School of Construction Program Outcomes 2014-2015

Construction Engineering Technology (BCT)

Program Summary BCT

The Construction Engineering Technology (BCT) program has undergone significant stresses in the past six years (turnover in leadership and teaching corps). In 2010, the university cancelled the School of Construction's Master of Science in Engineering Technology graduate programs (which included emphasis areas in Construction Management and Construction Visualization) as part of an institution-wide budget-cutting initiative. The cancellation has impacted recruitment of new tenure-track faculty and the research of existing faculty. Traditional enrollment has fallen since the recession of 2008-2009 paralleling trends in the construction industry, while distance-learning (online) enrollment has increased. Currently the program has 170 traditional students and 200 online students enrolled.

The Construction Engineering Technology Program at Southern Miss is the original construction technology program in the state of Mississippi for providing a well-rounded construction management education, engaging and empowering graduates to transform the built environment while improving the quality of life by protecting the health, safety, and welfare of the public. The BCT program is committed to producing graduates who possess the necessary skills to enter the Architecture/Engineering/Construction (A/E/C) industry fully capable of performing entry-level tasks as entry-level managers in the office or field. The graduates' critical thinking, discipline, and work ethics will be such that a short period of training and work experience will allow them to move into mid-level managerial positions.

The BCT Program acknowledges the definition of a professional constructor endorsed by the American Council for Construction Education (ACCE) and other construction associations of North America and strives to meet the following goals: 1) To support the university mission "to cultivate intellectual development and creativity through the generation, dissemination, application and preservation of knowledge"; 2) To maintain high-quality standards for construction education through professional accreditations; 3) To provide opportunities for students to interact with multiple disciplines in collaborative environments both on and off campus; 4) To promote evidence-based design research in order to solve problems related to the needs of people in all environments; 5) To cultivate effective communication skills, knowledge of design theory, history, sustainability, and codes along with creative, abstract and critical thinking skills; 6) To instill a sense of service, lifelong learning and social obligation.

The BCT initiative supports Southern Miss' emergence as the premier research University of the Gulf South through undergraduate and graduate research. Research accomplishments prior to termination of the CET graduate program include, 1) Development of standards and specifications in automatic guidance of construction machinery utilizing GPS technology for the Mississippi Department of Transportation and the National Cooperative Highway Research Program of the National Academies; 2) State-of-the-art research in Building Information Modeling for the Army Corps of Engineers.

The Program Educational Objective of the BCT program is: "Graduates possess the necessary skills, critical thinking, discipline and work ethics to enter the A/E/C industry fully capable of performing entry-level tasks consistent with the expectations of employers." This fully supports the Mission of the Institution by cultivating intellectual development and creativity through the generation and application of knowledge.

BCT is responsive to IHL priorities in a number of ways: educating a reentering workforce, financially self-supporting, substantial industry support to supplement state resources, and has taken innovative approaches to curriculum delivery such as developing online. In 2007, the BCT program

received approval to be delivered fully online; currently, this program is the University's (and the nation's) only accredited bachelor of science degree in construction management offered fully online. In 2009, the program won an eLearning Initiative grant from Blackboard (valued at $158,500) to improve the quality and support IHL priorities.

BCT is externally accredited by both ETAC-ABET and ACCE, and is the only construction management program in the nation that is SOC-NAV approved for Navy personnel. We have nearly 100% employment of our graduates; many students are employed while seeking their degree. BCT is the only accredited online construction management B.S. in the nation.

Continuous Improvement Initiatives

The following are improvement initiatives in the BCT Program underway in various stages of implementation:

A. Curriculum Redesign: The curriculum has been evaluated by the School of Construction Curriculum Committee and the following changes have been approved by the university's Academic Council for Fall 2015 implementation:
   a. The addition and/or consolidation of courses. These changes enable the BCT and ACT (Architectural Technology) programs to have a common set of courses in the first two years of study. Additionally, students in each program will gain competencies traditionally specific to each of the programs. This alignment is consistent with industry trends and requirements for entry-level graduates.
   b. Renumbering of courses and designation of new prerequisites: Some courses have been designated to receive lower course numbers so as to be taken earlier in the curriculum. The School of Construction Curriculum Committee has determined that new prerequisites are required to increase student success in all course and program outcomes, as well as increase quality overall.
   c. Calculus is now a requirement as deemed necessary for alignment with engineering programs (approximately 36 states accept the BCT degree for entrance into 'Engineer in Training' prior to licensure).
   d. Cohort matriculation: The BCT and ACT programs are offering courses in alternating semesters with the exception of internship and capstone courses. Cohort enables faculty to deliver traditional and online sections in the same semester, thus smoothing faculty capacity for research/publications and service to the program/industry.
   e. Alignment of traditional and online course learning outcomes: the cohort delivery of courses lends itself to simultaneous delivery of traditional and online courses utilizing Blackboard Learn, the program and university's course management system. By utilizing Blackboard Learn in both delivery methods, face-to-face and online, the faculty have committed to ensure alignment of course learning outcomes and consistent content.
   f. Design-Build Summer Program: Beginning in June 2015, the BCT program is instituting a project-based summer program for high school and community college students as well as the general public. As stated in the marketing materials, 'As an outcome of our summer program, students must demonstrate an understanding of sustainable design and construction techniques using energy analysis, rain water harvesting, low water consuming devices, economic analyses, low carbon footprint, material recycling. Students will also develop the ability to select sustainable technologies in the design a single family home, the necessary research skills to determine appropriate technologies for water and energy conservation, and to meet the goal of safety in residential design and construction'. The summer program also serves the Mississippi construction industry as a component of work-force training and development, consistent with Mississippi State Contractors License Board financial grants awarded to the program on an annual basis.

B. Curriculum Quality Campaign: In order to better assess, and increase, the quality of teaching and assessment on the BCT Program (and the other programs in the School), the following initiatives are underway:
    a. Assessment Performance Targets: Performance targets 80% of students scoring 70% or better on assessment outcomes. This is consistent with the program's Degree Plan which requires a minimum grade of 'C' to advance. Status: Implemented and reported next period.
    b. Education of faculty: New faculty are orientated to participate in the program outcomes assessment and continuous improvement processes. In addition, the University has instituted over the past two years a series of Teaching Enhancement Seminars for the benefit of all faculty and covering a variety of pedagogical topics.
C. Peer review/assessment of faculty course design and pedagogy: The School is developing plans for peer review and reporting of course content, organization, delivery, and rigor as a part of annual program evaluation. This should enable communication of course assessment and methodology across the faculty, leading to the closing of gaps and weaknesses.

The primary action plan which is always ongoing is the delivery of assessment presentations to faculty to illustrate the School of Construction approach to course-based assessment. This program underwent a 6th year ETAC-ABET accreditation visit in fall 2009. From that visit, it was apparent that the program outcomes in WeaveOnline did not provide adequate resolution from program level to course level. The organization of supporting materials and student samples of work was also extremely difficult to collect and organize in a meaningful manner. It was decided then to reorganize the program learning outcomes to exactly map to the ETAC-ABET general and program specific criteria with direct linkages from each course in the program that supported particular criteria. This is now our fifth cycle using this approach. In addition, for the current 2014-2015 cycle, course-level assessment tools have been remapped to the new 2015-2016 ETAC-ABET criteria as required and new program outcomes have been established in the University's archival system: WeaveOnline.

For the Construction Engineering Technology program, these new criteria are as follows:

General Criteria -- For all baccalaureate degree programs, these student outcomes must include, but are not limited to, the following learned capabilities:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of their disciplines to broadly-defined engineering technology activities,
b. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies,
c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes,
d. an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives,
e. an ability to function effectively as a member or leader on a technical team,
f. an ability to identify, analyze, and solve broadly-defined engineering technology problems,
g. an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature,

h. an understanding of the need for and an ability to engage in self-directed continuing professional development,
i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity, a knowledge of the impact of engineering technology solutions in a societal and global context, and k. a commitment to quality, timeliness, and continuous improvement.

Graduates of associate degree programs will, to the extent required to meet Program Educational Objectives:

a. utilize techniques that are appropriate to administer and evaluate construction contracts, documents, and codes;
b. estimate costs, estimate quantities, and evaluate materials for construction projects;
c. utilize measuring methods, hardware, and software that are appropriate for field, laboratory, and office processes related to construction;
d. apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to construction engineering.

In addition, graduates of baccalaureate degree programs will, to the extent required to meet Program Educational Objectives:

e. produce and utilize design, construction, and operations documents;
f. perform economic analyses and cost estimates related to design, construction, and maintenance of systems associated with construction engineering;
g. select appropriate construction materials and practices;
h. apply appropriate principles of construction management, law, and ethics, and;
i. perform standard analysis and design in at least one sub-discipline related to construction engineering.

Closing the Loop/Action Plan Tracking

The BCT Curriculum Committee will evaluate the Program Outcomes annually to identify outcome areas which are trending towards underperforming. Based on the current cycle, objective areas are maintaining high levels of competency and therefore no immediate “major” revisions to the course-based outcomes are necessary. However, BCT faculty will maintain and continuously improve the current methods of improvement to the overall quality and comprehension of the program which include at minimum:

- Annual individual faculty evaluations of the course-based instructional outcomes to identify areas of weakness within the frame-work of the ETAC-ABET criteria.
- Collective faculty reporting of course-based instructional outcomes that promote a collaborative problem solving approach to meeting the ETAC-ABET criteria across the program as well as individually within specific course sections.
- Interdepartmental reporting of course-based instructional outcomes to identify and encourage cross-disciplinary improvements in criteria outcomes for courses which have students enrolled from multiple degree programs within the School of Construction.
- Interdepartmental reporting of course-based instructional outcomes to refine and foster a multi-faceted approach to course delivery that results in higher success rates across all programs in courses which have students enrolled from multiple degree programs in the School of Construction.

- Support the University's initiative to identify earlier students who are at risk. This will inherently improve overall assessment numbers as students who do not complete the semester result in skewed and/or inconclusive evaluation results.
- Communication of all course and program assessment outcomes to faculty and the public via publication on School's website.
- Feedback from the BCT Program's Industrial Advisory Council (IAC) on course and program assessment outcomes, course quality/rigor.
- Redesign of BCT Program Capstone Course to better reflect and measure Weave/ABET outcome criteria.
- A combined BCT/ACT Curriculum Committee evaluation of individual course assessment mechanisms, both those which fall short and exceed benchmark passing goals.

Achievement Summary / Analysis

What specifically did your assessments show regarding proven strengths or progress you made on outcomes/objectives?

The Construction Engineering Technology (BCT) program has mapped its course assessments to ETAC-ABET's 'Criteria for Accrediting Engineering Technology Programs' since 2010. A four-year summary is provided later in this document which shows the progression from assessment years to this current year including the reorganization of criteria for this current cycle.

