I-ALC. Undergraduate Programs - To be completed by academic units offering degree programs.

Annual Report, 2012-2013

Department/Division: Computer Science_____

College: Arts and Sciences_____

Part I-ALC, Summary Report on Assessment, Academic Learning Compacts (ALC)

Program Title[a]: __Computer Science_____   Degree[b] ___BS_____   CIP Code: _11.0101_____

[a]**Prepare separate summary table for each degree program.**
[b]**For example, BA, BS, BSBA**

- Based on **direct (required) and indirect (optional) measures** of student learning in the domain(s) your department assessed, compare your students' performance this year to their performance in previous years.
- Duplicate this section when reporting assessments for more than one domain for a given program.

Note: The undergraduate assessment summary described in this report encompasses all three specializations within the Computer Science undergraduate program: Computer Information Systems, Computer Science, and Software Engineering. The CS program ALC (http://uwf.edu/cutla/ALC/Comp_Sci_ALC.pdf) was intentionally developed by the faculty to distinguish between the content outcomes for each specialization yet capture the common high-level outcomes for the other four domains across the specializations. The assessment of outcomes was conducted in the undergraduate capstone courses, which combine students from all three specializations and are completed during their senior year.

Indicate the student learning outcome domain assessed (check one):					
X	Content		Communication		Project Management
	Critical Thinking		Integrity/Values		Other (describe)

Describe the **specific student learning outcome** assessed in this domain:
Identify and use concepts, principles, and theories of modern programming languages for the development of computer programs; Compare and evaluate data structures and algorithms to solve scientific problems; Analyze, design, develop, and manage information systems using appropriate tools and techniques; Describe major software engineering models and processes; Model, design, and manage database products; Configure and manage operating systems and networks

REQUIRED: Describe the **direct measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
Content was assessed by: (a) the final project structure and performance; (b) the accompanying project documentation/report; and (c) partially by presentations given to peers, faculty and/or customers. Criteria were: (a) compliance with CS modeling, design and implementation principles for engineering-type projects; and (b) awareness of state-of-the-art principles and methods for research-type projects.
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
The trend from "Meets" to "Exceeds" visible in the 2011/2012 report is reversed somewhat in this report's period – the reason stated in the last report still seem to be valid: sample variations and instructor perception. Apart from this distinction the results are comparable. They show no explicit failure to meet the course expectations and are encouraging.
OPTIONAL: Describe the **indirect measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
N/A
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
N/A
Use of Assessment Data for Making Decisions. Describe the process used in your department to evaluate assessment evidence and make decisions (include dates of relevant department meetings if known). Describe the

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decisions made to improve student learning in your program. Describe how these decisions are related to the assessment evidence collected by your department.
The worksheet used for the assessed undergraduate courses gives instructors the opportunity to make recommendations for further refinement of these courses. These recommendations are available for faculty members that will be teaching the courses to continuously amend them. Observed problems are addressed by focusing on preparatory courses according to the curriculum maps.
Use of Assessment Data for Improvement of Assessment Procedures. Describe any changes made to assessment methods. Explain the relation between these changes and the information obtained from previous assessments.
The process underlying the collection of assessment data has not been modified in any substantial way – it seems to yield satisfactory results in terms of timely submission and fit for the purpose of the annual assessment.

Describe the Department's Commitment to Assessment Activities in 2012-2013

Domain(s) to be examined from department's multi-year assessment plan in 2012-2013
All five domains are being assessed at the undergraduate level.

Assessment question(s) to be addressed in 2013-2014
Last year's issues seem to persist: What measures should be taken to make assessing different courses taught by different instructors more comparable? Can the assessment process be further improved along the lines of ABET standards?

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[a]**Prepare separate summary table for each degree program.**
[b]**For example, BA, BS, BSBA**

- Based on **direct (required) and indirect (optional) measures** of student learning in the domain(s) your department assessed, compare your students' performance this year to their performance in previous years.
- Duplicate this section when reporting assessments for more than one domain for a given program.

Indicate the student learning outcome assessed (check one):					
	Content		Communication		Project Management
X	Critical Thinking		Integrity/Values		Other (describe)

Describe the **specific student learning outcome** assessed in this domain:
Employ computing strategies to analyze and develop computer systems; Identify and formulate computing solutions for various problems

REQUIRED: Describe the **direct measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
Critical thinking was assessed by reviewing a) written project reports with regard to exploration of alternatives, substantiation of design decisions and conclusions as well self-criticism and rational outlooks, b) observing student presentations, especially the response to critical questions.
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
A shift from "Meets" to "Exceeds" is shown in the assessment numbers. It is due to more fine grained evaluations in report grading and a stronger emphasis on critical questions after student presentations. These results have to be observed over the next periods in order to verify the viability of this assessment.
OPTIONAL: Describe the **indirect measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
N/A
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
N/A
Use of Assessment Data for Making Decisions. Describe the process used in your department to evaluate assessment evidence and make decisions (include dates of relevant department meetings if known). Describe the decisions made to improve student learning in your program. Describe how these decisions are related to the assessment evidence collected by your department.
The worksheet used for the assessed undergraduate courses gives instructors the opportunity to make recommendations for the further refinement of these courses. These recommendations are available for faculty members that will be teaching these courses and are continuously amended. Observed problems are addressed by focusing on preparatory courses according to the curriculum maps.
Use of Assessment Data for Improvement of Assessment Procedures. Describe any changes made to assessment methods. Explain the relation between these changes and the information obtained from previous assessments.
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Assessment question(s) to be addressed in 2013-2014
What measures should be taken to make assessing different courses taught by different instructors more comparable? Can the assessment process be further improved along the lines of ABET standards?

