: Construction Economics
- (e) 2: Cultural Enrichment and Social Awareness classes
- (f) 1: Accounting
- (g) 1: Formwork
- (h) 1: Combine Estimating classes
- (i) 1: Construction Practices
- (j) 1: Statistics

33. The curriculum could be improved by adding additional courses or material in the following topic areas:

*Listed below is a summary of courses or content suggested for addition or enhancement in the program, as well as the number of alumni who suggested them:*

- (a) 9: Nothing
- (b) 18: Leed and BIM training
- (c) 9: Additional Mechanical/Electrical coursework
- (d) 8: More written and oral communications
- (e) 5: Subcontractor relationships
- (f) 5: Change orders, Punch Lists, Submittals
- (g) 3: More heavy civil coursework
- (h) 3: More blueprint reading and shop drawing review
- (i) 2: Green construction
- (j) 2: Conflict resolution
- (k) 2: Relevant construction software training
- (l) 2: More CAD
- (m) 2: Required foreign language (Spanish)
- (n) 2: Offer a Masters degree program

Other suggested areas of improvement that were listed included additional coursework in ethics, incorporating heavy industrial projects into the curriculum, requiring an internship of all students, more classes in billing and business management, time management, QA/QC, field supervision, risk management, more law courses, more attention to safety, more project administration, how to deal with unions, estimating and scheduling on smaller projects, and dealing with the EPA and government regulations. Each of these was suggested only once.

**Academic Program Review**

**Employer/Advisory Board Survey**

**2011**



## **Academic Program Review**

### **2011 Employer/Advisory Board Survey**

#### **Results and Conclusions**

A survey was done of 24 employers and advisory committee members. Note that our Construction Technology & Management (CT&M) program advisory committee includes members from very prestigious firms, all of who employ our graduates. Therefore, a combined survey was deemed appropriate.

Employers included owners, vice presidents, project managers and superintendents. In general, they were very pleased with the quality of Ferris graduates. These graduates met or exceeded their expectations in the areas of written and oral communications, estimating and bidding, contract documents interpretation, construction safety, scheduling, computer software usage, general business comprehension, supervision and overall preparedness.

Comments were also quite positive regarding faculty and their commitment to students. They were very positive about the Granger Center and its facilities.

Note comments in the surveys. Most negative comments pertain to resources. Our advisory committee wants BIM incorporated into the program. They want more resources for student competitions. Some comments suggested more financial support from the university for things like faculty development. However, overall program quality was considered excellent.

A total of 24 employers and advisory board members completed the survey. Their job titles are:

Owner	1
Vice President	7
Division Manager	2
Project Manager	11
Estimator	
Superintendent	1
Field Engineer	
Industry liaison	2
Not Specified	
Total:	24

	Did not meet Expectations	Marginally Met Expectations	Met Expectations	Exceeded Expectations	Does not Apply
Written Communication			15	6	
Oral Communication			11	10	
Computer Software Competency			10	11	
Contract Document Interpretation			12	9	
Strategic Understanding of Bidding		1	16	4	
Scheduling Competency			15	6	
Construction Safety Understanding		1	11	9	
Estimating Competency			16	5	
Project Management Competency		1	11	8	1
Surveying & Layout Competency		3	14	1	3
Construction Inspection Understanding		1	14	6	
Visualization and Blueprint Reading Competency			7	14	
General Business Understanding			15	6	
Work Place Supervision Principles			17	4	
Workplace Ethics			7	14	
Overall Work Preparedness			10	11	
Potential for Promotion			7	13	1

The following characteristics apply only to your experience/interaction with Civil Engineering Technology (2-

year degree) graduates.					
	Did not meet Expectations	Marginally Met Expectations	Met Expectations	Exceeded Expectations	Does not Apply
Material Properties and Testing Competence		1	5	1	15
Highway Technology Understanding			2	1	19
Hydraulic Principles Understanding			2		20