This year's findings show strengths or progress in the following areas:

ETAC-ABET General Criteria Outcomes:

General Criterion g. an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature (this outcome improved from 79% to 83% meeting the target);

General Criterion i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity (improved from 86% to 88% meeting the target);

General Criterion j. a knowledge of the impact of engineering technology solutions in a societal and global context (improved from 71% to 80% meeting the target);

ETAC-ABET Degree Specific Criteria Outcomes:

Program Specific Criterion h. apply appropriate principles of construction management, law, and ethics (improved from 80% to 84% meeting the target);

Program Specific Criterion i. perform standard analysis and design in at least one sub-discipline related to construction engineering (improved from 84/85% to 86% meeting the target).

What specifically did your assessments show regarding any outcomes/objectives that will require continued attention?

This year's findings show concern in the following areas:

ETAC-ABET General Criteria Outcomes:

General Criterion b. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies (declined from 88% to 76% meeting the target);

General Criterion c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes (declined from 90% to 91% meeting the target);

General Criterion d. an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives (declined from 89% to 81% meeting the target);

ETAC-ABET Degree Specific Criteria Outcomes:

Program Specific Criterion c. utilize measuring methods, hardware, and software that are appropriate for field, laboratory, and office processes related to construction (declined from 91% to 74% meeting the target);

Program Specific Criterion d. apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to construction engineering (declined from 93/90% to 82% meeting the target);

Program Specific Criterion g. select appropriate construction materials and practices (declined from 90% to 83% meeting the target).

BCT faculty are reviewing the findings for the 2014-2015 cycle with respect to possible reasons for a number of areas that are not satisfactorily meeting established targets:

- Failure to take action on findings (close the loop) in earlier cycles (leadership changes)
- Inadequate/irregular course peer review/evaluation
- Course content & textbooks
- Assessment mechanisms
- Inadequacies faculty development (pedagogy)
- Too many changes in faculty/adjunct assignment to courses
- Learning curve for new faculty and adjuncts and lack of faculty time to mentor
- Faculty teaching loads have not been equitable (requiring adjuncts)
- Increase in course rigor
- Decrease in quality of students matriculating
- Top-heavy curriculum without ability to properly enforce pre-requisites
- Weak advisement: much of it by staff who are not as familiar with the curriculum
  Trend of students to take too many hours and hold part/full-time jobs

Mappings from Course Assessment Tools to ETAC-ABET Criteria 2015-2016

The following table shows the courses used in the 2014-2015 cycle for assessment. In each course listed, there are specific assessment tools (that are listed in Appendix F); this table indicates with an "x" that there can be found an assessment tool for that course supporting a particular criterion.

Assessment tools mapped to Criteria and Course Outcomes

BCT		General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
AEC 132/L	Architectural Graphics	x						x				x		x	x		x				
AEC 204/L	Building Materials	x		x			x	x	x	x		x		x		x	x	x	x		
AEC 270	Statics & Strengths		x		x		x														x
AEC 444	Building Structures		x		x		x									x					x
AEC 454	Estimating I	x	x					x		x		x					x	x	x	x	
AEC 496	Industrial Internship	x				x		x		x		x	x	x	x		x		x	x	x
AEC 300	Seminar					x						x									
AEC 301	Building Codes	x	x				x		x	x				x			x				x
BCT 336	Building Systems II	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		
BCT 336	Building Systems II	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		
BCT 374	Construction Organization					x		x	x	x	x	x	x							x	
BCT 374	Construction Organization					x		x	x	x	x	x	x							x	
BCT 400	Senior Project	x	x			x		x					x	x	x		x	x			
BCT 455/L	Estimating II	x	x					x	x	x		x	x	x	x	x	x	x		x	x
BCT 455/L	Estimating II	x	x					x	x	x		x	x	x	x	x	x	x		x	x
BCT 458/L	Scheduling	x	x				x	x					x				x			x	x
BCT 477	Project Management					x	x	x	x	x		x	x	x			x				
BCT 478	Construction Law							x				x	x				x			x	
BCT 480	Construction Safety				x		x	x		x		x							x	x	x
BCT 205/L	Surveying	x	x										x		x	x	x		x		

The following section, Course Findings, expands on this table showing the same sequence of courses (one per page) and shows the mapping of assessment tools to both the ETAC-ABET Criteria and to the Course Outcomes. The first table on each page shows the course outcomes with assessment tool numbers which are also mapped to the Criteria. The second table lists the assessment tools; the list number is the assessment number used in the first table. The third table on each page shows the findings for each assessment number organized by semester and by delivery method (FF = face-to-face and ONL = online.

Course Findings

Assessment Tools Mapped to ETAC-ABET Criteria and Course Outcomes

AEC 132/L	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Germany FF Hill ONL Architectural Graphics & Lab	1. Practice freehand sketching skills of architectural/construction related items	3						3				3		3	3		3				
	2. Produce orthographic projections							2,3,4				2,3,4			2,3,4		2,3,4				
	3. Identify common architectural symbols							3,4,5													
	4. Identify common architectural abbreviations							3,4,5													
	5. Identify common architectural terms							3,4,5													
	6. Create basic 2-D drawings using computer-aided drafting and design software							2,4				2,4		2,4	2,4		2,4				

Assessment tools mapped to Criteria

#	AEC 132/L ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Vocab Quizzes	x						x													
2	2. CAD Exercises	x	x				x	x							x		x				
3	3. Sketching Notebook	x	x					x				x		x	x		x				
4	4. Final Project	x	x				x	x							x		x				
5	5. Final Exam	x						x													

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	12	13	92%	1	20	23	87%					1	13	17	76%								
2	2	8	13	62%	2	12	23	52%					2	10	17	59%								
3	3	11	13	85%	3	17	23	74%					3	8	17	47%								
4	4	6	13	46%	4	16	23	70%					4	5	17	29%								
5	5	13	13	100%	5	17	23	74%					5	9	17	53%								
			AVG	**77%**			AVG	**71%**			AVG				AVG	**53%**			AVG				AVG	

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AEC 204/L	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Sharp	1. Identify the materials included in CSI Masterformat Divisions 3-14													1-8		7			6		
Building Materials & Lab	2. Create a report on observations made of materials being applied on both commercial and residential construction sites	2						2	2	2		2		1-4			2				
ACT & BCT	3. Define common construction processes and materials related terms	5		7,8										1-8					5-8		
	4. Create a 1,250 - 1,750 word (5-7 pages) research paper about one construction material						3	3				3		3							
	5. Create and discuss a layout of the location, type, and cost of materials found at both a general and specialized supplier	1						1	1			1		1				1			
	6. Demonstrate presentation skills by designing, developing, and delivering a formal presentation (10-15 minute) about building materials						4	4				4		4					4		

Assessment tools mapped to Criteria

#	AEC 204/L ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Supplier Report	x						x	x			x		x				x			
2	2. (2) Job Site Reports	x						x	x	x		x		x			x				
3	3. Research Project						x	x				x		x							
4	4. Final Project Presentation						x	x				x		x					x		
5	5. Quizzes 1-5glossary terms S-Z	x												x					x		
6	6. Exam One													x					x		
7	7. Exam Two			x										x		x			x		
8	8. Final Exam			x										x					x		

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	12	14	86%	1	40	41	98%																
2	2	13	14	93%	2	36	41	88%																
3	3	14	14	100%	3	41	41	100%																
4	4	12	14	86%	4	36	41	88%																
5	5	13	14	93%	5	38	41	93%																
6	6	14	14	100%	6	38	41	93%																
7	7	13	14	93%	7	40	41	98%																
8	8	14	14	100%	8	35	41	85%																
			AVG	**94%**			AVG	**93%**																

School of Construction Program Outcomes 2014-2015

AEC 270	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Sharp	1. Calculate the components of a force		1,2		1,2		1,2					1		1,2		1,2					1,2
Statics & Strengths	2. Calculate the moments of forces		1,4		1,4		1,4					1		1,4		1,4					1,4
ACT & BCT	3. Work problems involving the method of joints and sections		1,3		1,3		1,3					1		1,3		1,3					1,3
	4. Work problems involving pulleys		1		1		1					1		1		1					1
	5. Trace load paths on structures		1		1		1					1		1		1					1
	6. Calculate axial, shear and bearing stresses		1,3		1,3		1,3					1		1,3		1,3					1,3
	7. Calculate axial strain using Hooke's law		1		1		1					1		1		1					1
	8. Calculate thermal stresses		1		1		1					1		1		1					1
	9. Calculate centroids and moments of inertia		1,4		1,4		1,4					1		1,4		1,4					1,4
	10. Construct load, shear, and moment diagrams		1,4		1,4		1,4					1		1,4		1,4					1,4
	11. Calculate flexural stresses and beam deflections		1		1		1					1		1		1					1
	12. Analyze and design columns		1		1		1					1		1		1					1

Assessment tools mapped to Criteria

#	AEC 270 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Weekly Homework Problems		x		x		x					x		x		x					x
2	2. Exam One		x		x		x							x		x					x
3	3. Exam Two		x		x		x							x		x					x
4	4. Exam Three		x		x		x							x		x					x

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1					1	26	29	90%																
2					2	27	29	93%																
3					3	28	29	97%																
4					4	25	29	86%																
			AVG				AVG	**91%**			AVG				AVG				AVG				AVG	

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AEC 300	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Wright Seminar	1. Provide average to excellent discussion capabilities with respect to the current issues in construction.					1						1									

Assessment tools mapped to Criteria

#	AEC 300 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Research Paper					x						x									

	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
#	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1					1	40	46	87%					1	19	24	79%								
			AVG				AVG	**87%**			AVG				AVG	**79%**			AVG				AVG	

School of Construction Program Outcomes 2014-2015

AEC 301	Objectives	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
	1. Adopt a process for code research	1							1-4					1-4							1-4
	2. Synthesize research data.								1-4												
Wright	3. Translate data into a meaningful design solution.		1-4						1-4												
Building Codes	4. Interpret site data in how it relates to the code.																				
ACT, BCT	5. Produce commercial contract documents based on relevant code decisions																1-4				1-4
	6. Evaluate building systems and select appropriate solutions.						1-4		1-4	1-4				1-4							
	7. Build communication skills.						1		1-4												

Assessment tools mapped to Criteria

#	AEC 301 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1.Quizzes		x				x		x	x				x			x				x
2	2. Discussion		x				x		x	x				x			x				x
3	3. Test		x				x		x	x				x			x				x

	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
#	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1				1				1				1	32	37	86%	1				1			
2	2				2				2				2	30	30	100%	2				2			
3	3				3				3				3	28	28	100%	3				3			
			AVG				AVG				AVG				AVG	**95%**			AVG				AVG	

AEC 444	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Fletcher	1. Calculate beam loads, shear, and moments		1		1		1									1					1
Building Structures	2. Design wood connections, columns, beams, and decking		2		2		2									2					2
ACT & BCT	3. Design steel connections, columns, beams, and decking		3		3		3									3					3
	4. Design concrete beams, slab, and columns for bending, shear, and deflection		4		4		4									4					4
	5. Calculate reinforcement in concrete footings, beams, columns and slabs		5		5		5									5					5

