### School of Construction Program Outcomes Architectural Engineering Technology (ACT)

Program Summary A	СТ		2
<b>Continuous Improve</b>	ment Initiatives		2
Closing the Loop, Acl	hievement Summary / Analysis		4
<b>Course Findings (incl</b>	uded in report) with Assessment Tools I	Mapped to ETAC-ABET Criteria and Cours	e Objectives:
AEC 132/L	Architectural Graphics	Jessica Sharp/Shane Germany	6
AEC 204/L	Building Materials	Jessica Sharp	8
AEC 270	Statics & Strengths	Jessica Sharp	9
AEC 444	Structural Design	Desmond Fletcher	10
AEC 454	Estimating I	Jessica Sharp	11
ACT 234/L	Architectural CADD	Shane Germany	12
ACT 235/L	Architectural Working Drawings I	Shane Germany	13
ACT 262/L	Architectural Design I	Hans Palacios	14
ACT 322	Architectural History	Shane Germany	15
ACT 336/L	Architectural Working Drawings II	Shane Germany	16
ACT 338/L	Architectural Working Drawings III	Shane Germany	17
ACT 348	Modeling & Animation	Shane Germany	18
ACT 364/L	Architectural Design III	Hans Palacios	19
ACT 380	Specifications	Doris Kemp	20
ACT 400	Senior Project I	Hans Palacios	21
ACT 401	Senior Project II	Hans Palacios	22
ACT 450	Virtual reality in Construction	Shane Germany	23
ACT 465/L	Architectural Design IV	Hans Palacios	24
BCT 205/L	Surveying	John Hannon	25
Courses not included	l in report:		
AEC 315	Mechanical Systems	Dr. Fairuz Shiratuddin (Adjunct)	
AEC 316	Electrical Systems	Dr. Fairuz Shiratuddin (Adjunct)	
AEC 496	Industrial Internship	Doris Kemp	
ACT 301	Building CODES	Jenna Wright (Adjunct)	
ACT 363/L	Architectural Design II	Kevin Kitchens (Adjunct)	
Findings			
	eria (a-k)		26
	gree / Lower division Baccalaureate Deg		27
	e Degree Criteria		28
			29
-	ummary		33
Graduate Exit Survey	/ Findings (Indirect Measure 2)		34

#### **Program Summary ACT**

The ACT program provides students with a broad-based education with an emphasis on critical thinking, technical problem-solving ability, and computer applications in addition to a background in architectural design. The ACT program is committed to producing graduates who possess the necessary skills, critical thinking, discipline and work ethics to enter the Architecture/Engineering/Construction (A/E/C) industry fully capable of performing entry-level tasks at the office and in the field. Complex engineering systems keep modern buildings functioning. An architectural engineering technologist must understand civil infrastructure, plumbing, mechanical, electrical & lighting, and structural systems as well as the environmental & sustainability issues that are essential to a building's lifecycle. A degree in this field requires an orientation to the general principles of architectural design & multiple engineering disciplines and must include theoretical comprehension & practical skills of each. Graduates serve as architectural technologists for construction documentation (plans and specifications), CADD building data managers, construction project managers, facilities managers, systems engineers, and sales representatives for construction products; around 10% of our graduates continue their education to obtain architectural licenses. The Program Educational Objective of the ACT 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. Recent survey responses indicate our alumni in all program areas are more than satisfied with their degree in the areas of critical thinking, teamwork, communication skills, design process, ethics, modern techniques, professionalism, diversity, lifelong learning and preparation (ETAC-ABET accreditation self-studies 2009). It should be noted here that ETAC-ABET no longer requires the definition of a Program Educational Objective as of this past October 2012. ACT is also responsive to IHL priorities in a number of ways: educating a reentering workforce, operates in the black, has substantial industry support to supplement state resources, and has taken innovative approaches to curriculum delivery such as development for delivery online.

#### **Continuous Improvement Initiatives/Additional Action Plans**

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 2010. From that visit, it was apparent that the program objectives 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 fourth cycle using this approach it has resulted in overall objective areas average over 90% for the last two cycles. This result occurred despite a number of course reassignments and new faculty with new course developments that needed to embed these assessment processes into their activities. Each program must continue to reevaluate the mapping of course objectives to the program accreditation criteria listed below. For the Architectural Engineering Technology program, these 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 communicate effectively regarding broadly-defined engineering technology activities,
- 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,
- j. 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.

Criteria Specific to Architectural Engineering Technology Associate degree programs (and our corresponding lower-division) must demonstrate that graduates are capable of:

- a. employing concepts of architectural theory and design in a design environment;
- b. utilizing modern instruments, methods and techniques to produce A/E documents and presentations;
- c. conducting standardized field and laboratory testing on construction materials;
- d. utilizing modern instruments and research techniques for site development and building layout;
- e. determining forces and stresses in elementary structural systems;
- f. estimating material quantities for technical projects;
- g. calculating basic loads and demands in mechanical and electrical systems;
- h. utilizing codes, contracts and specifications in design, construction and inspection activities; and
- i. employing productivity software to solve technical problems;

Baccalaureate degree programs must demonstrate that graduates, in addition to the competencies above, are capable of:

- a. creating, utilizing and presenting design, construction, and operations documents;
- b. performing economic analyses and cost estimates related to design, construction, and maintenance of building systems in the architectural engineering technical specialties;
- c. selecting appropriate materials and practices for building construction;
- d. applying principles of construction law and ethics in architectural practice;
- e. applying basic technical design concepts to the solution of architectural problems involving architectural history, theory and design; codes, contracts and specifications; electrical and mechanical systems, environmental control systems, plumbing and fire protection; site development; structures, material behavior, foundations; construction administration, planning and scheduling; and

f. performing standard analysis and design in at least one recognized technical specialty within architectural engineering technology that is appropriate to the goals of the program.

Process Background: Faculty mapped each of their course objectives to the ETAC-ABET criteria using a listing of their assessment methods for each objective/criteria. This mapping provided evidence for which courses in the program inventory were supporting any given ETAC-ABET criteria. Additionally the mapping also provided a simple index system for staff to organize supporting materials by criteria for evaluation. ETAC-ABET requires only summative evidence, however this approach easily provides for formative inspection & evaluation of the curriculum. WeaveOnline Objectives reflect the exact ETAC-ABET criteria with two measures for each criteria: one direct and one indirect. The direct measures are the aggregated assessments for all student work samples (projects, exams, quizzes, papers) as determined by the faculty in their mapping exercise. The indirect measures are the graduate exit surveys and alumni surveys rewritten to also reflect the ETAC-ABET criteria.

Faculty then reported their findings for each section of their courses for fall 2012 and spring 2013. At the course level, it was decided to begin this process using targets of 80% of students would achieve 70 (out of 100) on the assessments. The findings were separated by program area the course might serve; for example, a course might have Architectural Engineering Technology (ACT), Construction Engineering Technology (BCT), Industrial Engineering Technology (IET), or other (OTHER) students. These findings were organized in a master spreadsheet organized so that the findings for each criteria for each program by semester and by delivery type (online or face-to-face) could be summed. This provides the total number of student samples for each criteria meeting the performance target versus total number of students being assessed. The findings for each criteria were then entered in WeaveOnline as annual summation values as well as being reported by semester and by type of site or delivery method. This system allows the program faculty to see the impact of their courses as a whole and individually on each criteria. Beyond the reporting system for SACS and ETAC-ABET, the faculty also now have a systematic approach to evaluate each of their course objectives using the defined performance target levels to look at weaknesses in each course.

#### **Closing the Loop/Action Plan Tracking**

The ACT Program Coordinator will evaluate the Program Outcomes annually to identify objective 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 objectives are necessary. However, ACT faculty will maintain and continuously improve the current methods of improvement to the overall quality & 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.

Continue to enforce faculty involvement at the program level rather than the course level in order to assure that ETAC-ABET criteria is being met across all courses in a collaborative and comprehensive manner.

#### **Achievement Summary / Analysis**

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

Since we implemented a course-based approach to assessment in the 2010-2011 cycle, there has been a marked improvement in findings. The average of all outcomes has increased from 87% to 93% in the previous 2012-2013 cycle and 91% in the current 2013-2014 cycle. During the current cycle seven criteria outcomes were in the 84%-90% bracket with the remaining exceeding 90%. The focus on course-based findings that not only are correlated with the program outcomes but also provide direct feedback for the individual course objectives are proving to allow us to maintain standards above the 90% average across outcomes.

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

Our assessment indicates that three outcomes/objective areas have dropped below the 90% mark since the 2012-2013 cycle. The focus on course-based findings provides direct feedback for the individual course objectives which will allow faculty to monitor and adapt to problem areas as they are identified. Annual evaluations that identify potential problem areas must be performed to establish pre-emptive strategies for improvement.