The following characteristics apply only to your experience/interaction with Building Construction Technology (2-year degree) graduates.					
	Did not meet Expectations	Marginally Met Expectations	Met Expectations	Exceeded Expectations	Does not Apply
Field Engineering Principles Understanding			4	3	15
Mechanical & Electrical Plans and System Understanding			5	2	15
Wood & Steel Framing Principles Understanding			3	3	16

The following question applies to <b>ALL</b> program graduates.			
	Doubtful *	Likely	Definitely
Given the appropriate economic conditions in the construction industry, I would hire a Ferris State University graduate		8	13

\* Please comment:

1) In general the students (graduates) have a good work ethic with a want to achieve attitude. 2) We generally find Ferris students to be well-rounded and very well educated in the field. All of our Ferris grads have done well over time and we will continue to look for talent at Ferris. 3) The individuals hired to date have worked out well. Within a short time they have caught on. Good attitude of wanting to learn more. 4) The program has made the transition from education to the profession arena very easy. Being prepared to take a leadership role immediately has significantly enhanced the ability to move through the ranks of the company. The degrees questions have changed, however, fundamentals are in place. 5) All the BS CM graduates hired by \*\*\*\* in our Midwest operations in the past 10 years have performed well and are considered high potential employees.

Based upon your experience with Ferris State University and possibly other universities with construction management programs, please answer the following:

	Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure / Unable to Answer
The program has a sufficient number of faculty	1	10	2	2	8
The program's faculty have satisfactory academic credentials and experience	11	10			2
The program's faculty have adequate institutional support for professional development and continuing education	4	8	4		7
The program has adequate facilities including computer and practice laboratories	11	9			3
The program receives adequate financial support from the university	1	7	4		11
There is high demand for graduates from Ferris State University's construction program(s)	9	12			2
The graduates of this program are competitive with graduates of similar programs at other universities	18	5			
The American Council for Construction Education (ACCE) accreditation is significant to the success of the program	11	7			5
The program's curriculum meets the needs of the industry	14	9			
The program's curriculum is updated in a timely manner to accommodate new technologies	15	4			4

Comments:

1) My understanding is that Professional Development funds are voluntarily used to support student teams/competitions due to a lack of other available funding. These are very worthwhile activities and a selfless gesture by the faculty. However, there should be some opportunities for faculty development.

In keeping with the program's desire to remain current with industry needs/trends, the following questions apply to our present thinking regarding course topics we are currently incorporating into our programs over the next year. We would appreciate your feedback on their importance to your firm.

	Less Important to My Firm	Support	Strongly Support	No Opinion
A new course focused on construction environmental sustainability principles and high quality building processes	2	10	9	
An organized program whereby the first two years of the CM program would apply toward a residential builder's license	17	2		2
In addition to the 4-year CM bachelor degree program, offer a one-year (two-semester) Masters Degree in Construction Management focused on both technology and business	9	4	8	
Revised computer course that incorporates a solid understanding of BIM technology, construction management software, and estimating software along with MS Office	2	6	12	

Finally, we would like to offer you the opportunity to comment on any aspect of the Ferris State University CM, CET, and BCT educational programs. Please offer any comment that would be useful to our continuing quest to improve our effectiveness and quality.