Assessment tools mapped to Criteria

#	AEC 444 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	Exam 1		x		x		x									x					x
2	Exam 2		x		x		x									x					x
3	Exam 3		x		x		x									x					x
4	Exam 4		x		x		x									x					x
5	Exam 5		x		x		x									x					x

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	11	15	73%									1	33	44	75%								
2	2	11	15	73%									2	28	44	64%								
3	3	13	15	87%									3	40	44	91%								
4	4	13	15	87%									4	38	44	86%								
5	5	7	15	47%									5	29	44	66%								
			AVG	73%			AVG				AVG				AVG	76%			AVG				AVG	

AEC 454	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Fletcher	1. Utilize software applications to quantify and document costs represented by two-dimensional construction documents.	5	2-5									2-5					1-5	1-5	2-5	5	
Estimating I	2. Utilize CSI MasterFormat to categorize and organize construction information.	1-5	2-5					5				2-5					5	5	2,5	5	
ACT & BCT	3. Realize ethical considerations regarding documentation, communication, and assumptions made when performing quantity surveying.									3										3	

Assessment tools mapped to Criteria

#	AEC 454 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Exam 1	x															x	x			
2	2. Exam 2	x	x									x					x	x	x		
3	3. Exam 3	x	x							x		x					x	x	x	x	
4	4. Exam 4	x	x									x					x	x	x		
5	5. Project	x	x					x				x					x	x	x	x	

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	4	7	57%									1	13	15	87%								
2	2	6	7	86%									2	10	15	67%								
3	3	7	7	100%									3	15	15	100%								
4	4	6	7	86%									4	14	15	93%								
5	5	5	7	71%									5	12	15	80%								
			AVG	**80%**											AVG	**85%**								

School of Construction Program Outcomes 2014-2015

AEC 496	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
	1. Recognize the functional areas (structure) of the host organization	3,6,7																			
Kemp	2. Identify functional roles (tasks, responsibilities) in industry and the intern's functional role within the host organization	3,6,7				3,6,7															
ACT & BCT	3. Identify to which of the life cycle process(es) of an asset/facility the internship duties relate	3,6,7,8				3,6,7,8															
	4. Describe the work flow processes and documentation associated with internship duties	3,6,7											3,6,7	3,6,7	3,6		3,6,7				3,6
Industrial Internship	5. Gain 400 contact hours of practical experience at a host company											1,2,4,5									
	6. Satisfactorily perform entry-level duties associated with the intern's role in the host company	3,6-10															3,6,7		3,6,7		3,6
	7. Identify ethical situations and dilemmas observed during the internship							3,6		3,6,7										3,6	
	8. Demonstrate verbal and written communication proficiency to advance in industry.							3,6,7													
	9. Submit 100% of the deliverables required by the established deadlines											1-10									

Assessment tools mapped to Criteria

#	AEC 496 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Internship agreement											x									
2	2. Schedule supervisor/instructor conversation											x									
3	3. Midterm report	x				x		x		x		x	x	x	x		x		x	x	x
4	4. instructor/supervisor conversations											x									
5	5. Schedule final oral presentation											x									
6	6. Final report	x				x		x		x		x	x	x	x		x		x	x	x
7	7. Final oral presentation	x				x		x		x		x	x	x			x		x		
8	8. Student survey	x				x						x									
9	9. Industry representative survey	x										x									
10	10. Student intern evaluation	x										x									

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1													1	16	16	100%								
2													2	15	16	94%								
3													3	15	16	94%								
4													4	16	16	100%								
5													5	14	16	88%								
6													6	16	16	100%								
7													7	16	16	100%								
8													8	16	16	100%								
9													9	16	16	100%								
10													10	16	16	100%								
			AVG				AVG				AVG				AVG	**98%**			AVG				AVG	

BCT 205	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Hannon Surveying	1. Recognize, define and explain common surveying terms and symbols.	1-3	1-3										1-3		1-3	1-3					
	2. Compute accuracies for horizontal and vertical distance measurements.	1-3	1-3										1-3		1-3	1-3					
	3. Perform direction computations involving horizontal angles, azimuths, bearings.	1-3	1-3										1-3		1-3	1-3					
	4. Perform a loop traverse computations, including closure, adjustment, station co-ordinates, and enclosed area.	1-3	1-3										1-3		1-3	1-3					
	5. Plot elevation data as ground profiles and/or contour lines.	1-2	1-2										1-3		1-3	1-3					
	6. Apply learned survey techniques to construction stakeout.	1-2	1-2										1-3		1-3	1-3					

Assessment tools mapped to Criteria

#	BCT 205 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Quizzes	x	x										x		x	x					
2	2. Tests	x	x										x		x	x					
3	3. Exercises	x	x										x		x	x					

#	FA14 F-F Tool #	FA14 F-F # >= C	FA14 F-F #ENR	FA14 F-F Ratio	FA14 ONL Tool #	FA14 ONL # >= C	FA14 ONL #ENR	FA14 ONL Ratio	SP15 F-F Tool #	SP15 F-F # >= C	SP15 F-F #ENR	SP15 F-F Ratio	SP15 ONL Tool #	SP15 ONL # >= C	SP15 ONL #ENR	SP15 ONL Ratio	SU15 F-F Tool #	SU15 F-F # >= C	SU15 F-F #ENR	SU15 F-F Ratio	SU15 ONL Tool #	SU15 ONL # >= C	SU15 ONL #ENR	SU15 ONL Ratio
1	1	14	14	100%									1	40	53	75%								
2	2	9	14	64%									2	49	53	92%								
3	3	13	14	93%									3	28	53	53%								
			AVG	**86%**			AVG				AVG				AVG	**74%**			AVG				AVG	

BCT 205L	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Hannon Surveying Laboratory	1. Keep a set of neat and legible surveying field notes in acceptable format.		4												4		4				
	2. Recognize, define and explain equipment requirements for specific surveying problems.	4	4																4		
	3. Analyze a mass diagram to determine construction project requirements.	4	4												4	4	4				
	4. Plot drawings and maps utilizing CAD tools, given field survey data.	4	4														4				
	5. Calculate line, grade, and staking, given field survey data.	4	4												4						

Assessment tools mapped to Criteria

#	BCT 205L ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
4	4 Exercises	x	x												x		x		x		

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
4	4	14	14	100%									4	40	53	75%								
			AVG	**100%**			AVG				AVG				AVG	**75%**			AVG				AVG	

School of Construction Program Outcomes 2014-2015

BCT 336	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Langar Building Systems II Fall 2014	1. Identify and understand Building System and Materials.	'3-7	5-7		5-7	5,6	3-6	5-7	1-10	5-7		1-5	5-8	3,4,5-7			5-8	5-7	5-7, 9, 10		
	2. Identify and evaluate sources of information on building systems	1	5-7			5,6	5,6	5-7	1,5-7	5-7		2-5	1	5-7				5-7			
	3. Identify and describe the proper use of construction materials and methods.	3-7	5-7		5-7	5,6	3-6	5-7	3,4,8	5,6		5,6	5,6	3,4,5-7			5-7		5-7, 9, 10		
	4. Interpret drawing document details relevant to a construction project.					5,6	5,6		5-10	5,6		5,6,9,10		5,6,9,10			5-7		5,6		
	5. Evaluate the technological, human, ecological, and economic performance of building systems.	1,2,5-7	5-7		5-7	5,6	5,6		1,2,5,6,8	5,6	5-7	5-7	5,6	5-7			5-7	5-7	5-7		
	6. Communicate information orally and graphically relative to the quality, quantity, and cost of materials and schedule of activities necessary to complete a building project or portion of a project.		5-7			5,6	5,6	5-7		5,6		5-7	5-7				5-7	1,2,5-8			
	7. Understand various building systems and their impacts on other systems.	5-7	5-7		5-7	5,6	5,6	5-7	5-7	5,6	5-7	5-7	5,6	3,4,5-8			5-7		5-7		
	8. Identify actions that downstream stakeholders can take to improve the value of a building project in the construction and operations phases.	1,2,5-7			5-7	5,6	5,6	5-7	5-7	5,6	5-7	5-7		5-8			5-7				
	9. Make recommendations of a specific course of action based on tradeoffs among likely impacts and justify those recommendations.	5-7	5-7	6,7		5,6	5,6	6,7	6,7	6,7	6,7	6,7	5-7	5-8			5-7	5-7	5-7		
	10. Document recommendations in a professional fashion appropriate for your audience.	5,6				5,6		5-7	5,6	5,6		5,6					5,6		5,'6		

Assessment tools mapped to Criteria

#	BCT 336 Fall 2014 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1 Quiz I	x							x			x	x					x			
2	2 Quiz II	x							x			x						x			
3	3 Quiz III	x					x		x			x		x							
4	4 Quiz IV	x					x		x			x		x							
5	5 Team Assignment 1.1	x	x		x	x	x	x	x	x	x	x	x	x			x	x	x		
6	6 Team Assignment 1.2	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		
7	7 Class Participation	x	x	x	x			x	x	x	x	x	x	x			x	x	x		
8	8 Final Exam								x				x	x			x	x			
9	9 Individual Assignment 1.1 + 1.2								x			x		x					x		
10	10 Individual Assignment 1.13 + 1.4								x			x		x					x		

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	8	15	53%																				
2	2	7	15	47%																				
3	3	7	15	47%																				
4	4	6	15	40%																				
5	5	13	15	87%																				
6	6	12	15	80%																				
7	7	12	15	80%																				
8	8	8	15	53%																				
9	9	10	15	67%																				
10	10	9	15	60%																				
			AVG	**61%**			AVG				AVG				AVG				AVG				AVG	

School of Construction Program Outcomes 2014-2015

BCT 336	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
	1. Identify and understand Building System and Materials.	1-8	7,8		7,8	7	7	7,8	1-9	7,8		1-7	7	2-7			7-9	5, 7,8	1-8		
Langar	2. Identify and evaluate sources of information on building systems	1	7,8			7	7	7,8	1, 7,8	7,8		1,7	1,8	1,7-9				7,8			
	3. Identify and describe the proper use of construction materials and methods.	1-8	7,8		7,8	7	7	7,8	1-8	7		2-7	7	2-8			7,8		2-8		
Building Systems II	4. Interpret drawing document details relevant to a construction project.					7	7		7	7		7		7			7,8		7		
Spring 2015	5. Evaluate the technological, human, ecological, and economic performance of building systems.	1,7,8	7,8		7,8	7	7		1,7,8,9	7	7,8	1,7,8	7,8	7,8			7,8	7,8	7,8		
	6. Communicate information orally and graphically relative to the quality, quantity, and cost of materials and schedule of activities necessary to complete a building project or portion of a project.		7,8			7	7	7,8		7		7,8	7,8				7,8	5,7-9			
	7. Understand various building systems and their impacts on other systems.	1,7,8	7,8		7,8	7	7	7,8	7-9	7	7,8	7,8	7,8	1, 7-9			7,8		7,8		
	8. Identify actions that downstream stakeholders can take to improve the value of a building project in the construction and operations phases.	1,7,8			7,8	7	7	7,8	7,8	7	7,8	7,8		7-9			7,8				
	9. Make recommendations of a specific course of action based on tradeoffs among likely impacts and justify those recommendations.	7,8	7,8	7,8		7	7	7,8	7,8	7,8	7,8	7,8	7,8	7-9			7,8	7,8	7,8		
	10. Document recommendations in a professional fashion appropriate for your audience.	7				7		7,8	7,8	7		7,8					7		7		