2013-2014

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### **Course Findings** with Assessment Tools Mapped to ETAC-ABET Criteria and Course Objectives

AFC 122/1	Course Objectives					Genera	al Criteria	1							Asso	oc & BS	program	n criter	ia				B	3S prog	ram cr	iteria	
AEC 132/L	Course Objectives	а	b	c	d	е	f	g	h	i	j	k	а	b	С	d	е	f	g	h	i	а	b	с	d	е	f
	1. Practice freehand sketching skills of architectural/construction related items								12			12	12									12					
	2. Produce orthographic projections						3-5						3-5								3-5						3-5
Sharp	3. Identify common architectural symbols	10,11					6-11	14		11		6-11		6-9,11	L						6-9,11	6-9,11					11
ACT, & BCT, IET	4. Identify common architectural abbreviations	10		-				14		10			_		_					10,14						10,14	I
Architectural Graphics	5. Identify common architectural terms	10						13,14		10										10,13,14						10,13,14	
Architectural Graphics Laboratory	<ol> <li>Create basic 2-D drawings using computer-aided drafting and design software</li> </ol>						1-9					1-9	1-9								1-9	1-9					1-9
	7. Create a partial drawing set of a residence using computer- aided drafting and design software	11					11					11		11							11						11
					Assessment	#students >= C	#students		Ratio		Assessment		#students >= C	#students	Ratio		Assessment	#students >= C		#students	Ratio		Assessment	#etudiants >= ſ	Į.	#students	Ratio
	ASSESSMENT Tools				FA13	F-F					FA	13	ONL			:	SP14	F-F				5	P14	01	NL		
1. Exercise 1 Cre	eating a title block with text in AutoCAD				1	12	12	10	00%																		
2. Exercise 2 Cre	eating an isometric sketch of a house-like shape in Auto	DCAD			2	12	12	10	00%							_											
3. Exercise 3 Ot	horgraphically projecting 6 sides of a shape in AutoCAD	)			3	12	12	10	00%																		
4. Exercise 4 – Ot	horgraphically projecting 6 sides of a shape in AutoCAD	)			4	10	12	8	33%																		
5. Exercise 5 Ot	horgraphically projecting 6 sides of a shape in AutoCAD	)			5	10	12	8	33%							· –											
6. Exercise 6 Cre	eating a partial floor plan with dimensions in AutoCAD				6	10	12	8	33%							_											
7. Exercise 7 Cre	eating a complete floor plan with dimensions in AutoCA	٩D			7	10	12	8	33%																		
8. Exercise 8 Cre	eating door and window schedules based on Exercise 7	in Auto	CAD		8	10	12	8	33%																		
9. Exercise 9 Cre	eating a front elevation and roof plan based on Exercise	e 7 in Au	toCAD		9	10	12	8	33%																		
10. Exercise 10	Commercial plan reading worksheet				10	12	12	10	00%																		
11. Final Project - elevations in Auto	<ul> <li>Creating a floor plan, door and window schedules, roc oCAD</li> </ul>	of plan, a	nd two		11	10	12	8	33%	]												]					
12. Sketching Not	tebook Sketching 50 objects in a Sketching Notebook				12	11	12	9	2%	1																	
	Quiz 1: glossary terms A-C; Quiz 2: glossary terms D-F; 4: glossary terms O-R; Quiz 5: glossary terms S-Z	; Quiz 3:	glossar	y	13	10	12	8	33%	1																	
	Comprehensive exam covering all modules				14	10	12	8	33%	1																	
										-	L					· –			_								

89%

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450 122/1	Course Ohiostiuse					Genera	al Criteria								Asso	c & BS	program	n criteri	ia				B	S program	criteria	
AEC 132/L	Course Objectives	а	b	С	d	е	f	g	h	i	j	k	а	b	с	d	е	f	g	h	i	а	b	с	i e	f
	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				2,4	2,3,4							2,3,4						2,4	2,3,4				
	3. Identify common architectural symbols	2,4,5						2,4,5																		
Germany	4. Identify common architectural abbreviations	2,4,5						2,4,5																		-
Architectural Graphics	5. Identify common architectural terms	1						1																		
Architectural Graphics Laboratory	6. Create basic 2-D drawings using computer-aided drafting and design software	2,4	2,4				2,4	2,4				2,4		2,4	2,4						2,4	2,4				
	7. Create a partial drawing set of a residence using computer- aided drafting and design software	2,4	2,4				2,4	2,4				2,4		2,4	2,4						2,4	2,4				

	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			FA13	ONL			SP14	F-F			SP14	ONL		
1. Vocab Quizzes									1	5	6	83%				
2. CAD Exercises									2	5	6	83%				1
3. Sketching Notebook									3	6	6	100%				
4. Final Project									4	2	6	33%				
5. Final Exam									5	3	6	50%				
			AVG				AVG				AVG	50%			AVG	1

450 204/1						Genera	l Criteria								Asso	: & BS	program	crite	ria				В	S progra	am cri	teria	
AEC 204/L	Course Objectives	а	b	c	d	е	f	g	h	i	j	k	а	b	с	d	е	f	g	h	i	а	b	с	d	e	f
	1. Identify the materials included in CSI Masterformat Divisions 3-14							6												6				6		6	
	<ol> <li>Create a report on observations made of materials being applied on both commercial and residential construction sites</li> </ol>	2						2	2	2		2								2		2					
Sharp	3. Define common construction processes and materials related terms	5		7,8				5-8							7,8					6				5-8		5-8	
ACT & BCT	4. Create a 1,250 - 1,750 word (5-7 pages) research paper about one construction material						3	3				3	3									3				3	
Building Materials	<ol> <li>Create and discuss a layout of the location, type, and cost of materials found at both a general and specialized supplier</li> </ol>	1						1	1			1						1					1				
Building Materials Laboratory	<ol> <li>Demonstrate presentation skills by designing, developing, and delivering a formal presentation (10-15 minute) about building materials</li> </ol>						4	4				4												4		4	

	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F				FA13	ONL			SP14	F-F				SP14	ONL		
1. Supplier Report A layout of the location, type, and cost of materials found at both a general and specialized supplier	1	7	8	88%		1	1	1	100%	1	5	5	100%		1	1	1	100%
2. (2) Job Site Reports A report on observations made of materials being applied on both commercial and residential construction sites	2	6	8	75%		2	1	1	100%	2	5	5	100%		2	1	1	100%
3. Research Project A 1,250 - 1,750 word (5-7 pages) research paper about one construction material	3	8	8	100%		3	1	1	100%	3	5	5	100%		3	1	1	100%
<ol> <li>Final Project Presentation A formal presentation (10-15 minutes) about the installation of one building material</li> </ol>	4	8	8	100%		4	1	1	100%	4	5	5	100%		4	1	1	100%
5. Quizzes 1-5 Quiz 1: glossary terms A-C; Quiz 2: glossary terms D-F; Quiz 3: glossary terms G-N; Quiz 4: glossary terms O-R; Quiz 5: glossary terms S-Z	5	8	8	100%		5	1	1	100%	5	5	5	100%		5	1	1	100%
6. Exam One Covers Chapters: 1-2, 4-8, and Basic estimating	6	8	8	100%		6	1	1	100%	6	5	5	100%		6	1	1	100%
7. Exam Two	7	8	8	100%		7	1	1	100%	7	5	5	100%		7	1	1	100%
8. Final Exam	8	8	8	100%		8	1	1	100%	8	5	5	100%		8	1	1	100%
				95%	]				100%			AVG	100%	-			AVG	100%

450.270	Course Objectives					Genera	al Criteria								Asso	: & BS	program	crite	ria				В	S progi	ram cr	iteria	
AEC 270	Course Objectives	а	b	с	d	e	f	g	h	i	j	k	а	b	с	d	e	f	g	h	i	а	b	с	d	e	f
	1. Calculate the components of a force		1-3,8		1-3,8		1-3,8										1-3,8									1-3,8	1-3,8
	2. Calculate the moments of forces		5-6, 8-9		5-6, 8-9		5-6, 8-9										5-6, 8-9									5-6, 8-9	5-6, 8-9
Sharp	3. Work problems involving the method of joints and sections		8		8		8										8									8	8
	4. Work problems involving pulleys		4		4		4										4									4	4
ACT & BCT	5. Trace load paths on structures		9														9									9	9
	6. Calculate axial, shear and bearing stresses		4,8-9		4,8-9		4,8-9										4,8-9									4,8-9	4,8-9
Statics & Strengths	7. Calculate axial strain using Hooke's law		4,8		4,8		4,8										4,8									4,8	4,8
	8. Calculate thermal stresses		4		4		4										4									4	4
	9. Calculate centroids and moments of inertia		5-6,9		5-6,9		5-6,9										5-6,9									5-6,9	5-6,9
	10. Construct load, shear, and moment diagrams		5-6,9		5-6,9		5-6,9										5-6,9									5-6,9	5-6,9
	11. Calculate flexural stresses and beam deflections		7		7		7										7									7	7
	12. Analyze and design columns		7		7		7										7									7	7

	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			FA13	ONL				SP14	F-F			SP14	ONL		
1. Homework #1														1	7	7	100%
2. Homework #2									ſ					2	7	7	100%
3. Homework #3									Ī					3	6	7	86%
4. Homework #4									[					4	7	7	100%
5. Homework #5														5	7	7	100%
6. Homework #6									Ī					6	7	7	100%
7. Homework #7									ſ					7	7	7	100%
8. Midterm Exam									[					8	6	7	86%
9. Final Exam									[					9	7	7	100%
			AVG				AVG		-			AVG				AVG	96%

12. Assgnment 12

13. Assgnment 13

14. Assgnment 14

AEC 444	Course Objectives					Genera	l Criteria								Ass	oc & BS	program	n crite	ria					BS prog	ram cr	iteria	
AEC 444	Course Objectives	а	b	с	d	е	f	g	h	i	j	k	а	b	с	d	е	f	g	h	i	а	b	с	d	е	f
	1. Calculate beam loads, shear, and moments		1-4		1-4		1-4										1-4									1-4	1-4
Fletcher	2. Design wood connections, columns, beams, and decking		5-8		5-8		5-8										5-8									5-8	5-8
ACT & BCT	3. Design steel connections, columns, beams, and decking		9-13		9-13		9-13										9-13									9-13	9-13
Building Structures	<ol> <li>Design concrete beams, slab, and columns for bending, shear, and deflection</li> </ol>		14		14		14										14									14	14
	<ol> <li>Calculate reinforcement in concrete footings, beams, columns and slabs</li> </ol>		14		14		14										14									14	14
					Assessment	#students >= C	#students	oi+cd	MILO		Assessment	#students >=	υ	#students	Ratio		Assessment	#students >=	J	#students	Ratio		Assessment	#students >=		#students	Ratio
					Asse	#stu	#st		-		Asse	#stu		#st			Asse	#stu		#st	н		Asse	#stu		#st	Ľ
	ASSESSMENT Tools				FA13	F-F					FA13	з с	DNL				SP14	F-F					SP14	0	NL		
1. Assgnment 1											1		9	9	100%								1		4	4	100%
2. Assgnment 2											2		9	9	100%								2		4	4	100%
3. Assgnment 3											3		9	9	100%							1 [	3		4	4	100%
4. Assgnment 4											4		8	9	89%							1	4		4	4	100%
5. Assgnment 5											5		9	9	100%							1	5		3	4	75%
6. Assgnment 6											6		9	9	L00%								6		4	4	100%
7. Assgnment 7											7		7	9	78%								7		4	4	100%
8. Assgnment 8										]	8		9	9	100%							1 [	8		4	4	100%
9. Assgnment 9											9		8	9	89%							$\Box$	9		3	4	75%
10. Assgnment 10	0										10		9	9	100%							1 [	10		4	4	100%
11. Assgnment 11	1										11		9	9	100%							1 [	11		3	4	75%