<p>Aspects of the FSU program that we particularly like and believe important including curricula content, faculty, and special programs</p>	<p>1) FSU grads are better prepared to manage the entire construction process vs. other grads that are only trained in engineering. 2) Program has a very business-like, positive attitude - good relations among faculty and student body. 3) Ferris continues to focus on construction and that's what we need. **** has a comprehensive training program that will shape the students skills to fit our systems after they are hired but they need the starter skills of understanding plans and specifications, terminology, computer skills and software skills. 4) Hands-on experience for the students. Experience is relevant. 5) OSHA 30-hour is great. 6) Continue to produce well rounded students who have real life experiences, knowledge of the complete management process and good organizational/communication skills. 6) All programs and adjustments proposed. 7) Good faculty and facilities. 8) Faculty really care about the students. Faculty goes above and beyond to help students. 9) The program has been a success in preparing the individuals to be integral parts fo the team immediately. 10) Strong curricula and very dedicated faculty. Excellent facilities. 11) FSU has a great CM faculty staff. They make the program what it is today - thank you. 12) The university engages students in professional organizations. Faculty is in tune with the business of construction in a practical sense. 13) Great facility. Be sure to keep it up to date.</p>
<p>Areas that you believe could be strengthened or added to the program to yield a more effective FSU graduate</p>	<p>1) More support in the area of student competitions. Business course - i.e. finance, marketing, business law, an introductory level. 2) BIM is where construction and engineering is going and I believe it's going very fast. The ability to build, understand, and incorporate models into schedules and estimating is upon us. We are also loading operations and maintenance information into models for the owners to use at the end of the project. 3) Continue to update technology (especially BIM). 4) The Ferris CM Program needs to adopt a "BIM" course and Fold Technology/Paperless Management in your classes. This will be adopted in the next 5-8 years. 5) BIM, Green, and other passing fads need to be minimized to the marketplace reality. 6) Focus on the basics of construction. These usually apply to all types. Don't get so caught up in the newest buzz word in construction. Get work at right price, build work at lowest cost, take care of assets. 7) Internships at various companies throughout college to gain experience in all fields. 8) Continue the periodic revision of courses offered in order to remain current to industry practices. 9) LEED, BIM. 10) Practical experience as part of requirements. 11) Field trips/speakers from industry in classroom. LEED.</p>
<p>Other comments</p>	<p>1) Ferris program has a very good reputation in the industry and assist with continuing education for industry. 2) Keep up the good work. 3) Eager students. Helpful instructors. 4) Add courses to introduce students to Lean Construction principles, integrated project delivery, and ways to improve productivity through prefabrication and modularization. 5) We have hired Ferris grads with success in meeting our requirements.</p>

2 individuals were unable to answer the program specific questions due to a lack of interaction with students and recent graduates and addressed only the general questions.



## Construction Technology & Management

### College of Engineering Technology

#### Graduate Exit Survey

The College of Engineering Technology offered an exit survey to graduates of all disciplines to measure their perceptions of all phases of their educational experience. It is a 250 page document found on the share drive, and the results are somewhat inconclusive. The three programs under the umbrella of "Construction Technology & Management" include Associate degree programs in Civil Engineering Technology (CETM) and Building Construction Technology (CETM), as well as the Bachelor of Science Construction Management (CONM) program.

In this monstrous survey document, there are typically only 2 or 3 responses in BCTM, often none in CETM, and 8 or 9 in CONM. In addition, some students listed their majors as "Construction Technology & Management", so their actual majors are unknown. The low response rate means that any data is statistically weak, but an overview of the results is included below.

It should be noted that, in almost every question posed to the CONM students, there were about 9 responses, and 7 were "Strongly Agree", and the other 2 "Somewhat Agree". There were typically only 2 BCTM responses, which were usually split between "Somewhat Agree" and "Neutral". There were some CETM responses, usually 2 or 3, and split like the BCTM responses.

Questions were as follows:

- (1) *Students developed adequate critical thinking skills.* CONM students strongly agree, and CETM and BCTM students are split.
- (2) *Students have good technical understanding of their field.* CONM students strongly agree. BCTM students are neutral.
- (3) *Students can apply theory to practice.* CONM students strongly agree. BCTM students are neutral.
- (4) *Enthusiasm for professors:* All CONM responses were strongly agree.
- (5) *Students developed strong oral and written skills.* CONM students (by typical 6 to 2 margin) strongly agreed, while BCTM students were split between somewhat agree and neutral.
- (6) *Students are prepared for responsibility.* CONM students strongly agree, and BCTM students are split between somewhat agree and neutral.
- (7) *Students have adequate social awareness courses.* CONM students strongly agree, and BCTM students are split between somewhat agree and neutral.
- (8) *Students effectively used resources.* CONM students strongly agree, and BCTM students are split between somewhat agree and neutral.