Assessment tools mapped to Criteria

#	BCT 336 Spring 2015 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1 Test I	x							x			x	x	x					x		
2	2 Test II	x							x			x	x	x					x		
3	3 Test III	x							x			x	x	x					x		
4	4 Test IV	x							x			x	x	x					x		
5	5 Test V	x							x			x	x	x				x	x		
6	6 Test VI	x							x			x	x	x					x		
7	7 Team Assignment	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		
8	8 Class Participation	x	x	x	x			x	x	x	x	x	x	x			x	x	x		
9	9 Final Exam								x					x			x	x			

	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
#	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	9	19	47%					1	17	18	94%	1	44	51	86%								
2	2	2	19	11%					2	15	18	83%	2	43	51	84%								
3	3	10	19	53%					3	17	18	94%	3	44	51	86%								
4	4	8	19	42%					4	18	18	100%	4	48	51	94%								
5	5	19	19	100%					5	15	18	83%	5	40	51	78%								
6	6	16	19	84%					6	17	18	94%	6	47	51	92%								
7	7	18	19	95%					7	15	18	83%	7	26	51	51%								
8	8	12	19	63%					8	10	18	56%	8	50	51	98%								
9	9	12	19	63%					9	15	18	83%	9	42	51	82%								
			AVG	**62%**			AVG				AVG	**86%**			AVG	**84%**			AVG				AVG	

School of Construction Program Outcomes 2014-2015

BCT 374	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Sharp Construction Organization SP15	1. Understand the importance of roles that people play within a construction company.					2		1-2,6	2	2,6	1	1-6	3-6							1-3, 6	
	2. Become familiar with construction industry, associated stakeholders, and the relationship shared between the major stakeholders.					2		1-2,6	2	2,6	1	1-6	3-6							1-3, 6	
	3. Realize various types of business ownership.					2		1-2,6	2	2,6	1	1-3,5-6	4							1-6	
	4. Understand organizational structure of a company.					2		1-2,6	2	2,6	1	1-6	3-6							1-6	
	5. Generate an understanding for bidding, cost estimating, and scheduling.										1	1,3,5	3,5							1,3,5	
	6. Develop an understanding for construction contracts, and construction scope document.							6		6	1	1,3,5-6	5-6							1,3,5-6	
	7. Investigate details of construction insurance, bonds, and cash flow.					2		1-2	2	2	1	1-3,5	5							1-3,5	
	8. Realize the importance of adopting safety at an organizational level and identify the industry standards.					2		1-2,6	2	2,6	1	1-2,5-6	5-6							1-2,5-6	

Assessment tools mapped to Criteria

#	BCT 374 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Research Papers							x			x	x								x	
2	2. Final Project					x		x	x	x		x								x	
3	3. Weekly Quizzes											x	x							x	
4	4. Exam One											x	x							x	
5	5. Exam Two											x	x							x	
6	6. Attendance / Participation							x		x		x	x							x	

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1									1	14	17	82%	1	50	59	85%								
2									2	17	17	100%	2	52	59	88%								
3									3	17	17	100%	3	59	59	100%								
4									4	15	17	88%	4	53	59	90%								
5									5	17	17	100%	5	55	59	93%								
6									6	17	17	100%	6	48	59	81%								
			AVG				AVG				AVG	**95%**			AVG	**90%**			AVG				AVG	

School of Construction Program Outcomes 2014-2015

BCT 374	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Langar Construction Organization FA14	1. Understand the importance of roles that people play within a construction company.					5,6,9		5,6	2-9	5,6,7	7	2,5,6,9	5,6,9							2,7,8	
	2. Become familiar with construction industry, associated stakeholders, and the relationship shared between the major stakeholders.					5,6,9		5,6	2-9	5,6,7	7	2-9	5,6,9								
	3. Realize various types of business ownership.					6		6	2,3,6-9	6,7	7	2,3,6-9	6,7,9								
	4. Understand organizational structure of a company.					6,9		6	6,7,9	6,7,9	7	6,7,9	6,7,9								
	5. Generate an understanding for bidding, cost estimating, and scheduling.					9			1,7-9	7,9		1,7-9	9								
	6. Develop an understanding for construction contracts, and construction scope document.					6,9		6	4,6-8	6,7		4,6-8	6-8								
	7. Investigate details of construction insurance, bonds, and cash flow.					6,9		6	4,6-9	6,7,9	7	4,6-9	6-9								
	8. Realize the importance of adopting safety at an organizational level and identify the industry standards.								7,8	7	7	7,8	7,8							2,7,8	

Assessment tools mapped to Criteria

#	BCT 374 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	Quiz # 1											x									
2	Quiz # 2								x			x								x	
3	Quiz # 3								x			x									
4	Quiz # 4								x			x									
5	Team Assignment # 1.1					x		x	x	x		x	x								
6	Team Assignment # 1.2					x		x	x	x		x	x								
7	Class Participation								x	x	x	x	x							x	
8	Final Exam								x			x	x							x	
9	BIG Software					x			x	x		x	x								

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	2	25	8%																				
2	2	6	25	24%																				
3	3	12	25	48%																				
4	4	1	25	4%																				
5	5	22	25	88%																				
6	6	25	25	100%																				
7	7	25	25	100%																				
8	8	25	25	100%																				
9	9	8	25	32%																				
			AVG	**56%**			AVG				AVG				AVG				AVG				AVG	

School of Construction Program Outcomes 2014-2015

BCT 400	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Hannon	1. Demonstrate an understanding of construction a project cost estimate, proposal, work, control, quality assurance, and safety plans.	1-7	1-7			1-8		1-7					1-7	2,5	2,3		1-7	2,3			
Senior Project	2. Develop a topic and make a presentation of ideas through writing in an organized, logical, and coherent form and in a style that is appropriate for construction management and the building construction industry (GEC SLO 01).	2,3	2,3			2,3		1-7													
	3. Use Standard English grammar, punctuation, spelling, and usage (GEC SLO 02).	2,3	2,3			2,3		1-7													
	4. Use appropriate strategies to speak effectively in professional contexts for video recorded presentations (GEC SLO15).	7	7			7															

Assessment tools mapped to Criteria

#	BCT 400 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Organizational Structure	x	x			x							x				x				
2	2. Project Work Proposal	x	x			x							x	x	x		x	x			
3	3. Project Work Plan	x	x			x							x		x		x	x			
4	4. Project Control Plan	x	x			x							x				x				
5	5. Project QA/QC Plan	x	x			x							x	x			x				
6	6. Project Safety Plan	x	x			x							x				x				
7	7. Final Presentation	x	x			x							x				x				
8	8. Peer Review (individual)					x															

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	0	5	0%	1	0	16	0%					1	19	19	100%								
2	2	5	5	100%	2	11	16	69%					2	7	19	37%								
3	3	5	5	100%	3	12	16	75%					3	7	19	37%								
4	4	5	5	100%	4	13	16	81%					4	7	19	37%								
5	5	5	5	100%	5	14	16	88%					5	19	19	100%								
6	6	0	5	0%	6	0	16	0%					6	19	19	100%								
7	7	5	5	100%	7	13	16	81%					7	19	19	100%								
8	8	0	5	0%	8	0	16	0%					8	19	19	100%								
			AVG	**63%**			AVG	**49%**							AVG	**76%**								

School of Construction Program Outcomes 2014-2015

BCT 455/L	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Fletcher	1. Identify and assemble the components of a construction cost estimate	1-5										1-5	1-5	1-5	3-5	1-5	1-5	1-5			1-5
Estimating II	2. Be familiar with the startup activities for assembling a complete bid	1-5										1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
BCT	3. Categorize work into various scope packages	1-5										1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
Fall 2014	4. Determine general conditions and overhead costs	1-5										1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	5. Determine labor, material, equipment and subcontractor costs	1-5										1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	6. Evaluate and analyze bids from subcontractors, suppliers and vendors	1-5	3-5						3-5			1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	7. Handle post-bid adjustments and final scopes of work	1-5	3-5									1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	8. Prepare a complete bid for sample projects	1-5	3-5					3-5				1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	9. Work with spreadsheets to analyze and compare bids	1-5	3-5									1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	10. Discuss ethics when preparing, submitting, and evaluating bids	2								2										2	

Assessment tools mapped to Criteria

#	BCT 455/L ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Exam 1	x										x	x	x	x	x	x	x			x
2	2. Exam 2	x								x		x	x	x	x	x	x	x		x	x
3	3. Exam 3	x	x					x	x			x	x	x	x	x	x	x			x
4	4. Exam 4	x	x					x	x			x	x	x	x	x	x	x			x
5	5. Project 1	x	x					x	x			x	x	x	x	x	x	x			x

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	6	7	86%																				
2	2	7	7	100%																				
3	3	7	7	100%																				
4	4	7	7	100%																				
5	5	7	7	100%																				
			AVG	**97%**																				

BCT 455/L	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Fletcher	1. Identify and assemble the components of a construction cost estimate	1-5										1-5	1-5	1-5	3-5	1-5	1-5	1-5			1-5
Estimating II	2. Be familiar with the startup activities for assembling a complete bid	1-5										1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
BCT	3. Categorize work into various scope packages	1-5										1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
Spring 2015	4. Determine general conditions and overhead costs	1-5										1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	5. Determine labor, material, equipment and subcontractor costs	1-5										1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	6. Evaluate and analyze bids from subcontractors, suppliers and vendors	1-5	3-5						3-5			1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	7. Handle post-bid adjustments and final scopes of work	1-5	3-5									1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	8. Prepare a complete bid for sample projects	1-5	3-5					3-5				1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	9. Work with spreadsheets to analyze and compare bids	1-5	3-5									1-5	1-5	1-5	1-5	1-5	1-5	1-5			3-5
	10. Discuss ethics when preparing, submitting, and evaluating bids	2								2										2	

Assessment tools mapped to Criteria

#	BCT 455/L ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Exam 1	x										x	x	x	x	x	x	x			x
2	2. Exam 2	x								x		x	x	x	x	x	x	x		x	x
3	3. Project 1	x	x					x	x			x	x	x	x	x	x	x			x
4	4. Project 2	x	x					x	x			x	x	x	x	x	x	x			x
5	5. Project 3	x	x					x	x			x	x	x	x	x	x	x			x