4

4

4

AVG

4

2

3

12

13

14

AVG

100%

50%

75%

89%

AVG

12

13

14

9

8

9

9

9

9

AVG

100%

89%

100%

96%

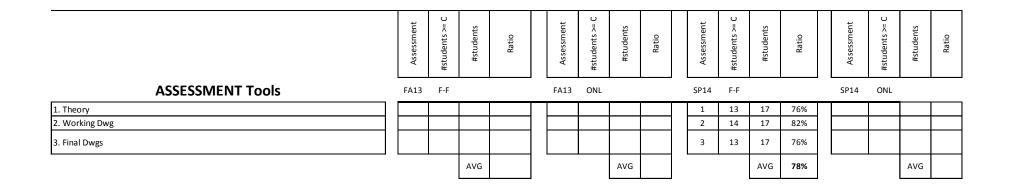
	Course Objectives					Genera	al Criteria						BS program	n criteria									B	S progra	am crit	teria	
AEC 454	Course Objectives	а	b	с	d	е	f	g	h	i	j	k	а	b	с	d	e	f	g	h	i	а	b	с	d	е	f
	1. Quantify and document three-dimensional materials																										
	represented by two-dimensional construction design drawings	2-7										2-7						2-7			2-7	2-7	2-7				2-7
	(Perform and display quantity surveying).																										
Sharp	2. Learn to algebraically resolve units of measure.	2-9	2-9					2-9				2-9						2-9			2-7	2-7	2-9				2-7
ACT & BCT	3. Utilize the CSI Master Format to categorize and organize construction information.	7																7									
Estimating I	<ol> <li>Visualize three dimensional structures and volumes from construction bidding documents (Construction drawing interpretation).</li> </ol>	2-9	2-9					2-9				2-9						2-9			2-7	2-7	2-9				2-7
	<ol> <li>Utilize the spreadsheet application and commercial software applications to automate quantity take-off.</li> </ol>	1-7								1-7		1-7						1-7			1-7	1-7	1-7		1-7		1-7
	6. Interpret and conform to written technical specifications	7																7		7							
	7. Be productive in an environment of critical deadlines.	1-7										1-7						1-7									

	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			FA13	ONL				SP14	F-F			SP14	ONL		
1. Exercise 1	1	7	7	100%										1	6	6	100%
2. Exercise 2	2	7	7	100%										2	6	6	100%
3. Exercise 3	3	7	7	100%										3	6	6	100%
4. Exercise 4	4	6	7	86%					Ì					4	6	6	100%
5. Exercise 5	5	6	7	86%										5	6	6	100%
6. Exercise 6	6	7	7	100%										6	6	6	100%
7. Final Project	7	7	7	100%										7	6	6	100%
8. Exam One	8	7	7	100%					1					8	6	6	100%
9. Exam Two	9	7	7	100%					]					9	6	6	100%
			AVG	97%			AVG					AVG				AVG	100%

ACT 224/1	Course Objectives					Genera	al Criteria								Asso	c & BS	progran	criteria	1				В	S progr	am crit	eria	
ACT 234/L	Course Objectives	а	b	с	d	e	f	g	h	i	j	k	а	b	с	d	e	fg	3	h	i	а	b	с	d	е	f
	1. Manage the operating structure of Revit Architecture.												1-3								1-3	1-3					
	<ol> <li>Manipulate the work environment to produce the separate sheets required within a set of plans with appropriate display settings for each sheet.</li> </ol>												1-3								1-3	1-3					
Germany	3. Produce new wall types to represent conditions not covered with the standard Revit package.												1-3								1-3	1-3					
	<ol> <li>Create custom doors and windows or openings using profiles.</li> </ol>												1-3								1-3	1-3					
Architectural CADD	<ol> <li>Design custom Curtain Walls with an understanding of how to insert varying panels and glass.</li> </ol>												1-3								1-3	1-3					
Architectural CADD Lab	6. Utilize packaged wall types for floor plan development.												1-3								1-3	1-3					
	<ol> <li>Insert doors, windows and design content such as multi- view blocks.</li> </ol>												1-3								1-3	1-3					
	<ol> <li>Define column grids and insert columns, while gaining control over the imbedded anchoring system.</li> </ol>												1-3								1-3	1-3					
	9. Delineate 2D and 3D stairs with code compliant results.												1-3								1-3	1-3					
	10. Exploit the automatic roof design features as well as creating complicated roof structures with the use of roof slabs.												1-3								1-3	1-3					
	<ol> <li>Generate reflected ceiling plans using display representation sets to change between floor and ceiling views. Add mask blocks to design content inserted.</li> </ol>												1-3								1-3	1-3					
	12. Create door and window schedules using the automated functions in Revit as well as produce custom schedules.												1-3								1-3	1-3					
	13. Add dimensions and annotation to the drawings.												1-3								1-3	1-3					
	14. Build 2D elevations and sections from the 3D parametric plans.												1-3								1-3	1-3					

	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			F	A13	ONL			SP14	F-F			SP14	ONL		
Final Project	1	13	16	81%													
CAD Exercises	2	15	16	94%													
Quizzes	3	15	16	94%													
			AVG	90%													

ACT 225 /I	Courses Ohio stives					Genera	al Criteria							Asso	c & BS	program	criteria				В	S progr	am cri	teria	
ACT 235/L	Course Objectives	а	b	С	d	е	f	g h	i	j	k	а	b	с	d	е	f g	h	i	а	b	с	d	е	f
	1. Identify pertinent codes related to light frame construction.	2-3											1-3					1-3		2-3			1		
	2. Apply the Drawing System (UDS) and AIA CAD Layer		2-3										1-3												
	3. Utilize architectural terms.			2-3	2-3			2-3												2-3					
Germany	<ol> <li>Analyze various wall systems and be able to explain their characteristics.</li> </ol>									1-3			1-3						2-3						
	<ol> <li>Determine the proper foundation system for specific building types based on codes and zoning restrictions.</li> </ol>									1-3									2-3	2-3		2-3			
Architectural Working Drawings I	6. Recognize the various graphic symbols used on construction plans.																			2-3					
Architectural Working Drawings I Lab	<ol> <li>Design a roof plan for any given house based on a given systematic approach.</li> </ol>									1-3			2-3						2-3	2-3					
	8. Select the best building system for the current project.												1-3						1-3	1,2					
	9. Revise site contours to conform to the grading requirements of a given site.												2-3						1-3	2-3					
	10. Site a building in an appropriate location on a lot based on solar, topographical, codes, and zoning restrictions.									1-3			2-3						1-3	1-3				-	
	<ol> <li>Calculate the correct stair rise and run with proper riser and tread ratios.</li> </ol>												2-3												
	12. Examine the various fireplace components and demonstrate proficiency in detailing.																			2-3					
	<ol> <li>Specify millwork profiles and design casework utilizing a variety of materials.</li> </ol>																								



ACT 262/L	Course Objectives					Genera	Criteria								A	Assoc	& BS	progra	m criter	ia				В	S progr	am cr	iteria	
ACT 202/L	course objectives	а	b	с	d	е	f	g	h	i	j	k	а		b	с	d	е	f	g	h	i	а	b	с	d	е	f
	1. Adopt a process for program research	1,2,3,4				2,3,4			1,2	2	1	1	1,2														1,3,4	
	2. Synthesize research data	1,2,5			2	2,5	2	1,2,5		1,2	1	1,5	1,2								2							
Palacios	3. Translate data into a meaningful design solution	2,3,4,5,6			2	2,3,4,5	2,4	2,3,4,5	,6			5	2,3,4	4 4	l,5								2,3,4,5,6				3,4	3,4,5
	4. Interpret site data	3				3									3								3				3	
Architectural Design I	5. Evaluate building systems using sustainable guidelines and select appropriate solutions	2,4,5				2,4,5	2,4	2,4,5	2	2,4		5											2,4,5		4		4	
Architectural Design I Laboratory	6. Build communication skills	2,3,4,5,6				2,3,4,5			2,6	5												5,6						
	7. Understand the design process and how to utilize building systems not only as functional components of design but also as a source for architectural expression and human comfort	2,4,5			2	2,4,5	2,4	2,4,5	1,2	2 2,4	1	1,5	2,4										2,4,5		4		4,5	
					Assessment	#students >= C	#students		Ratio		Accecement		#students >= C	#students	Ratio			Assessment	#students >= C	#students		Ratio		Assessment	#students >=	υ	#students	Ratio
	ASSESSMENT Tools				FA13	F-F					FA	13	ONL				S	SP14	F-F				SI	P14	ON	IL .		
1. Architectural Pr	recedent																	1	7	11	L	64%						ſ
2. Programming P	resentation																	2	10	11	L	91%						ſ
3. Site Design Pres	sentation																	3	11	11	L	100%						1
4. Schematic Desig	gn Presentation																	4	11	11	L	100%						
5. Final Presentati	on																	5	11	11	L	100%						
6. Design Portfolic	)																	6	10	11	L	91%						
							AVG	ì						AVG						AV	G	91%					AVG	

A 67 333	October Obligations					Genera	l Criteria								Asso	oc & BS	program	n criteria	1				BS prog	gram ci	iteria	
ACT 322	Course Objectives	а	b	с	d	e	f	g	h	i	j	k	а	b	c	d	е	f	g h	i	a	ł	c	d	е	f
	1. Recognize and distinguish differences between well-known architecture and eras						3-4			3-4		3-4												3-4		
	2. Define common terms associated with architecture						3-4			3-4		3-4												3-4		
	<ol> <li>Design, develop, and prepare a detailed paper about an individual whose work made significant contributions to architecture</li> </ol>	1						2	2		2									2				2	2	
Architectural History	4. Use USM's Library as a resource for locating articles, reference manuals, and books containing details about a significant figure in the field of architecture	1						1-2	1-2	2	1-2		2							1-2				1-2	2	
	<ol> <li>Analyze how developments in building materials, social, religious and economic factors have influenced architecture</li> </ol>						3-4			3-4		3-4												3-4		
	6. Demonstrate presentation skills by designing, developing and delivering Power Point presentations	1					3-4	1	1	3-4	1	3-4	1							1				1		

	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F				FA13	ONL			SP14	F-F			SP14	ONL		
1. Presentation	1	14	14	100%													
2. Research Paper	2	14	14	100%													
3. Vocab Quizzes	3	10	14	71%													
4. Final Exam	4	14	14	100%	Ľ												
			AVG	93%				AVG				AVG				AVG	

ACT 22C/I	Course Ohiostiuse					Genera	l Criteria								Asso	c & BS	program	crite	ria			В	S progra	am cri	teria	
ACT 336/L	Course Objectives	а	b	с	d	е	f	g	h	i	j	k	а	b	с	d	е	f	g h	i	а	b	с	d	е	f
	<ol> <li>Produce clear, concise, contract documents based on National CAD Standards drafting conventions.</li> </ol>	1-4																	1-4						1-4	
Germany	2. Plan an architectural set of drawings through the use of													1-4												
Germany	mock-up drawing development.													1-4												
Architectural	3. Integrate engineering technology and building science in the				1-4															1-4						Í
Working Drawings II	assembly of architectural details.				1-4															1-4						1
Architectural	4. Spot common pitfalls in the development of contract																									
Working Drawings II	documents that can potentially lead to change orders or						1-4					1-4														1
Laboratory	arbitration.																									