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1													1	10	12	83%								
2													2	12	12	100%								
3													3	10	12	83%								
4													4	10	12	83%								
5													5	12	12	100%								
															AVG	**90%**								

BCT 458	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Sulbaran	1. Explain Schedule Planning and Development documents	1,2,3	1,2,3				1,2,3														1,2,3
Scheduling	2. Identify Construction Activities	1,2,3	1,2,3				1,2,3														1,2,3
	3. Estimate Activity Durations	1,2,3	1,2,3				1,2,3														1,2,3
	4. Develop Schedule Implementing Activity Logic	2,3	2,3				2,3						2,3				2,3			2,3	2,3
	5. Calculate Project Durations	2,3	2,3				2,3						2,3				2,3			2,3	2,3
	6. Allocate Resources	2,3	2,3				2,3						2,3				2,3			2,3	2,3
	7. Establish Schedule Control Basis	2,3	2,3				2,3						2,3				2,3			2,3	2,3
	8. Review and Validate Schedule	2,3	2,3				2,3						2,3				2,3			2,3	2,3
	9. Document and Communicate Schedule	2,3	2,3				2,3						2,3				2,3			2,3	2,3
	10. Submit Schedule Deliverables	2,3	2,3				2,3						2,3				2,3			2,3	2,3
	11. Progress Reporting	2,3	2,3				2,3						2,3				2,3			2,3	2,3
	12. Analysis and Communication of Plan and Schedule	2,3	2,3				2,3						2,3				2,3			2,3	2,3

Assessment tools mapped to Criteria

#	BCT 458 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1 Midterm Exam	x	x				x														x
2	2 Quizzes/Assignments	x	x				x						x				x			x	x
3	3 Final Exam	x	x				x						x				x			x	x

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1				1	39	51	76%	1	5	5	100%	1	10	14	71%					1			
2	2				2	34	51	67%	2	5	5	100%	2	10	14	71%					2			
3	3				3	39	51	76%	3	4	5	80%	3	12	14	86%					3			
			AVG				AVG	73%			AVG	93%			AVG	76%							AVG	

BCT 458L	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Scheduling Lab	1. Describe the graphic user interface of commercially available schedule applications	2,3	2,3				2,3						2				2			2,3	2,3
	2. Compile activities using the WBS in Microsoft Project	2,3	2,3				2,3						2				2			2,3	2,3
	3. Calculate activity durations in Microsoft Project	2,3	2,3				2,3						2				2				2,3
	4. Appraise the relationship between activities to implement the Critical Path Method	2,3	2,3				2,3						2				2			2,3	2,3
	5. Define resources in Microsoft Project	2,3	2,3				2,3						2				2			2,3	2,3
	6. Allocate resources in Microsoft Project	2,3	2,3				2,3						2				2			2,3	2,3
	7. Prepare schedule reports	2,3	2,3				2,3	2					2				2			2,3	2,3

Assessment tools mapped to Criteria

#	BCT 458L ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
2	2 Quizzes/Assignments	x	x				x	x					x				x			x	x
3	3 Final Exam	x	x				x													x	x

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
4	2				2	34	51	67%	2	5	5	100%	2	10	14	71%					2			
5	3				3	39	51	76%	3	4	5	80%	3	12	14	86%					3			
			AVG				AVG	**72%**			AVG	90%			AVG	79%							AVG	

BCT 477	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
	1 Realize the importance of teamwork and learn to operate in teams.					5, 6	5, 6	5, 6, 7	1,'5-7	7		5, 6	1,'5-7				6				
Langar	2 Develop a better understanding of construction projects and associated stakeholders.					5, 6	5, 6	5, 6, 7	1,3, 4-8	7		5, 6	'5-7				6				
	3 Generate a deeper understanding about the various project delivery methods.					5, 6	5, 6	5, 6, 7	3,5-8	7		5, 6	'5-7	6			6				
Project Management	4 Realize the impact of information technology on construction project management.					5, 6	5, 6	5, 6, 7	1,''5-8	7		5, 6	'5-7	6			6				
FA14	5 Be capable of assessing bidding process, procurement strategies, and the associated documents.					5, 6	5, 6	5, 6, 7	'6-8			5, 6	7	6			6				
	6 Familiarize with the project time, cost, and quality management.					5, 6	5, 6	5, 6, 7	7-8			5, 6	7	6			6				
	7 Plan, prepare, evaluate, and modify job schedules.					5, 6	5, 6	5, 6, 7	6,7			5, 6	7	6							
	8 Understand and familiarize with the importance of on-site safety, construction law, and other documents that will be used by general contractors								7,8	7											

Assessment tools mapped to Criteria

#	BCT 477 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1 Quiz I								x				x								
2	2 Quiz II																				
3	3 Quiz III								x												
4	4 Quiz IV								x												
5	5 Team Assignment I					x	x	x	x			x	x								
6	6 Team Assignment II					x	x	x	x			x	x	x			x				
7	7 Class Participation							x	x	x			x								
8	8 Final Exam																				

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	12	15	80%																				
2	2	15	15	100%																				
3	3	6	15	40%																				
4	4	8	15	53%																				
5	5	12	15	80%																				
6	6	12	15	80%																				
7	7	15	15	100%																				
8	8	12	15	80%																				
			AVG	**77%**			AVG				AVG				AVG				AVG				AVG	

BCT 478	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Regan	1. Recognize and differentiate between the basic implications of primary construction contract clauses.												1,5							1,5	
Construction Law	2. Identify construction management/contract administration best practices based upon construction law.							2,3									2,3			2,3	
	3. Critically evaluate construction disputes based upon case facts and contract content.												4				4			4	
	4. Demonstrate the ability to research, develop, and focus on legal topics for speaking and writing assignments while presenting ideas in an organized, logical, and coherent form.							2,3,4				2,3					2,3			2,3	
	5. Demonstrate the ability to use Standard English grammar, punctuation, spelling, and usage.							2,3,5				2,3					2,3			2,3	
	6. Consideration of ethical issues involved in construction project delivery.							2,3												2,3	

Assessment tools mapped to Criteria

#	BCT 478 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Quiz												x							x	
2	2. CTP							x				x					x			x	
3	3. BPD							x				x					x			x	
4	4. FIRAC							x					x				x			x	
5	5. Exam							x					x							x	

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1					1	31	45	69%	1								1							
2					2	31	45	69%	2								2							
3					3	40	45	89%	3								3							
4					4	35	45	78%	4								4							
5					5	34	45	76%	5								5							
							AVG	**78%**			AVG								AVG					

BCT 480	Course Student Learning Outcomes	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
Kemp	1. Locate appropriate CFR reference for various construction hazards								7			1							1		5,7
Construction Safety	2. Visually recognize compliance and non-compliance issues and situations						5														5
	3. Produce summaries that reflect current accident causes and discuss violations, preventive measures, and ethical issues.							3		3,6											2-7
	4. Create a basic Safety Plan for a general contractor				7			7													7
	5. Give presentations related to construction safety hazards and jobsite tool box meetings				7			7													7
	6. Research and document several current issues in construction safety						5	3												6	

Assessment tools mapped to Criteria

#	BCT 480 ASSESSMENT Tools	General Criteria											AS & BS criteria				BS program criteria				
		a	b	c	d	e	f	g	h	i	j	k	a	b	c	d	e	f	g	h	i
1	1. Pre-Test & Post-Test											x							x		
2	2. OSHA Self-Test																				x
3	3. Two Safety Articles							x		x											x
4	4. Exam 1 --covers Intro through Tools																				x
5	5. Hazard Recognition Report						x														x
6	6. Exam #2 ---Electrical -- Record Keeping									x										x	
7	7. Final Project				x			x	x												x

#	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio	Tool #	# >= C	#ENR	Ratio
	FA14	F-F			FA14	ONL			SP15	F-F			SP15	ONL			SU15	F-F			SU15	ONL		
1	1	8	10	80%	1	35	37	95%					1	44	54	81%								
2	2	9	10	90%	2	35	37	95%					2	50	54	93%								
3	3	10	10	100%	3	37	37	100%					3	53	54	98%								
4	4	7	10	70%	4	30	37	81%					4	49	54	91%								
5	5	10	10	100%	5	36	37	97%					5	52	54	96%								
6	6	10	10	100%	6	35	37	95%					6	47	54	87%								
7	7	9	10	90%	7	36	37	97%					7	52	54	96%								
			AVG	**90%**			AVG	**94%**			AVG				AVG	**92%**			AVG				AVG	

Findings: General Criteria (a-k)

	BCT criteria	>=70	ENR	%	sem	>=70	ENR	%	type	>=70	ENR	%	%	>=70	ENR	BCT concatenated findings
GC	a	1883	2438	77%	FA14	828	1130	73%	F-F	384	525	73%	77	1,883	2,438	77% (1,883 of 2,438) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'a'.
									ONL	444	605	73%				FA14: F-F = 73% (384 of 525); ONL = 73% (444 of 605);
					SP15	1055	1308	81%	F-F	147	169	87%				SP15: F-F = 87% (147 of 169); ONL = 80% (908 of 1,139);
									ONL	908	1139	80%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				
GC	b	1462	1929	76%	FA14	666	889	75%	F-F	267	337	79%	76	1,462	1,929	76% (1,462 of 1,929) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'b'.
									ONL	399	552	72%				FA14: F-F = 79% (267 of 337); ONL = 72% (399 of 552);
					SP15	796	1040	77%	F-F	48	61	79%				SP15: F-F = 79% (48 of 61); ONL = 76% (748 of 979);
									ONL	748	979	76%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				
GC	c	257	316	81%	FA14	156	178	88%	F-F	81	96	84%	81	257	316	81% (257 of 316) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'c'.
									ONL	75	82	91%				FA14: F-F = 84% (81 of 96); ONL = 91% (75 of 82);
					SP15	101	138	73%	F-F	25	36	69%				SP15: F-F = 69% (25 of 36); ONL = 75% (76 of 102);
									ONL	76	102	75%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				
GC	d	594	733	81%	FA14	273	321	85%	F-F	131	168	78%	81	594	733	81% (594 of 733) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'd'.
									ONL	142	153	93%				FA14: F-F = 78% (131 of 168); ONL = 93% (142 of 153);
					SP15	321	412	78%	F-F	25	36	69%				SP15: F-F = 69% (25 of 36); ONL = 79% (296 of 376);
									ONL	296	376	79%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				
GC	e	558	753	74%	FA14	250	368	68%	F-F	147	194	76%	74	558	753	74% (558 of 753) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'e'.
									ONL	103	174	59%				FA14: F-F = 76% (147 of 194); ONL = 59% (103 of 174);
					SP15	308	385	80%	F-F	32	35	91%				SP15: F-F = 91% (32 of 35); ONL = 79% (276 of 350);
									ONL	276	350	79%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				