	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F				FA13	ONL			SP14	F-F			SP14	ONL		
1. Final Drawings	1	11	12	92%													
2. Field Reports	2	12	12	100%													
3. Working Dwgs	3	12	12	100%													
4. Quizzes	4	12	12	100%													
			AVG	98%	_			AVG				AVG				AVG	

ACT 220/1	Course Ohiostiuse					Genera	l Criteria								Asso	c & BS	program	n crite	ria				В	S progra	am crit	teria	
ACT 338/L	Course Objectives	а	b	с	d	e	f	g	h	i	j	k	а	b	с	d	e	f	g	h	i	а	b	с	d	е	f
	1. Develop non-structural framing and finish envelop shaping architectural space	1-4			1-4						1-4		1-4							1-4	1-4		1-4				
	2. Discern the suitability of an already developed detail from a previous project, a reference textbook, or industry	1-4			1-4		1-4				1-4		1-4							1-4	1-4		1-4		1-4		
Germany	<ol> <li>Show marked improvement on designating material components of architectural details</li> </ol>	1-4			1-4		1-4		1-4		1-4		1-4						1-4	1-4	1-4		1-4		1-4		
Architectural Working Drawings III	<ol> <li>Produce clear, concise, details based on National CAD Standards drafting conventions</li> </ol>	1-4					1-4				1-4		1-4						1-4	1-4	1-4		1-4				
Architectural Working Drawings III Laboratory	<ol> <li>To integrate working drawings with specifications through effective notation and referencing.</li> </ol>	1-4					1-4				1-4		1-4						1-4	1-4	1-4		1-4				
	6. Detail proper and effective fire resistance details	1-4					1-4				1-4		1-4							1-4	1-4				1-4		
	7. Detail custom basic millwork	1-4					1-4				1-4		1-4						1-4	1-4	1-4		1-4				

	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			FA13	ONL				SP14	F-F			SP14	ONL		
1. Final Dwgs										1	17	20	85%				
2. Field Reports										2	13	20	65%				
3. Theory Modules										3	19	20	95%				
4. Working Dwgs										4	17	20	85%				
			AVG				AVG		-			AVG	83%			AVG	

ACT 349	Course Obio stives					Genera	l Criteria								Asso	c & BS	program	criteria				B	S program c	riteria	
ACT 348	Course Objectives	а	b	с	d	е	f	g	h	i	j	k	а	b	с	d	е	f	; h	i	а	b	c d	е	f
	<ol> <li>Create 3D visualizations from verbal and/or visual descriptions of building</li> </ol>	1,2,3,4	1,2,3,4		1,2,3,4		1,2,3,4					1,2,3,4		1,2,3,4,5					1,2	1,2,3,4,	1,2,3,4,5		1,2,3,4		
Germany	<ol> <li>Plan, organize, &amp; develop models &amp; utilize software tools as required to produce visual media for promotional, scheduling, or analysis.</li> </ol>		1,2,3,4		1,2,3,4		1,2,3,4					1,2,3,4		1,2,3,4,5					1,2	1,2,3,4,	5		1,2,3,4		
	<ol> <li>Utilize typical vocabulary, graphic symbols, standards &amp; language used in architecture, engineering, &amp; construction to develop models.</li> </ol>	1,2,3,4					1,2,3,4	1,2,3,4						1,2,3,4,5					1,2	1,2,3,4,	5		1,2,3,4		

	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			FA13	ONL			SP14	F-F			SP14	ONL		
1. Wall Section Models	1	8	9	89%												
2. Construction Animation	2	8	9	89%												
3. Texture & Materials	3	8	9	89%												
4. CAD to SketchUp	4	8	9	89%												
5. Final Portfolio	5	8	9	89%												
	,	•	AVG	89%			AVG				AVG				AVG	

	Course Objectives					Genera	l Criteria	1							Asso	: & BS	program	crite	ria				В	S prog	ram cr	iteria	
ACT 364/L	Course Objectives	а	b	с	d	е	f	g	h	i	j	k	а	b	с	d	е	f	g	h	i	а	b	с	d	е	f
	1. Adopt a process for program research	1,2,3,4				2,3,4			1,2		1	1	1,2													1,3,4	
	2. Synthesize research data	1,2,5			2	2,5	2	1,2,5		1,2	1	1,5	1,2							2							
Palacios	3. Translate data into a meaningful design solution	2,3,4,5,6			2	2,3,4,5	2,4	2,3,4,5,6	;			5	2,3,4	4,5								2,3,4,5,6				3,4	3,4,5
	4. Interpret site data	3				3								3								3				3	
Architectural Design III	5. Evaluate building systems using sustainable guidelines and select appropriate solutions	2,4,5				2,4,5	2,4	2,4,5	2	2,4		5										2,4,5		4		4	
Architectural Design III Laboratory	6. Build communication skills	2,3,4,5,6				2,3,4,5			2,6																		
	<ol> <li>Understand the design process and how to utilize building systems not only as functional components of design but also as a source for architectural expression and human comfort</li> </ol>	2,4,5			2	2,4,5	2,4	2,4,5	1,2	2,4	1	1,5	2,4									2,4,5		4		4,5	

	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			I	A13	ONL				SP14	F-F			SP14	ONL		
1. Architectural Precedent											1	9	17	53%				
2. Programming Presentation										Ī	2	17	17	100%				
3. Site Design Presentation											3	17	17	100%				
4. Schematic Design Presentation											4	13	17	76%				
5. Final Presentation										Ī	5	17	17	100%				
6. Design Portfolio										Ī	6	16	17	94%				
			AVG					AVG		-			AVG	87%			AVG	

ACT 200	Course Objectives					Genera	al Criteria								Asso	c & BS	program	crite	ria				E	S progr	am cr	iteria	
ACT 380	Course Objectives	а	b	с	d	е	f	g	h	i	j	k	а	b	с	d	е	f	g	h	i	а	b	с	d	е	f
	1. Define the relationship and content of Construction Documents	1,4,5									1,2,3										1-6						
	2. Analyze differences/similarities in types of contracts	1,4						1,6											2		4,6						
Kemp	3. Compare descriptive, performance, proprietary, and reference standard methods of specifying	3						3,5,6			1,2,3								3		3,5,6						
	<ol> <li>Demonstrate appropriate language in creating a specification</li> </ol>	3,4,5																			3,5,6						
Specifications	5. Interpret and analyze AIA-A201 General Conditions of the Contract	1						1			1,2,3										1,6						
	6. Compile a 3-Part specification	3						3											3		3						
	7. Research and select appropriate products based on instructor provided performance criteria	2						2			1,2,3										2						
	8. Prepare for and pass the CDT (Construction Documents Technologist) certification exam.	1						1,6													6						

	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F				FA13	ONL			SP14	F-F			SP14	ONL		
1. Project 1-AIA-A201										1	12	13	92%				
2. Project 2-Product Selection										2	13	13	100%				
3. Project 3 - Four Methods of Specifying										3	12	13	92%				
4. Exam 1 - Phases through Conditions of Contract										4	7	13	54%				
5. Exam 2 - Drawings through Writing Specifications										5	12	13	92%				
6. CDT Exam-Construction Documents TechnologistCSI national exam										6	1	13	8%				
			AVG		_			AVG				AVG	73%			AVG	

ACT 400	Course Objectives					Genera	l Criteria								Assoc	& BS	program	criteria	э				E	3S progra	am cr	iteria	
ACT 400	Course Objectives	а	b	с	d	e	f	g	h	i	j	k	а	b	с	d	е	f	g	h	i	а	p	с	d	e	f
	1. Adopt a process for program research.	1,2			1	1,2	2	1	1,2	1																	
Palacios	2. Synthesize research data.	2,5				2	2,5				5	2,5								2,5							
	3. Translate data into a meaningful design solution.	3,4,6,8			3,4,6	3,6		8				8	3,4,6	3,4,6,8		3,4,6			(1) (1)	3,4,6		3,4,6,8				3,4,6	3,4,6
Senior Project	4. Interpret site data.	2,3			3	2	2					2	3			3				2,3						6,7	6,7
	5. Produce commercial contract documents.	6,7			6	6				6,7		6,7	6	6,7		6	6	6	6	7		6,7	6	6,7	7	6,7	6,7
	6. Evaluate building systems and select appropriate solutions.	3,4,5,6			3,4,6	3,6					5		3,4,6											3,4,6	$\square$	3,4,5,6	3,4,5,6
	7. Build communication skills.	1,2,3,6,8				1,2,3,6		1,8				2,8		8													
	8. Develop a multi-disciplinary approach to problem solving.	1			1	1			1	1																	
	9. Develop and focus on one topic in speaking and writing																										
	assignments and present ideas in an organized, logical and coherent form.	8						8																			
	<ol> <li>Demonstrate the ability to understand our technological society, use computer-based technology in communication, solving problems, and acquiring information.</li> </ol>	1-8				1,2,3,6		1,8		1	5	8															

	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			FA13	ONL			SP14	F-F			SP14	ONL		
1. BIM Management Plan	1	6	6	100%					1	5	5	100%				
2. Code Research & Programming	2	6	6	100%					2	3	5	60%				
3. Schematic Design Construction Drawings	3	6	6	100%					3	4	5	80%				
4. Design Development Construction Drawings	4	6	6	100%					4	4	5	80%				
5. Sustainability Assessment	5	6	6	100%					5	1	5	20%				
6. Final Construction Drawings	6	6	6	100%					6	5	5	100%				
7. Specifications	7	6	6	100%					7	5	5	100%				
8. Design Presentation	8	6	6	100%					8	5	5	100%				

100%

AVG

AVG

80%

AVG

AVG

ACT 401	Course Ohio atives					Genera	l Criteria								Asso	c & BS	program	n crite	ria				E	S progr	am cr	iteria	
ACT 401	Course Objectives	а	b	с	d	e	f	g	h	i	j	k	а	b	с	d	е	f	g	h	i	а	b	с	d	е	f
	1. Illustrate building systems correctly.	3,4,6,8			3,4,6	3,6						6,8		3,4,6												3,4,6	3,4,6
Palacios	2. Specify suitable system components.	5,6,7				6	5				5						6	6	6	6,7			6	5,6,7		5,6,7	5,6,7
	3. Assemble drawings into a cohesive document.	3,4,6			3,4,6	3,6				6		6	3	3,4,6								3,4,6				3,4,6	3,4,6
Senior Project II	4. Analyze industry data in the production of specifications.	7								7		7								7					7	7	7
	<ol> <li>Manage information gathered for the development of contract documents.</li> </ol>	1,2			1	1,2	2	1	1,2	1		2	2														
	<ol> <li>Evaluate and revise documents based on student and instructor assessments</li> </ol>	3,4,5,8			3,4	3					5											3,4				3,4	3,4
	7. Build communication skills.	1,2,3,6,8				1,2,3,6		1,8				2,8															
	8. Develop a multi-disciplinary approach to problem solving.	1			1	1			1	1																	

		Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	F	FA13	F-F				FA13	ONL			SP14	F-F			SP14	ONL		
1. BIM Management Plan	1 Г	1	6	6	100%						1	3	3	100%				
2. Code Research & Programming		2	6	6	100%						2	3	3	100%				
3. Schematic Design Construction Drawings		3	6	6	100%						3	3	3	100%				
4. Design Development Construction Drawings	1 Г	4	5	6	83%						4	2	3	67%				
5. Sustainability Assessment		5	6	6	100%						5	1	3	33%				
6. Final Construction Drawings		6	6	6	100%						6	3	3	100%				
7. Specifications		7	6	6	100%						7	3	3	100%				
8. Design Presentation		8	6	6	100%						8	3	3	100%				
			•	AVG	98%	1			AVG				AVG	88%		•	AVG	

ACT 450	Course Ohiostiuse					Genera	al Criteria								Asso	c & BS	program	criteria				E	3S progr	am cr	iteria	
ACT 450	Course Objectives	а	b	с	d	е	f	g	h	i	j	k	а	b	с	d	е	fg	h	i	а	b	с	d	е	f
	<ol> <li>Given BIM files, utilize standard software tools to make observations about design &amp; constructability of building systems.</li> </ol>	2,3	2,3			3	2,3	2,3	3			2,3	3	3						3					3	
Germany	<ol> <li>Understand &amp; provide feedback about the implementation and use of BIM during the design, construction, and occupancy phases of a building lifecycle.</li> </ol>	1,2,3	1,2,3			1,3	1,2,3	1,2,3				1,2,3	1,3	1,2,3					1,2	3	1				3	
VR	3. Utilize typical vocabulary, standards & language to describe BIM concepts as they relate to architecture, engineering, construction & facilities management	1,2,3	1,2,3			1,3	1,2,3	1,2,3				1,2,3	1,3	1,2,3					1,2	3	1				3	

	Assessment	#students >= C	#students	Ratio		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment		#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			F	A13	ONL			SP14	F-F			SP1	4	ONL		
1. BIM Report										1	10	12	83%					
2. BIM & Navis Quizzes										2	10	12	83%					
3. Navisworks Exercises										3	8	12	67%					
			AVG					AVG				AVG	78%				AVG	

r																											
ACT 465/L	Course Objectives					Genera	Criteria	r							Asso	: & BS	program	criter	ia				В	S prog	ram cr	iteria	
	course objectives	а	b	С	d	е	f	g	h	i	j	k	а	b	с	d	е	f	g	h	i	а	b	С	d	е	f
	<ol> <li>Conduct preliminary research and programming work required for successful design development.</li> </ol>	1,2,4,5				1,2,4,5	4,5	1,2,4,5			1,2	1,2,4,5	4													4,5	
	<ol> <li>Select materials and structural systems appropriately in response to site and environmental conditions, local codes, and program requirements.</li> </ol>	1,2,4,5			4		4,5				1,2	1,2,4,5	4			4				5				2,4,5		4,5	
Palacios	3. Develop methodologies and strategies for Building Information Modeling management.	4,5,6			4	4,5,6						4,5														4	
	<ol> <li>Implement the Building Information Modeling management strategy through the development of a building construction project</li> </ol>	4,5,6			4	4,5,6		4,5				4,5														4	
Architectural Design IV	5.Collaborate and identify roles and responsibilities among the project team	4,5,6				4,5,6						4,5															
Architectural Design IV Laboratory	<ol> <li>Examine the benefits and documentation approaches of sustainable design strategies</li> </ol>	1,2,3,5						1,5	1,5	1,2	1,2	1,2,5								5							
	<ol><li>Document and analyze the performance of materials and building systems applied to the project.</li></ol>	1,2,5					5			1,2	1,2	1,2,5								5		5		2,5		5	5
	<ol> <li>Develop the preliminary documentation for USGBC's LEED certification program as it applies to sustainable design.</li> </ol>	1,3,5						1,5	1,5	1	1	1,5		5						5		5				5	5
	<ol> <li>Demonstrate proficiency in the communication of design ideas through various presentation media.</li> </ol>	1,2,4,5,6				4,5,6		1,2,4,5				1,2,4,5	4,6	5,6								5,6					5,6

	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	FA13	F-F			FA13	ONL			SP14	F-F			SP14	ONL		
1. LEED Presentation	1	12	12	100%												
2. Emerging Technology Presentation	2	12	12	100%												
3.Exam	3	9	12	75%												
4. Programming Presentation	4	12	12	100%												
5. LEED Checklist / Documentation	5	12	12	100%												
6.Final Presentation	6	12	12	100%												
			AVG	96%												
				•			AVG			•	AVG			•	AVG	

DCT 205 /	Course Ohiostines					Genera	l Criteria								Asso	c & BS	program	n cri	eria				В	3S progr	am cri	teria	
BCT 205/L	Course Objectives	а	b	с	d	e	f	g	h	i	j	k	а	b	С	d	е	f	g	h	i	а	b	С	d	е	f
	1. Measure with steel tape, correct for errors, and adjust for temperature and tension	1-3	1-3	1-3			1-3						1-3		1-3							1-3					1-3
Hannon	2. Understand the concept of differential leveling	1-3	1-3	1-3			1-3						1-3		1-3							1-3					1-3
	<ol> <li>Use level and perform calculations in order to adjust for errors and close the loop</li> </ol>	1-3	1-3	1-3			1-3						1-3		1-3							1-3					1-3
Surveying	<ol><li>Use transit and understand the concept of angles and directions</li></ol>	1-3	1-3	1-3			1-3						1-3		1-3							1-3					1-3
	5. Calculate coordinates based on bearings and distances and vice versa, and also adjust for error closure	1-3	1-3	1-3			1-3						1-3		1-3							1-3					1-3
	<ol> <li>Perform construction layout (setting up points of known coordinates/and As-built)</li> </ol>	1-3	1-3	1-3			1-3						1-3		1-3							1-3					1-3
	7. Application of GPS and GIS technology used in Surveying and Construction Layout	1-3	1-3	1-3			1-3						1-3		1-3							1-3					1-3
	1. Measuring Distances using Pacing	4,5	4,5	4,5		4,5						4,5															
Hannon	2. Survey Field Note Standards	4,5	4,5	4,5		4,5						4,5															
	3. Measuring building height using similar triangles	4,5	4,5	4,5		4,5						4,5															
Surveying Laboratory	4. Determine the Finish Floor Elevation of a building using differential leveling	4,5	4,5	4,5		4,5						4,5															
	5. Traverse survey	4,5	4,5	4,5		4,5						4,5															
	6. Excel Spreadsheet of Compass Rule	4,5	4,5	4,5		4,5						4,5															
	7. Building Layout	4,5	4,5	4,5		4,5						4,5															

		Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio	Assessment	#students >= C	#students	Ratio
ASSESSMENT Tools	F	A13	F-F			FA13	ONL			SP14	F-F			SP14	ONL		
1. Midterm						1	4	4	100%	1	7	7	100%				
2. Final Exam						2	4	4	100%	2	7	7	100%				
3 Research Paper						3	4	4	100%	3	7	7	100%				
				AVG				AVG	100%			AVG	100%			AVG	

ASSESSMENT Tools	FA13	F-F			FA13	ONL				SP14	F-F			SP14	ONL	_	
4 Leveling Exercises					4	4	4	100%		4	7	7	100%				
5 Traverse Exercises					5	4	4	100%		5	7	7	100%				
			AVG				AVG	100%	-			AVG	100%			AVG	