GC	**f**	1060	1351	**78%**	FA14	617	784	79%	F-F	185	248	75%	78	1,060	1,351
									ONL	432	536	81%			
					SP15	443	567	78%	F-F	38	43	88%			
									ONL	405	524	77%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
GC	**g**	1336	1608	83%	FA14	781	931	84%	F-F	299	347	86%	83	1,336	1,608
									ONL	482	584	83%			
					SP15	555	677	82%	F-F	78	92	85%			
									ONL	477	585	82%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
GC	**h**	1320	1671	**79%**	FA14	554	789	70%	F-F	442	670	66%	79	1,320	1,671
									ONL	112	119	94%			
					SP15	766	882	87%	F-F	156	179	87%			
									ONL	610	703	87%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
GC	**i**	816	929	88%	FA14	317	361	88%	F-F	209	246	85%	88	816	929
									ONL	108	115	94%			
					SP15	499	568	88%	F-F	59	70	84%			
									ONL	440	498	88%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
GC	**j**	257	322	**80%**	FA14	92	108	85%	F-F	92	108	85%	80	257	322
									ONL	0	0	0%			
					SP15	165	214	77%	F-F	39	53	74%			
									ONL	126	161	78%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
GC	**k**	2010	2456	82%	FA14	798	1073	74%	F-F	456	684	67%	82	2,010	2,456
									ONL	342	389	88%			
					SP15	1212	1383	88%	F-F	221	246	90%			
									ONL	991	1137	87%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			

78% (1,060 of 1,351) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'f'.
FA14: F-F = 75% (185 of 248); ONL = 81% (432 of 536);
SP15: F-F = 88% (38 of 43); ONL = 77% (405 of 524);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
83% (1,336 of 1,608) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'g'.
FA14: F-F = 86% (299 of 347); ONL = 83% (482 of 584);
SP15: F-F = 85% (78 of 92); ONL = 82% (477 of 585);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
79% (1,320 of 1,671) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'h'.
FA14: F-F = 66% (442 of 670); ONL = 94% (112 of 119);
SP15: F-F = 87% (156 of 179); ONL = 87% (610 of 703);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
88% (816 of 929) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'i'.
FA14: F-F = 85% (209 of 246); ONL = 94% (108 of 115);
SP15: F-F = 84% (59 of 70); ONL = 88% (440 of 498);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
80% (257 of 322) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'j'.
FA14: F-F = 85% (92 of 108); ONL = 0% (0 of 0);
SP15: F-F = 74% (39 of 53); ONL = 78% (126 of 161);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
82% (2,010 of 2,456) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET General Criteria 'k'.
FA14: F-F = 67% (456 of 684); ONL = 88% (342 of 389);
SP15: F-F = 90% (221 of 246); ONL = 87% (991 of 1,137);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);

Associate Degree and Lower Division Baccalaureate Criteria

AS	**a**	1776	2237	**79%**	FA14	668	924	72%	F-F	398	524	76%	79	1,776	2,237	79% (1,776 of 2,237) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Associate Degree Program Specific Criteria 'a'.
									ONL	270	400	68%				FA14: F-F = 76% (398 of 524); ONL = 68% (270 of 400);
					SP15	1108	1313	84%	F-F	204	227	90%				SP15: F-F = 90% (204 of 227); ONL = 83% (904 of 1,086);
									ONL	904	1086	83%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				
AS	**b**	1555	1854	84%	FA14	807	975	83%	F-F	355	476	75%	84	1,555	1,854	84% (1,555 of 1,854) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Associate Degree Program Specific Criteria 'b'.
									ONL	452	499	91%				FA14: F-F = 75% (355 of 476); ONL = 91% (452 of 499);
					SP15	748	879	85%	F-F	139	162	86%				SP15: F-F = 86% (139 of 162); ONL = 85% (609 of 717);
									ONL	609	717	85%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				
AS	**c**	466	634	**74%**	FA14	187	241	78%	F-F	119	140	85%	74	466	634	74% (466 of 634) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Associate Degree Program Specific Criteria 'c'.
									ONL	68	101	67%				FA14: F-F = 85% (119 of 140); ONL = 67% (68 of 101);
					SP15	279	393	71%	F-F	0	0	0%				SP15: F-F = 0% (0 of 0); ONL = 71% (279 of 393);
									ONL	279	393	71%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				
AS	**d**	623	762	82%	FA14	284	323	88%	F-F	138	166	83%	82	623	762	82% (623 of 762) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Associate Degree Program Specific Criteria 'd'.
									ONL	146	157	93%				FA14: F-F = 83% (138 of 166); ONL = 93% (146 of 157);
					SP15	339	439	77%	F-F	0	0	0%				SP15: F-F = 0% (0 of 0); ONL = 77% (339 of 439);
									ONL	339	439	77%				SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
					SU15	0	0	0%	F-F	0	0	0%				
									ONL	0	0	0%				

Upper Division Baccalaureate Criteria

BS	**e**	1214	1593	**76%**	FA14	595	814	73%	F-F	238	304	78%	76	1,214	1,593
									ONL	357	510	70%			
					SP15	619	779	79%	F-F	54	69	78%			
									ONL	565	710	80%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
BS	**f**	613	782	**78%**	FA14	268	333	80%	F-F	205	260	79%	78	613	782
									ONL	63	73	86%			
					SP15	345	449	77%	F-F	55	72	76%			
									ONL	290	377	77%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
BS	**g**	1132	1358	83%	FA14	484	591	82%	F-F	262	349	75%	83	1,132	1,358
									ONL	222	242	92%			
					SP15	648	767	84%	F-F	124	144	86%			
									ONL	524	623	84%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
BS	**h**	1030	1232	84%	FA14	437	572	76%	F-F	85	106	80%	84	1,030	1,232
									ONL	352	466	76%			
					SP15	593	660	90%	F-F	115	122	94%			
									ONL	478	538	89%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			
BS	**i**	1275	1488	86%	FA14	599	716	84%	F-F	134	160	84%	86	1,275	1,488
									ONL	465	556	84%			
					SP15	676	772	88%	F-F	23	25	92%			
									ONL	653	747	87%			
					SU15	0	0	0%	F-F	0	0	0%			
									ONL	0	0	0%			

76% (1,214 of 1,593) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Baccalaureate Degree Program Specific Criteria 'e'.
FA14: F-F = 78% (238 of 304); ONL = 70% (357 of 510);
SP15: F-F = 78% (54 of 69); ONL = 80% (565 of 710);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
78% (613 of 782) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Baccalaureate Degree Program Specific Criteria 'f'.
FA14: F-F = 79% (205 of 260); ONL = 86% (63 of 73);
SP15: F-F = 76% (55 of 72); ONL = 77% (290 of 377);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
83% (1,132 of 1,358) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Baccalaureate Degree Program Specific Criteria 'g'.
FA14: F-F = 75% (262 of 349); ONL = 92% (222 of 242);
SP15: F-F = 86% (124 of 144); ONL = 84% (524 of 623);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
84% (1,030 of 1,232) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Baccalaureate Degree Program Specific Criteria 'h'.
FA14: F-F = 80% (85 of 106); ONL = 76% (352 of 466);
SP15: F-F = 94% (115 of 122); ONL = 89% (478 of 538);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);
86% (1,275 of 1,488) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ETAC-ABET Baccalaureate Degree Program Specific Criteria 'i'.
FA14: F-F = 84% (134 of 160); ONL = 84% (465 of 556);
SP15: F-F = 92% (23 of 25); ONL = 87% (653 of 747);
SU15: F-F = 0% (0 of 0); ONL = 0% (0 of 0);

Action Plans

FA14	SP15	FF	ONL						
x		x		AEC 132/L	Performance < target 80%				BCT ACTION PLANS
				Shane Germany	ACT	BCT	IET	ID / Other	
				1. Vocab Quiz	88.9	92.3	100.0	**60.0**	
				2. CAD Exercise	**55.6**	**61.5**	100.0	**40.0**	students who did not attend work days for cad exercises often did not submit assignments, mandatory attendance requirements should fix this issue.
				3. Sketchbook	**66.7**	84.6	**50.0**	**60.0**	
				4. Final Project	**55.6**	**46.2**	**50.0**	**40.0**	students who did not attend work days for cad exercises often did not submit assignments, mandatory attendance requirements should fix this issue.
				5. Final Exam	88.9	100.0	100.0	**60.0**	
FA14	**SP15**	**FF**	**ONL**						
x			x	**AEC 132/L**	**Performance < target 80%**				**BCT ACTION PLANS**
				Jenna Hill	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Quiz	**33.3**	87.0	**50.0**	**66.7**	
				2 CAD Exercises	**33.3**	**52.2**	**37.5**	**16.7**	students did not complete course work ; monitor. students request more time; extend deadlines. Modify course work
				3 Sketchbook	**33.3**	**73.9**	**50.0**	**66.7**	students did not complete course work; monitor
				4 Final Project	**0.0**	**69.6**	**50.0**	**50.0**	students did not complete course work ; monitor. students request more time; extend deadlines
				5 Final Exam	**33.3**	**73.9**	**50.0**	**50.0**	students did not complete course work; monitor
FA14	**SP15**	**FF**	**ONL**						
	x		x	**AEC 132/L**	**Performance < target 80%**				**BCT ACTION PLANS**
				Jenna Hill	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Quiz	**100.0**	**76.5**	**60.0**	80.0	students did not complete course work; monitor
				2 CAD Exercises	**0.0**	**58.8**	**50.0**	80.0	students did not complete course work ; monitor. students request more time; extend deadlines. Modify course work
				3 Sketchbook	**0.0**	**47.1**	**50.0**	80.0	students did not complete course work; monitor
				4 Design Charette	**0.0**	**64.7**	**50.0**	**60.0**	students did not complete course work ; monitor. students request more time; extend deadlines
				5 Final Project	**0.0**	**29.4**	**50.0**	**60.0**	students did not complete course work; monitor
				6 Final Exam	**0.0**	**52.9**	**50.0**	100.0	students did not complete course work; monitor

Action Plans Continued

FA14	SP15	FF	ONL						
x		x		**AEC 204**	**Performance < target 80%**				**BCT ACTION PLANS**
				Jessica Sharp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Supplier Report	100.0	85.7		**50.0**	
				2. (2) Job Site Reports	80.0	92.9		**50.0**	
				3. Research Project	100.0	100.0		100.0	
				4. Final Project Presentation	100.0	85.7		100.0	
				5. Quizzes 1-5	100.0	92.9		100.0	
				6. Exam One	100.0	100.0		100.0	
				7. Exam Two	100.0	92.9		**50.0**	
				8. Final Exam	100.0	100.0		100.0	

FA14	SP15	FF	ONL						
x			x	**AEC 204**	**Performance < target 80%**				**BCT ACTION PLANS**
				Jessica Sharp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Supplier Report	100.0	97.6		100.0	
				2. (2) Job Site Reports	100.0	87.8		**66.7**	
				3. Research Project	100.0	100.0		**66.7**	
				4. Final Project Presentation	100.0	87.8		**66.7**	
				5. Quizzes 1-5	100.0	92.7		100.0	
				6. Exam One	100.0	92.7		100.0	
				7. Exam Two	100.0	97.6		100.0	
				8. Final Exam	**66.7**	85.4		**66.7**	