# Findings: General Criteria (a-k)

	ACT		-	•		. 70	-	•		. 70			ø/ .	0	-	
	criteria	>=70	ENR	%	sem	>=70	ENR	%	type	>=70	ENR	%	% >	>=70	ENR	ACT concatenated findings
GC	а	1013	1128	90%	FA13	506	544	93%	F-F	483	521	93%	90 1	1,013	1,128	90% (1,013 of 1,128) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on
									0.011	22	22	4000/				all assessments supporting ABET General Criteria 'a'.
					CD14	507	F04	070/	ONL	23	23 493	100%				FA13: F-F = 93% ( 483 of 521 ); ONL = 100% ( 23 of 23 );
					SP14	507	584	87%	F-F	423 84		86%				SP14: F-F = 86% ( 423 of 493 ); ONL = 92% ( 84 of 91 );
									ONL	84	91	92%				93% (489 of 528) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
GC	b	489	528	93%	FA13	227	238	95%	F-F	86	92	93%	93	489	528	assessments supporting ABET General Criteria 'b'.
									ONL	141	146	97%				FA13: F-F = 93% ( 86 of 92 ); ONL = 97% ( 141 of 146 );
					SP14	262	290	90%	F-F	76	89	85%				SP14: F-F = 85% ( 76 of 89 ); ONL = 93% ( 186 of 201 );
					51 14	202	250	5070	ONL	186	201					314.14 - 05% (700185), ONE - 55% (10001201),
									ONE	100						94% (112 of 119) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
GC	с	112	119	94%	FA13	38	38	100%	F-F	16	16	100%	94	112	119	assessments supporting ABET General Criteria 'c'.
									ONL	22	22	100%				FA13: F-F = 100% ( 16 of 16 ); ONL = 100% ( 22 of 22 );
					SP14	74	81	91%	F-F	45		100%				SP14: F-F = 100% ( 45 of 45 ); ONL = 81% ( 29 of 36 );
									ONL	29	36					
																91% (640 of 707) of student work samples (projects, exams, guizzes, papers) were scored 70 (out of 100) or better on all
GC	d	640	707	91%	FA13	380	414	92%	F-F	259	288	90%	91	640	707	assessments supporting ABET General Criteria 'd'.
									ONL	121	126	96%				FA13: F-F = 90% ( 259 of 288 ); ONL = 96% ( 121 of 126 );
					SP14	260	293	89%	F-F	122	140	87%				SP14: F-F = 87% (122 of 140); ONL = 90% (138 of 153);
									ONL	138	153	90%				
				050/				4000/		4.00	4.0.0	1000/				95% (294 of 310) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
GC	е	294	310	95%	FA13	116	116	100%	F-F	108	108	100%	95	294	310	assessments supporting ABET General Criteria 'e'.
									ONL	8	8	100%				FA13: F-F = 100% ( 108 of 108 ); ONL = 100% ( 8 of 8 );
					SP14	178	194	92%	F-F	178	194	92%				SP14: F-F = 92% ( 178 of 194 ); ONL = 0% ( 0 of 0 );
									ONL	0	0	0%				
GC	4	612	674	91%	FA13	302	316	96%	F-F	167	176	95%	01	612	674	91% (612 of 674) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
GC		012	074	91%	FA15	502	510	90%	г-г	107	1/0	93%	91	012	074	assessments supporting ABET General Criteria 'f'.
									ONL	135	140	96%				FA13: F-F = 95% ( 167 of 176 ); ONL = 96% ( 135 of 140 );
					SP14	310	358	87%	F-F	197	237	83%				SP14: F-F = 83% ( 197 of 237 ); ONL = 93% ( 113 of 121 );
									ONL	113	121	93%				
GC	g	819	909	90%	FA13	329	336	98%	F-F	321	328	98%	90	819	909	90% (819 of 909) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
	0															assessments supporting ABET General Criteria 'g'.
									ONL	8	8					FA13: F-F = 98% ( 321 of 328 ); ONL = 100% ( 8 of 8 );
					SP14	490	573	86%	F-F	407	483	84%				SP14: F-F = 84% ( 407 of 483 ); ONL = 92% ( 83 of 90 );
									ONL	83	90	92%				
GC	h	273	310	88%	FA13	104	106	98%	F-F	102	104	98%	88	273	310	88% (273 of 310) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
									~~~			1000/				assessments supporting ABET General Criteria 'h'.
					604.4	460	204	83%	ONL	2 167		100% 83%				FA13: F-F = 98% ( 102 of 104 ); ONL = 100% ( 2 of 2 );
					SP14	169	204	83%	F-F		202					SP14: F-F = 83% ( 167 of 202 ); ONL = 100% ( 2 of 2 );
									ONL	2	2	100%				91% (355 of 391) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
GC	i	355	391	91%	FA13	176	184	96%	F-F	175	183	96%	91	355	391	assessments supporting ABET General Criteria 'i'.
									ONL	1	1	100%				ASSESSMENTS SUPPORTING ABET GENERAL CITERAL 1. FA13: F-F = 96% ( 175 of 183 ); ONL = 100% ( 1 of 1 );
					SP14	179	207	86%	F-F	96	113	85%				FA13: F-F = $95\%$ (175 01 183 ); ONL = $100\%$ (1 01 1 ); SP14: F-F = $85\%$ (96 of 113 ); ONL = $88\%$ (83 of 94 );
					3P14	179	207	00%	ONL	83	94					3P14. F-F = 63% ( 90 UI 115 ), UNL = 86% ( 83 UI 94 ),
									ONL	03	54	0070				84% (227 of 270) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
GC	j	227	270	84%	FA13	66	64	103%	F-F	66	64	103%	84	227	270	assessments supporting ABET General Criteria 'j'.
									ONL	0	0	0%				FA13: F-F = $103\%$ ( 66 of 64 ); ONL = $0\%$ ( 0 of 0 );
					SP14	161	206	78%	F-F	121	155	78%				SP14: $F-F = 78\%$ ( 121 of 155 ); ONL = 78% ( 40 of 51 );
					JF 14	101	200	1070	ONL	40	155 51	78% 78%				JI 14. 1-1 - 70/0 ( 121 0) 133 J, ONE - 70/0 ( 40 0) J1 J,
																91% (638 of 702) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
GC	k	638	702	91%	FA13	425	457	93%	F-F	409	441	93%	91	638	702	assessments supporting ABET General Criteria 'k'.
									ONL	16	16	100%				FA13: F-F = 93% ( 409 of 441 ); ONL = 100% ( 16 of 16 );
					SP14	213	245	87%	F-F	153	185	83%				SP14: F-F = 83% ( 153 of 185 ); ONL = 100% ( 60 of 60 );
					J. 14	215	245	0.70	ONL	60		100%				
									UNL	00	00	100/0				

### Findings: Associate Level Criteria

	ACT															
	criteria	>=70	ENR	%	sem	>=70	ENR	%	type	>=70	ENR	%	%	>=70	ENR	ACT concatenated findings
AS	а	483	547	88%	FA13	248	271	92%	F-F	235	258	91%	88	483	547	88% ( 483 of 547 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
									ONL	13	13	100%				assessments supporting ABET Associate Degree Program Specific Criteria 'a'. FA13: F-F = 91% ( 235 of 258 ); ONL = 100% ( 13 of 13 );
					SP14	235	276	85%	F-F	234		85%				SP14: F-F = 85% ( 234 of 275 ); ONL = 100% ( 1 of 1 );
					0.1.	200	2/0	05/0	ONL	1		100%				
AS	b	408	461	89%	FA13	221	243	91%	F-F	221	243	91%	89	408	461	89% ( 408 of 461 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
									ONL	0	0	0%				assessments supporting ABET Associate Degree Program Specific Criteria 'b'. FA13: F-F = 91% ( 221 of 243 ); ONL = 0% ( 0 of 0 );
					SP14	187	218	86%	F-F	147	167	88%				SP14: F-F = 88% ( 147 of 167 ); ONL = 78% ( 40 of 51 );
					51 14	107	210	00/0	ONL	40	51	78%				31 14. 1 1 - 00.0 ( 14. 01 10. ), ONE - 70.0 ( 40 01 31 ),
				000/				40004								93% ( 70 of 75 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all
AS	с	70	75	93%	FA13	30	30	100%	F-F	16	16	100%	93	70	75	assessments supporting ABET Associate Degree Program Specific Criteria 'c'.
									ONL	14	14	100%				FA13: F-F = 100% ( 16 of 16 ); ONL = 100% ( 14 of 14 );
					SP14	40	45	89%	F-F	38	43	88%				SP14: F-F = 88% ( 38 of 43 ); ONL = 100% ( 2 of 2 );
									ONL	2	2	100%				
AS	d	43	45	96%	FA13	30	30	100%	F-F	30	30	100%	96	43	45	96% (43 of 45) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Associate Degree Program Specific Criteria 'd'.
									ONL	0	0	0%				FA13: F-F = 100% ( 30 of 30 ); ONL = 0% ( 0 of 0 );
					SP14	13	15	87%	F-F	13	15	87%				SP14: F-F = 87% ( 13 of 15 ); ONL = 0% ( 0 of 0 );
									ONL	0	0	0%				
AS	e	252	265	95%	FA13	133	138	96%	F-F	12	12	100%	95	252	265	95% (252 of 265) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Associate Degree Program Specific Criteria 'e'.
									ONL	121	126	96%				FA13: F-F = 100% ( 12 of 12 ); ONL = 96% ( 121 of 126 );
					SP14	119	127	94%	F-F	8		100%				SP14: F-F = 100% ( 8 of 8 ); ONL = 93% ( 111 of 119 );
									ONL	111	119	93%				
AS	f	149	152	98%	FA13	81	84	96%	F-F	80	83	96%	98	149	152	98% (149 of 152) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Associate Degree Program Specific Criteria 'f'.
									ONL	1	1	100%				FA13: F-F = 96% ( 80 of 83 ); ONL = 100% ( 1 of 1 );
					SP14	68	68	100%	F-F	13	13	100%				SP14: F-F = 100% ( 13 of 13 ); ONL = 100% ( 55 of 55 );
									ONL	55	55	100%				
AS	g	111	126	88%	FA13	12	12	100%	F-F	12	12	100%	88	111	126	88% (111 of 126) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Associate Degree Program Specific Criteria 'g'.
									ONL	0	0	0%				FA13: F-F = 100% ( 12 of 12 ); ONL = 0% ( 0 of 0 );
					SP14	99	114	87%	F-F	99	114	87%				SP14: F-F = 87% ( 99 of 114 ); ONL = 0% ( 0 of 0 );
									ONL	0	0	0%				
AS	h	377	424	89%	FA13	178	187	95%	F-F	176	185	95%	89	377	424	89% ( 377 of 424 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Associate Degree Program Specific Criteria 'h'.
									ONL	2	2	100%				FA13: F-F = 95% ( 176 of 185 ); ONL = 100% ( 2 of 2 );
					SP14	199	237	84%	F-F	151	178	85%				SP14: F-F = 85% ( 151 of 178 ); ONL = 81% ( 48 of 59 );
							-		ONL	48	59	81%				. " , "
AS	i	359	424	85%	FA13	160	169	95%	F-F	160	169	95%	85	359	424	85% ( 359 of 424 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or better on all assessments supporting ABET Associate Degree Program Specific Criteria 'i'.
									ONL	0	0	0%				FA13: F-F = 95% ( 160 of 169 ); ONL = 0% ( 0 of 0 );
					SP14	199	255	78%	F-F	159	204	78%				SP14: F-F = 78% ( 159 of 204 ); ONL = 78% ( 40 of 51 );
										100	204	, 0/0				

### Findings: Bachelor Level Criteria

criteria         >=70         ENR         %         m         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         %         <	
BS       a       633       694       91%       FA13       331       364       91%       FF       317       350       91%       91       633       694       assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'a'.         BS       b       327       364       90%       FA13       193       216       89%       F-F       11       100%       FA13       193       216       89%       F-F       192       215       89%       90       327       364       90% (327 of 364) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'b'.         BS       b       327       364       90%       FA13       193       216       89%       F-F       192       215       89%       90       327       364       90% (327 of 364) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'b'.         SP14       134       148       91%       F-F       79       93       85%       5914       FF = 89% (192 of 215); ONL = 100% (1 of 1);       SP14       FF       79       93       85%       5914       FF = 89% (192 of 93); ONL = 100% (5 of 55);       ONL = 100% (55 of 55)	
SP14       302       330       92%       F-F       218       235       93%       SP14: F-F = 93% (218 of 235); ONL = 88% (84 of 95);         BS       b       327       364       90%       FA13       193       216       89%       F-F       192       215       89%       90% (327 of 364) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'b'.         BS       b       327       364       90%       F-F       192       215       89%       90       327       364       90% (327 of 364) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'b'.         SP14       134       148       91%       F-F       79       93       85%       SP14: F-F = 85% (79 of 93); ONL = 100% (1 of 1);       SP14: F-F = 85% (79 of 93); ONL = 100% (5 of 55);         BS       c       263       280       94%       FA13       157       159       99%       F-F       152       154       99%       94       263       280       94% (263 of 280) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         SP14       106       121 </td <td><sup>.</sup> better on all</td>	<sup>.</sup> better on all
BS       b       327       364       90%       FA13       193       216       89%       F-F       192       215       89%       90       327       364       90% ( 327 of 364 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'b'.         BS       c       263       280       94%       FA13       157       159       99%       F-F       152       154       99%       94       263       280       94% ( 263 of 280 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'b'.         BS       c       263       280       94%       FA13       157       159       99%       F-F       152       154       99%       94       263       280       94% ( 263 of 280 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         BS       c       263       280       94%       FA13       157       159       99%       F-F       152       154       99%       94       263       280       94% ( 263 of 280 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Bacca	
BS       b       327       364       90%       FA13       193       216       89%       FF       192       215       89%       90       327       364       assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'b'.         BS       5       5       5       0NL       1       1       100%       5       55       100%       FA13       FF = 85% (192 of 215); ONL = 100% (1 of 1);       SP14       10       148       91%       FF = 79       93       85%       5       5914       FF = 85% (79 of 93); ONL = 100% (5 of 55);       5       5914       FF = 85% (79 of 93); ONL = 100% (55 of 55);       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       6       326       280       94% (263 of 280) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.       FA13: F-F	
SP14       134       148       91%       F-F       79       93       85%       SP14: F-F = 85% (79 of 93 ); ONL = 100% (55 of 55 );         BS       c       263       280       94%       FA13       157       159       99%       F-F       152       154       99%       94       263       280       94% (263 of 280 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         FA13       157       159       99%       F-F       154       99%       94       263       280       94% (263 of 280 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         SP14       106       121       88%       F-F       74       82       90%       FA13: F-F = 99% (152 of 154 ); ONL = 100% (5 of 5 );       SP14: F-F = 90% (74 of 82 ); ONL = 82% (32 of 39 );         BS       d       258       281       92%       FA13       115       117       98%       F-F       115       117       98%       92       258       281       92% (258 of 281 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments	better on all
SP14       134       148       91%       F-F       79       93       85%       SP14: F-F = 85% (79 of 93); ONL = 100% (55 of 55);         BS       c       263       280       94%       FA13       157       159       99%       F-F       152       154       99%       94       263       280       94% (263 of 280) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         SP14       106       121       88%       F-F       74       82       90%       SP14: F-F = 99% (152 of 154); ONL = 100% (5 of 5);         BS       d       258       281       92%       FA13       115       117       98%       F-F       115       117       98%       92       258       281       92% (258 of 281) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         BS       d       258       281       92%       FA13       115       117       98%       92       258       281       92% (258 of 281) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments	
ONL       55       55       100%         BS       c       263       280       94%       FA13       157       159       99%       F-F       152       154       99%       94       263       280       94% ( 263 of 280 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         FA13       157       159       99%       F-F       152       154       99%       94       263       280       94% ( 263 of 280 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         SP14       106       121       88%       F-F       74       82       90%       SP14: F-F = 99% ( 152 of 154 ); ONL = 100% ( 5 of 5 );       SP14: F-F = 90% ( 74 of 82 ); ONL = 82% ( 32 of 39 );         ONL       32       39       82%       92% ( 258 of 281 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or         BS       d       258       281       92%       FA13       115       117       98%       92       258       281       92% ( 258 of 281 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or	
BS       c       263       280       94%       FA13       157       159       99%       F-F       152       154       99%       94       263       280       assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         BS       d       258       281       92%       F-F       150       154       99%       94       263       280       assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         BS       d       258       281       92%       F-F       74       82       90%       F-F       99%       94       263       280       assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         BS       d       258       281       92%       F-F       74       82       90%       F-F       F-F       99%       94       263       280       assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'c'.         NL       32       39       82%       90%       F-F       74       82       90%       SP14: F-F = 90% (74 of 82); ONL = 82% (32 of 39);       92% (258 of 281) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or         BS       d       258       281       92%       F-F       115	
SP14       106       121       88%       F-F       74       82       90%       SP14: F-F = 90% (74 of 82 ); ONL = 82% (32 of 39 );         ONL       32       39       82%       92% (258 of 281 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or         BS       d       258       281       92% (258 of 281 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or	· better on all
SP14       106       121       88%       F-F       74       82       90%       SP14: F-F = 90% (74 of 82 ); ONL = 82% (32 of 39 );         ONL       32       39       82%       92% (258 of 281 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or         BS       d       258       281       92% (258 of 281 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or	
BS d 258 of 281 of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or	
L BS d 258 281 92% FA13 115 117 98% F-F 115 117 98% 92 258 281	
assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'd'.	· better on all
ONL 0 0 0% FA13: F-F = 98% ( 115 of 117 ); ONL = 0% ( 0 of 0 );	
SP14         143         164         87%         F-F         74         88         84%         SP14: F-F = 84% ( 74 of 88 ); ONL = 91% ( 69 of 76 );	
ONL 69 76 91%	
BS e 652 716 91% FA13 322 335 96% F-F 198 206 96% 91 652 716 91% (652 of 716) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'e'.	· better on all
ONL         124         129         96%         FA13: F-F = 96% ( 198 of 206 ); ONL = 96% ( 124 of 129 );	
SP14         330         381         87%         F-F         216         259         83%         SP14: F-F = 83% ( 216 of 259 ); ONL = 93% ( 114 of 122 );	
ONL 114 122 93%	
BS <b>f</b> 650 697 93% FA13 365 391 93% F-F 232 253 92% 93 650 697 93% (650 of 697 ) of student work samples (projects, exams, quizzes, papers) were scored 70 (out of 100) or assessments supporting ABET Baccalaureate Degree Program Specific Criteria 'f'.	· better on all
ONL 133 138 96% FA13: F-F = 92% ( 232 of 253 ); ONL = 96% ( 133 of 138 );	
SP14 285 306 93% F-F 132 145 91% SP14: F-F = 91% (132 of 145); ONL = 95% (153 of 161);	
ONL 153 161 95%	

#### **Action Plans**

AEC 132 FF SP14	Р	erforma	nce < tai	get 80%	
Shane Germany	ACT	BCT	IET	ID / Other	ACTION PLANS
Sketchbook		69			Construction students avoid "Hand sketching" exercises, refuse to submit; Monitor, evaluate & obtain
Sketchbook					feedback on why this trend is obvious to BCT and adapt
Sketchbook			33		Small sample size, similar to BCT comments
CAD Exercises			67		Small sample size, ,monitor
Quizzes			67		Small sample size, ,monitor
Final Exercise	33	75			14/22 ACT-BCT Students opted not to submit the final or submitted it grossly incomplete; Monitor,
Final Exercise	55	/5			prepare students better for the reality of a culmulative final & time commitment;
Final Exercise			33	50	Small sample sizes, 2/5 IET-ID Students
Final Evan	50	62			13/22 Students opted not to submit the final or submitted it grossly incomplete; Monitor, prepare
Final Exam	50	63			students better for the reality of a culmulative final & time commitment
Final Exam			33		Small sample size, monitor

AEC 270 ONL SP14	Р	erforma	nce < tar	get 80%	ACTION PLANS
Jessica Sharp	ACT	BCT	IET	ID / Other	ACTION PLANS
					Cheating was discovered, so multiple students received a "0" for this assignment. Remediation: Course
		74			delivery has been altered to reduce cheating. Assignments are graded but awarded less credit towards
5. Homework 5		74			the student's overall grade. Exams are now proctored, ensuring each student understands and retains
					the course materials.