FA14	SP15	FF	ONL						
x			x	**AEC 270**	**Performance < target 80%**				**BCT ACTION PLANS**
				Jessica Sharp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Weekly Homework Assignments	83.3	89.7	100.0		
				2. Exam One	100.0	93.1	100.0		
				3. Exam Two	100.0	96.6	100.0		
				4. Exam Three	83.3	86.2	100.0		

FA14	SP15	FF	ONL						
	x		x	**AEC 301**	**Performance < target 80%**				**BCT ACTION PLANS**
				Jenna Hill	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Quiz	**62.5**	86.5		**0.0**	
				2 Discussion	**75.0**	81.1		100.0	
				3 Final Exam	**37.5**	**75.7**		**0.0**	

Action Plans Continued

FA14	SP15	FF	ONL						
x		x		AEC 444	Performance < target 80%				BCT ACTION PLANS
				Desmond Fletcher	ACT	BCT	IET	ID / Other	
				1 Exam 1	83.3	**73.3**		**0.0**	Improve the sample problems
				2 Exam 2	**50.0**	**73.3**		100.0	Improve the sample problems
				3 Exam 3	100.0	86.7		100.0	
				4 Exam 4	100.0	86.7		100.0	
				5 Exam 5	**50.0**	**46.7**		**0.0**	Improve the sample problems and reevaluate difficulty of exam
FA14	SP15	FF	ONL						
	x		x	AEC 444	Performance < target 80%				BCT ACTION PLANS
				Desmond Fletcher	ACT	BCT	IET	ID / Other	
				1 Exam 1	**58.3**	**75.0**			Improve the sample problems
				2 Exam 2	**58.3**	**63.6**			Improve the sample problems
				3 Exam 3	**75.0**	90.9			
				4 Exam 4	91.7	86.4			
				5 Exam 5	83.3	**65.9**			Improve the sample problems
FA14	SP15	FF	ONL						
x		x		AEC 454	Performance < target 80%				BCT ACTION PLANS
				Desmond Fletcher	ACT	BCT	IET	ID / Other	
				1 Exam 1	**66.7**	**57.1**			Nothing; scores improved
				2 Exam 2	**66.7**	85.7			
				3 Exam 3	100.0	100.0			
				4 Exam 4	100.0	85.7			
				5 Exam 5	100.0	**71.4**			Evaluate presentation materials
FA14	SP15	FF	ONL						
	x		x	AEC 454	Performance < target 80%				BCT ACTION PLANS
				Desmond Fletcher	ACT	BCT	IET	ID / Other	
				1 Exam 1	100.0	86.7			
				2 Exam 2	100.0	**66.7**			Improve the presentation materials
				3 Exam 3	100.0	100.0			
				4 Exam 4	100.0	93.3			
				5 Project	100.0	80.0			

Action Plans Continued

FA14	SP15	FF	ONL						
	x		x	**AEC 496**	**Performance < target 80%**				**BCT ACTION PLANS**
				Doris Kemp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Internship agreement	100.0	100.0			
				2. Schedule supervisor/instructor conversation	**66.7**	93.8			
				3. Midterm report	100.0	93.8			
				4. instructor/supervisor conversation	100.0	100.0			
				5. Schedule final oral presentation	100.0	87.5			
				6. Final report	100.0	100.0			
				7. Final oral presentation	100.0	100.0			
				8. Student survey	100.0	100.0			
				9. Industry representative survey	100.0	100.0			
				10. Student intern evaluation	100.0	100.0			

FA14	SP15	FF	ONL						
	x		x	**BCT 205**	**Performance < target 80%**				**BCT ACTION PLANS**
				Hannon	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Quizzes	**33.3**	**75.5**		100.0	This is first time course material, more data needs collection; one reason for the low percentage is non-submission of assessment; tutoring should be available; questionaires will be offered after each assessment to catch problems earlier.
				2. Tests	**16.7**	92.5		0.0	
				3. Exercises	**33.3**	**52.8**		0.0	This is first time course material, more data needs collection; one reason for the low percentage is non-submission of assessment; tutoring should be available; questionaires will be offered after each assessment to catch problems earlier.

FA14	SP15	FF	ONL						
	x		x	**BCT 205L**	**Performance < target 80%**				**BCT ACTION PLANS**
				Hannon	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Exercises	**33.3**	**75.5**		0.0	This Lab is still in development; a course text which assists with the material will be specified next iteration; computer hardware minimum requirements is also to be specified (should do as a program as CAD programs are resource intensive and typically 64-bit).

FA14	SP15	FF	ONL						
x		x		**BCT 205**	**Performance < target 80%**				**BCT ACTION PLANS**
				Hannon	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Quizzes	100.0	100.0		100.0	
				2. Tests	**71.4**	64.3			Course has been completely redesigned for Spring 2015; New text, tests,quizzes, and exercises.
				3. Exercises	**71.4**	92.9		100.0	

Action Plans Continued

FA14	SP15	FF	ONL						
	x		x	**BCT 336**	**Performance < target 80%**				**BCT ACTION PLANS**
				Sandeep Langar	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Quiz # 1	**60.0**	86.3		100.0	
				2Quiz # 2	80.0	84.3		100.0	
				3 Quiz # 3	100.0	86.3		100.0	
				4 Quiz # 4	100.0	94.1		100.0	
				5 Quiz # 5	**60.0**	**78.4**		100.0	Moniter
				6 Quiz # 6	100.0	92.2		100.0	
				7 Team Assignment	**60.0**	**51.0**		100.0	Moniter
				8 Class Participation	100.0	98.0		100.0	
				9 Final Exam	80.0	82.4		100.0	

FA14	SP15	FF	ONL						
	x	x		**BCT 336**	**Performance < target 80%**				**BCT ACTION PLANS**
				Sandeep Langar	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Quiz # 1	70.0	94.4			
				2Quiz # 2	80.0	83.3			
				3 Quiz # 3	100.0	94.4			
				4 Quiz # 4	100.0	100.0			
				5 Quiz # 5	**70.0**	83.3			
				6 Quiz # 6	80.0	94.4			
				7 Team Assignment	**70.0**	83.3			
				8 Class Participation	**70.0**	**55.6**			Moniter
				9 Final Exam	**70.0**	83.3			

FA14	SP15	FF	ONL						
x		x		**BCT 336**	**Performance < target 80%**				**BCT ACTION PLANS**
				Sandeep Langar	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Quiz I	100.0	**53.3**			Moniter
				2 Quiz II	**66.7**	**46.7**			Moniter
				3 Quiz III	100.0	**46.7**			Moniter
				4 Quiz IV	100.0	**40.0**			Moniter
				5 Team Assignment 1.1	100.0	86.7			
				6 Team Assignment 1.2	100.0	80.0			
				7 Class Participation	100.0	80.0		100.0	
				8 Final Exam	**66.7**	**53.3**			Moniter
				Individual Assignment 1.1 + 1.2	100.0	**66.7**			Moniter
				Individual Assignment 1.13 + 1.4	**0.0**	**60.0**			Moniter

Action Plans Continued

FA14	SP15	FF	ONL						
x		x		**BCT 374**	**Performance < target 80%**				**BCT ACTION PLANS**
				Sandeep Langar	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Quiz # 1	100.0	**68.4**			Moniter
				2Quiz # 2	100.0	94.7			
				3 Quiz # 3	100.0	**78.9**			Moniter
				4 Quiz # 4	**0.0**	**36.8**			Moniter
				5 Team Assignment # 1.1	100.0	**78.9**			Moniter
				6 Team Assignment # 1.2	100.0	94.7			
				7 Class Participation	100.0	100.0			
				8 Final Exam	**0.0**	**63.2**			Moniter
				9 BIG Software	100.0	100.0			

FA14	SP15	FF	ONL						
	x	x		**BCT 374**	**Performance < target 80%**				**BCT ACTION PLANS**
				Jessica Sharp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Research Papers		82.4			
				2. Final Project		100.0			
				3. Weekly Quizzes		100.0			
				4. Exam One		88.2			
				5. Exam Two		100.0			
				6. Attendance / Participation		100.0			

FA14	SP15	FF	ONL						
	x		x	**BCT 374**	**Performance < target 80%**				**BCT ACTION PLANS**
				Jessica Sharp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Research Papers		84.7			
				2. Final Project		88.1			
				3. Weekly Quizzes		100.0			
				4. Exam One		89.8			
				5. Exam Two		93.2			
				6. Attendance / Participation		81.4			

Action Plans Continued

FA14	SP15	FF	ONL						
	x	x		**BCT 400**	**Performance < target 80%**				**BCT ACTION PLANS**
				Hannon	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Organizational Chart		100.0			
				2. Project Work Proposal		**66.7**			Students should be prohibited from taking Estimating at same time as Capstone; Lower-level course outcomes should be reviewed; Industry and faculty should review these assignments.
				3. Project Work Plan		**66.7**			Students should be prohibited from taking Project Controls at same time as Capstone; Lower-level course outcomes should be reviewed; Industry and faculty should review these assignments.
				4. Project Control Plan		**66.7**			Students should be prohibited from taking Project Controls at same time as Capstone; Lower-level course outcomes should be reviewed; Industry and faculty should review these assignments.
				5. Project QA/QC Plan		100.0			
				6. Project Safety Plan		100.0			
				7. Final Presentation		100.0			
				8. Peer Review (individual)		**77.8**			

FA14	SP15	FF	ONL						
	x		x	**BCT 400**	**Performance < target 80%**				**BCT ACTION PLANS**
				Hannon	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Organizational Chart		100.0			
				2. Project Work Proposal		**36.8**			Students should be prohibited from taking Estimating at same time as Capstone; Lower-level course outcomes should be reviewed; Industry and faculty should review these assignments.
				3. Project Work Plan		**36.8**			Students should be prohibited from taking Project Controls at same time as Capstone; Lower-level course outcomes should be reviewed; Industry and faculty should review these assignments.
				4. Project Control Plan		**36.8**			Students should be prohibited from taking Project Controls at same time as Capstone; Lower-level course outcomes should be reviewed; Industry and faculty should review these assignments.
				5. Project QA/QC Plan		100.0			
				6. Project Safety Plan		100.0			
				7. Final Presentation		100.0			
				8. Peer Review (individual)		100.0			