	AEC 444 ONL FA13	Performance < target 80%				ACTION PLANS
	Desmond Fletcher	ACT	BCT	IET	ID / Other	ACTION PLANS
A 2					50	No action required; small sample (2)
A 4					50	No action required; small sample (2)
A 9					50	No action required; small sample (2)
A 13					50	No action required; small sample (2)

AEC 444 ONL SP14	P	Performance < target 80%			ACTION PLANS
Desmond Fletcher	ACT	BCT	IET	ID / Other	ACTION PLANS
ASSIGNMENT 1	50				improve review materials
ASSIGNMENT 1		59			improve review materials

### Action Plans (Continued)

AEC 454 FF FA13	Р	erforma	nce < tai	rget 80%	ACTION PLANS
Jessica Sharp	ACT	ВСТ	IET	ID / Other	ACTION FLANS
3. Assignment 3		73			Cheating was discovered, so multiple students received a "0" for this assignment. Remediation: Course delivery has been altered to reduce cheating. Assignments are graded but awarded less credit towards the student's overall grade. Exams are now proctored, ensuring each student understands and retains the course materials.
5. Assignment 5		73			Cheating was discovered, so multiple students received a "0" for their submission. Remediation: Course delivery has been altered to reduce cheating. Assignments are graded but awarded less credit towards the student's overall grade. Exams are now proctored, ensuring each student understands and retains the course materials.

AEC 496 ONL FA13	Р	erforma	nce < tar	get 80%	ACTION PLANS
Doris Kemp	ACT	ВСТ	IET	ID / Other	ACTION PLANS
1. Internship agreement				50	
4. Implement conversation		50			Low numbers of students: no action required
between instructor/supervisor		50			

ACT 234/L FF FA13	Р	erforma	nce < tar	get 80%	ACTION PLANS
Shane Germany	ACT	ВСТ	IET	ID / Other	ACTION PLANS
Final Project			0	0	small sample, incomplete submission, monitor

ACT 235 FF SP14	P	erforma	nce < tar	get 80%	ACTION PLANS			
Shane Germany	ACT	ACT BCT IET ID/Other ACT			ACTION PLANS			
				ļ	Students were not consistently submitting these assignments, likely due to open due dates (10 are			
Theory	76				required by Final); Increase emphasis on weight towards final average, set reminders & incremental due			
					dates for each.			
Final Dura	76				Three students did not complete the semester and did not withdraw; Monitor, attempt to contact			
Final Dwgs	76				students for feedback			

ACT 262/L FF SP14	Performance < target 80%				ACTION PLANS					
Hans Palacios	ACT	ВСТ	IET	ID / Other	ACTION PLANS					
2 Architectural Precedent Final Paper	64				integrate assignments to enhance analytical and writing skills development					

### Action Plans (Continued)

ACT 322 FF FA13	Р	Performance < target 80%		rget 80%	ACTION PLANS			
Shane Germany ACT BCT IET ID / Other		ID / Other						
Research Paper	71				Evidence of lack of proof reading, finalizing, spelling, & gramatic errors; Implement peer reviewed			
	/1				drafts, emphasize writing center collaboration			

ACT 338 FF SP14	Performance < target 80%		get 80%	ACTION PLANS							
Shane Germany	ACT	BCT IET ID / Other		ID / Other	ACTION PLANS						
					Students were not consistently submitting these assignments, likely due to open due dates (10 are						
Field Reports	65				required by Final); Increase emphasis on weight towards final average, set reminders & incremental due						
					dates for each.						

ACT 364/L FF SP14 Pe			nce < tai	rget 80%	ACTION PLANS	
Hans Palacios ACT BCT IET I		ID / Other				
2 Architectural Precedent Final 53 in In			ntegrate assignments to enhance analytical and writing skills development			
18 Schematic Design Final 76			levelop strategies to reinforce design process; effectively communicate assignment instructions and objectives			

ACT 380 FF SP14	Р	erforma	nce < tar	get 80%	ACTION PLANS
Doris Kemp	ACT	BCT	IET	ID / Other	ACTION PLANS
1. Exam 1	54				Students failed to prepare adequately for Exam #1 and stated that they had several exams the same day; The CDT exam is very difficult and the pass rate on the first attempt is low nation wide. The instructor will perform a detailed analysis of exam results and incorporate additional material in the course to improve the outcome of student performance on the CDT exam. This group of students also failed to show up for Friday evening study sessions and many were enrolled in Senior Project classes.
6. CDT Exam	8				Students failed to prepare adequately for Exam #1 and stated that they had several exams the same day; The CDT exam is very difficult and the pass rate on the first attempt is low nation wide. The instructor will perform a detailed analysis of exam results and incorporate additional material in the course to improve the outcome of student performance on the CDT exam. This group of students also failed to show up for Friday evening study sessions and many were enrolled in Senior Project classes.

### Action Plans (Continued)

ACT 400 FF SP14	Performance < target 80%		get 80%	ACTION PLANS			
Hans Palacios			ID / Other				
2 Code & Programming	60				integrate assignments to enhance analytical and writing skills development		
5 Sustainability Assessment	20				integrate assignments to enhance analytical and writing skills development		

ACT 401 FF SP14	Performance < target 80%		get 80%	ACTION PLANS					
Hans Palacios	ACT	BCT	IET	ID / Other	ACTION PLANS				
4 Design Development	60				small sample in this case; just monitor				
5 Sustainability Assessment				integrate assignments to enhance analytical and writing skills development					

ACT 450 FF SP14	Performance < target 80%		get 80%	]	
Shane Germany	ACT	BCT	IET	ID/Other	
Dim Donort	67				I
Bim Report	67				

ACT 465/L FF FA13	Performance < target 80%		get 80%	ACTION PLANS					
Hans Palacios			ID / Other						
5 Exam 75 re			reinforce study skills and familiarity with course content						

### 2013-2014

### ACT Four-year Summary

АСТ	2010-201	1 summ	ary		АСТ	2011-201	2 sumn	nary		ACT	2012-201	3 sumn	nary		ACT	2013-2014	summa	ry	
	criteria	>=70	ENR	%		criteria	>=70	ENR	%		criteria	>=70	ENR	%		criteria	>=70	ENR	%
GC	а	732	816	90%	GC	а	671	767	87%	GC	а	479	512	94%	GC	а	1013	1128	90%
GC	b	108	128	84%	GC	b	104	128	81%	GC	b	306	321	95%	GC	b	489	528	93%
GC	С	96	113	85%	GC	С	81	96	84%	GC	С	33	36	92%	GC	С	112	119	94%
GC	d	119	146	82%	GC	d	113	139	81%	GC	d	305	315	97%	GC	d	640	707	91%
GC	е	56	60	93%	GC	е	48	59	81%	GC	е	17	20	85%	GC	е	294	310	95%
GC	f	558	641	87%	GC	f	484	565	86%	GC	f	395	423	93%	GC	f	612	674	91%
GC	g	485	547	89%	GC	g	384	436	88%	GC	g	311	360	86%	GC	g	819	909	90%
GC	h	187	220	85%	GC	h	162	184	88%	GC	h	117	125	94%	GC	h	273	310	88%
GC	i	283	311	91%	GC	i	233	276	84%	GC	i	330	360	92%	GC	i	355	391	91%
GC	j	338	373	91%	GC	j	352	402	88%	GC	j	159	175	91%	GC	j	227	270	84%
GC	k	753	840	90%	GC	k	579	662	87%	GC	k	264	288	92%	GC	k	638	702	91%
AS	а	845	987	86%	AS	а	758	894	85%	AS	а	127	133	95%	AS	а	483	547	88%
AS	b	203	239	85%	AS	b	143	172	83%	AS	b	56	63	89%	AS	b	408	461	89%
AS	С	52	62	84%	AS	С	39	44	89%	AS	С	33	36	92%	AS	С	70	75	93%
AS	d	273	308	89%	AS	d	234	267	88%	AS	d	61	61	100%	AS	d	43	45	96%
AS	е	58	71	82%	AS	е	53	64	83%	AS	е	108	114	95%	AS	е	252	265	95%
AS	f	47	58	81%	AS	f	25	33	76%	AS	f	66	68	97%	AS	f	149	152	98%
AS	g	94	108	87%	AS	g	92	110	84%	AS	g	250	262	95%	AS	g	111	126	88%
AS	h	355	401	89%	AS	h	306	356	86%	AS	h	122	127	96%	AS	h	377	424	89%
AS	i	640	747	86%	AS	i	649	769	84%	AS	i	196	235	83%	AS	i	359	424	85%
BS	а	694	821	85%	BS	а	589	699	84%	BS	а	330	351	94%	BS	а	633	694	91%
BS	b	590	665	89%	BS	b	506	574	88%	BS	b	293	303	97%	BS	b	327	364	90%
BS	С	174	197	88%	BS	С	103	120	86%	BS	С	123	131	94%	BS	C	263	280	94%
BS	d	205	219	94%	BS	d	215		85%	BS	d	142	157	90%	BS	d	258	281	92%
BS	е	538	617	87%	BS	е	414		87%	BS	е	304	325	94%	BS	е	652	716	91%
BS	f	380	435	87%	BS	f	283	340	83%	BS	f	246	258	95%	BS	f	650	697	93%
	ACT	8863	10130	87%		ACT	7620	8888	85%		ACT	5173	5559	93%		ACT	10507	11599	91%

ACT Graduate Exit Survey Findings (Indirect Measure 2)

	criteria	2013	ACT Exit Survey Findings	
1	а	3.3	Average of 7 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	3.4	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'b' was 3.4. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
3	с	3.3	Average of 7 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	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'd' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
5	е	3.5	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'e' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
6	f	3.4	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'f' was 3.4. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
7	g	3.5	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'g' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
8	h	3.5	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'h' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
9	i	3.5	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'i' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
10	j	3.2	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'j' was 3.2. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
11	k	3.4	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET General Criteria 'k' was 3.4. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
12	а	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'a' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
13	b	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'b' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met

			Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific	
14	С	3.2	Criteria 'c' was 3.2. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
15	d	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'd' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
16	е	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'e' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
17	f	3.2	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'f' was 3.2. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
18	g	3.2	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'g' was 3.2. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
19	h	3.4	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'h' was 3.4. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
20	i	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Associate Degree Program Specific Criteria 'i' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
21	а	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'a' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
22	b	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'b' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
23	С	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'c' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
24	d	3.5	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'd' was 3.5. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
25	е	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'e' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met
26	f	3.3	Average of 7 ratings on the evaluation category supporting 2013-2014 ABET Baccalaureate Degree Program Specific Criteria 'f' was 3.3. (4 = Very True; 3 = True; 2 = Somewhat True; 1 = Not True)	Met