Action Plans Continued

FA14	SP15	FF	ONL						
x		x		**BCT455/L**	**Performance < target 80%**				**BCT ACTION PLANS**
				Desmond Fletcher	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Exam 1		85.7			
				2 Exam 2		100.0			
				3 Exam 3		100.0			
				4 Exam 4		100.0			
				5 Exam 5		100.0			
FA14	**SP15**	**FF**	**ONL**						
	x		x	**BCT455/L**	**Performance < target 80%**				**BCT ACTION PLANS**
				Desmond Fletcher	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Exam 1		83.3			
				2 Exam 2		100.0			
				3 Exam 3		83.3			
				4 Exam 4		83.3			
				5 Exam 5		100.0			
FA14	**SP15**	**FF**	**ONL**						
x			x	**BCT 458/L**	**Performance < target 80%**				**BCT ACTION PLANS**
				Tulio Sulbaran	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Midterm Exam		**76.5**			Reorganize Unit Content
				2 Quizzes/Assignments		**66.7**			Provide Additional Reminders
				3 Final Exam		**76.5**			Assess the impact of Action 1 (Midterm) and 2 (Q&A)
FA14	**SP15**	**FF**	**ONL**						
	x		x	**BCT 458/L**	**Performance < target 80%**				**BCT ACTION PLANS**
				Tulio Sulbaran	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Midterm Exam		**71.4**			Remind the students the important of studying for the Midterm Exam
				2 Quizzes/Assignments		**71.4**			Provide Additional Reminders
				3 Final Exam		85.7			
FA14	**SP15**	**FF**	**ONL**						
	x	x		**BCT 458/L**	**Performance < target 80%**				**BCT ACTION PLANS**
				Tulio Sulbaran	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Midterm Exam		100.0			
				2 Quizzes/Assignments		100.0			
				3 Final Exam		80.0			

Action Plans Continued

FA14	SP15	FF	ONL						
x		x		**BCT 477**	**Performance < target 80%**				**BCT ACTION PLANS**
				Sandeep Langar	**ACT**	**BCT**	**IET**	**ID / Other**	
				1 Quiz # 1		80.0			
				2Quiz # 2		100.0			
				3 Quiz # 3		**40.0**			Moniter
				4 Quiz # 4		**53.3**			Moniter
				5 Team Assignment # 1.1		80.0			
				6 Team Assignment # 1.2		80.0			
				7 Class Participation		100.0			
				8 Final Exam		80.0			
FA14	**SP15**	**FF**	**ONL**						
x			x	**BCT 478**	**Performance < target 80%**				**BCT ACTION PLANS**
				Hannon	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Quiz		**68.9**			No problem perceived, final grades were curved up 2%
				2. CTP		**68.9**			No problem perceived, final grades were curved up 2%
				3. BPD		**88.9**			No problem perceived, final grades were curved up 2%
				4. FIRAC		**77.8**			No problem perceived, final grades were curved up 2%
				5. Exam		**75.6**			No problem perceived, final grades were curved up 2%
FA14	**SP15**	**FF**	**ONL**						
x		x		**BCT 480**	**Performance < target 80%**				**BCT ACTION PLANS**
				Doris Kemp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Pre-Test & Post-Test	100.0	80.0			
				2. OSHA Self-Test	100.0	90.0			
				3. Two Safety Articles	100.0	100.0			
				4. Exam 1 --covers Intro through Tools	**50.0**	**70.0**			Both ACT & BCT students indicated they did not prepare well for exam because they had other exams that same day; monitor.
				5. Hazard Recognition Report	**50.0**	100.0			
				6. Exam #2 ---covers Electrical through Record Keeping	**50.0**	100.0			
				7. Final Project	100.0	90.0			

Action Plans Continued

FA14	SP15	FF	ONL						
x			x	**BCT 480**	**Performance < target 80%**				**BCT ACTION PLANS**
				Doris Kemp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Pre-Test & Post-Test		94.6		100.0	
				2. OSHA Self-Test		94.6		100.0	
				3. Two Safety Articles		100.0		100.0	
				4. Exam 1 --covers Intro through Tools		81.1		100.0	
				5. Hazard Recognition Report		97.3		100.0	
				6. Exam #2 ---covers Electrical through Record Keeping		94.6		100.0	
				7. Final Project		97.3		100.0	

FA14	SP15	FF	ONL						
	x		x	**BCT 480**	**Performance < target 80%**				**BCT ACTION PLANS**
				Doris Kemp	**ACT**	**BCT**	**IET**	**ID / Other**	
				1. Pre-Test & Post-Test		81.5		100.0	
				2. OSHA Self-Test		92.6		100.0	
				3. Two Safety Articles		98.1		100.0	
				4. Exam 1 --covers Intro through Tools		90.7		**0.0**	
				5. Hazard Recognition Report		96.3		100.0	
				6. Exam #2 ---covers Electrical through Record Keeping		87.0		100.0	
				7. Final Project		96.3		100.0	

BCT Four-year Summary

(Not including 2012-2013 which was not reported)

The summaries prior to the 2014-2015 cycle have been resorted to map into the reorganized 2015-2016 ETAC-ABET Criteria.

<-- 2014-2014 Criteria or earlier -->															2015-2016 Criteria				
BCT	2010-2011 summary				BCT	2011-2012 summary				BCT	2013-2014 summary*				BCT	2014-2015 summary			
	criteria	>=70	ENR	%		criteria	>=70	ENR	%		criteria	>=70	ENR	%		criteria	>=70	ENR	%
GC	a	1772	1945	91%	GC	a	2500	2827	88%	GC	a	1529	2019	76%	GC	a	1883	2438	77%
GC	b	1534	1688	91%	GC	b	2313	2614	88%	GC	b	1373	1561	88%	GC	b	1462	1929	76%
GC	c	889	929	96%	GC	c	779	911	86%	GC	c	139	154	90%	GC	c	257	316	81%
GC	d	954	1017	94%	GC	d	831	989	84%	GC	d	1073	1201	89%	GC	d	594	733	81%
GC	e	1642	1874	88%	GC	e	1593	1776	90%	GC	e	998	1354	74%	GC	e	558	753	74%
GC	f	1271	1439	88%	GC	f	2129	2436	87%	GC	f	2037	2531	80%	GC	f	1060	1351	78%
GC	g	894	966	93%	GC	g	1792	1986	90%	GC	g	1690	2137	79%	GC	g	1336	1608	83%
GC	h	832	929	90%	GC	h	621	731	85%	GC	h	379	443	86%	GC	h	1320	1671	79%
GC	i	974	1121	87%	GC	i	608	694	88%	GC	i	913	1067	86%	GC	i	816	929	88%
GC	j	207	234	88%	GC	j	302	359	84%	GC	j	390	548	71%	GC	j	257	322	80%
GC	k	2183	2512	87%	GC	k	2923	3296	89%	GC	k	1329	1500	89%	GC	k	2010	2456	82%
AS	a	1331	1490	89%	AS	a	2206	2504	88%	AS	a	591	713	83%	AS	a	1776	2237	79%
AS	b	1016	1080	94%	AS	b	1219	1419	86%	AS	b	520	651	80%	→ AS	b	1555	1854	84%
AS	e	146	195	75%	AS	e	719	830	87%	AS	e	1271	1514	84%					
AS	c	332	342	97%	AS	c	579	628	92%	AS	c	177	195	91%	AS	c	466	634	74%
AS	d	832	949	88%	AS	d	435	509	85%	AS	d	38	41	93%	→ AS	d	623	762	82%
AS	f	370	480	77%	AS	f	602	676	89%	AS	f	229	254	90%					
BS	a	1104	1275	87%	BS	a	2605	2967	88%	BS	a	711	827	86%	BS	e	1214	1593	76%
BS	b	473	560	84%	BS	b	1282	1485	86%	BS	b	861	1034	83%	BS	f	613	782	78%
BS	c	811	927	87%	BS	c	948	1065	89%	BS	c	564	627	90%	BS	g	1132	1358	83%
BS	d	318	335	95%	BS	d	935	1079	87%	BS	d	582	731	80%	BS	h	1030	1232	84%
BS	e	1446	1632	89%	BS	e	1805	2049	88%	BS	e	1936	2273	85%	→ BS	i	1275	1488	86%
BS	f	792	849	93%	BS	f	1583	1854	85%	BS	f	1402	1667	84%					
	BCT	22123	24768	**89%**		BCT	31309	35684	**87%**		BCT	20732	25042	**84%**		BCT	21237	26446	**80%**

BCT Graduate Exit Survey Findings (Indirect Measure 2)

These findings are from the 2013-2014 cycle using the prior ETAC-ABET criteria since they have not been compiled for the current cycle.

	criteria	2013	BCT Exit Survey Findings	
1	a	3.3	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'a' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
2	b	3.3	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'b' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
3	c	3.3	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'c' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
4	d	2.8	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'd' was 2.8. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	**Not Met**
5	e	3.1	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'e' was 3.1. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
6	f	3.3	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'f' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
7	g	3.3	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'g' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
8	h	3.3	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'h' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
9	i	3.3	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'i' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
10	j	3.1	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'j' was 3.1. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
11	k	3.2	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'k' was 3.2. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
12	a	3.1	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'a' was 3.1. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met

13	**b**	**3.1**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'b' was 3.1. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
14	**c**	**3.0**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'c' was 3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
15	**d**	**2.9**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'd' was 2.9. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	**Not Met**
16	**e**	**3.2**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'e' was 3.2. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
17	**f**	**3.0**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'f' was 3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
18	**a**	**3.1**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'a' was 3.1. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
19	**b**	**3.1**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'b' was 3.1. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
20	**c**	**3.1**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'c' was 3.1. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
21	**d**	**3.1**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'd' was 3.1. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
22	**e**	**3.0**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'e' was 3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
23	**f**	**2.9**	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'f' was 2.9. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	**Not Met**

Action Plans Related to Indirect Measures

BCT Indirect Measures

		Action Plans
Exit Surveys	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'd' was 2.8. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Require degree plan check to ensure increased sample size of respondents
	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'd' was 2.9. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Require degree plan check to ensure increased sample size of respondents
	Average of 19 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'f' was 2.9. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Require degree plan check to ensure increased sample size of respondents

Student Achievement Outcome

In order to satisfy a new SACS Student Achievement Outcome requirement, the following outcome was added to the Construction Engineering Technology outcomes in addition to the twenty reviewed above. The new outcome is: The Construction Engineering Technology program will use the "retention of all students enrolled by academic program" data available on the Institutional Research website to track the percentage of students retained or graduated 1 year later. Retention data will include both "retained in original academic program" and "degree already awarded in original program" data. Following are the outcome measure, target, and findings:

Measure: The Construction Engineering Technology program will use the "retention of all students enrolled by academic program" data available on the Institutional Research website to track the percentage of students retained or graduated 1 year later. Retention data will include both "retained in original academic program" and "degree already awarded in original program" data.

Target: At least 60% of students enrolled as a major in the Construction Engineering Technology BS degree program in the fall semester two years prior will either be retained as a major in the fall semester one year prior to the assessment year or have graduated in the major by the fall semester one year prior to the assessment year.

Findings: For students enrolled as a major (n=244) in the Construction Engineering Technology BS degree program in Fall 2012, 54.6% (131/244) of students were still majors in Fall 2013 and 12.5% (30/244) graduated by Fall 2013 for a combined retention rate of 66% (161/244). The target was met.