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- Based on **direct (required) and indirect (optional) measures** of student learning in the domain(s) your department assessed, compare your students' performance this year to their performance in previous years.
- Duplicate this section when reporting assessments for more than one domain for a given program.

Indicate the student learning outcome assessed (check one):					
	Content	X	Communication		Project Management
	Critical Thinking		Integrity/Values		Other (describe)

Describe the **specific student learning outcome** assessed in this domain:
Create and deliver effective oral presentations and written reports; Communicate using appropriate tools and technologies

REQUIRED: Describe the **direct measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
Communication skills were assessed by requesting and evaluating: (a) a written report; and (b) one or more presentations before peers, faculty and/or customers. To assess written communication skills, criteria included structure, form and language of the report; to assess oral communication skills, form, media usage, coherence, timing, posture and audience interaction were pertinent.
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
It seems the moderate shift from "Exceeds" to "Meets" counteracts the opposite movement observed in the previous period. Either slight adjustments in evaluation account for this or the 2011/12 results were in fact untypical.
OPTIONAL: Describe the **indirect measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
N/A
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
N/A
Use of Assessment Data for Making Decisions. Describe the process used in your department to evaluate assessment evidence and make decisions (include dates of relevant department meetings if known). Describe the decisions made to improve student learning in your program. Describe how these decisions are related to the assessment evidence collected by your department.
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- Based on **direct (required) and indirect (optional) measures** of student learning in the domain(s) your department assessed, compare your students' performance this year to their performance in previous years.
- Duplicate this section when reporting assessments for more than one domain for a given program.

Indicate the student learning outcome assessed (check one):					
	Content		Communication		Project Management
	Critical Thinking	X	Integrity/Values		Other (describe)

Describe the **specific student learning outcome** assessed in this domain:
Describe ethical issues in computing contexts; Articulate the responsibilities of a computing professional

REQUIRED: Describe the **direct measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
Assessment was performed by: (a) evaluating written reports and oral presentations for accounts of ethical implications of the project or research topic and b) strictly enforcing citation rules – and, generally, rules of academic honesty – for reports, papers and oral presentations.
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
It seems the shift from "Exceeds" to "Meets" counteracts the opposite movement observed in the previous period. Either slight adjustments in evaluation account for this or the 2011/12 results were in fact untypical.
OPTIONAL: Describe the **indirect measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
N/A
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
N/A
Use of Assessment Data for Making Decisions. Describe the process used in your department to evaluate assessment evidence and make decisions (include dates of relevant department meetings if known). Describe the decisions made to improve student learning in your program. Describe how these decisions are related to the assessment evidence collected by your department.
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Describe the Department's Commitment to Assessment Activities in 2013-2014
Domain(s) to be examined from department's multi-year assessment plan in 2013-2014

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All five domains are being assessed at the undergraduate level.
Assessment question(s) to be addressed in 2012-2013
What measures should be taken to make assessing different courses taught by different instructors more comparable? Can the assessment process be further improved along the lines of ABET standards?

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- Duplicate this section when reporting assessments for more than one domain for a given program.

Indicate the student learning outcome assessed (check one):					
	Content		Communication	X	Project Management
	Critical Thinking		Integrity/Values		Other (describe)

Describe the **specific student learning outcome** assessed in this domain:
Employ effective project management skills to develop a project plan, monitor, and track development efforts through design, implementation, and testing of the computer system; Work as part of a team in the development of computer systems

REQUIRED: Describe the **direct measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
The domain was assessed by requiring: (a) written progress reports for engineering projects; (b) a detailed research plan for research-oriented projects and (c) intermediate presentations ensuring progress and effective response to eventual problems.
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
There are now about 12% of "Exceeds" assessments in this area – a new observation. This is due to a refined evaluation system that puts more emphasis on project planning and project plan execution than until the last period. Also alternative project plans were evaluated.
OPTIONAL: Describe the **indirect measure(s)** used to assess student learning in this domain (e.g., answers to questions included on an exam, performance on a paper or project scored with a rubric, etc.). Include information about any additional measures used to assess learning outcomes in this domain.
N/A
If you observed changes in student performance on this measure when compared to previous years, briefly describe (in one or two sentences) the nature of these changes.
N/A
Use of Assessment Data for Making Decisions. Describe the process used in your department to evaluate assessment evidence and make decisions (include dates of relevant department meetings if known). Describe the decisions made to improve student learning in your program. Describe how these decisions are related to the assessment evidence collected by your department.
The worksheet used for the assessed undergraduate courses gives instructors the opportunity to make recommendations for the further refinement of these courses. These recommendations are available for faculty members that will be teaching these courses and are continuously amended. Observed problems are addressed by focusing on preparatory courses according to the curriculum maps.
Use of Assessment Data for Improvement of Assessment Procedures. Describe any changes made to assessment methods. Explain the relation between these changes and the information obtained from previous assessments.

> *The process underlying the collection of assessment data has not been modified in any substantial way – it seems to yield satisfactory results in terms of timely submission and fit for the purpose of the annual assessment procedures.*

Describe the Department's Commitment to Assessment Activities in 2013-2014

Domain(s) to be examined from department's multi-year assessment plan in 2013-2014
All five domains are being assessed at the undergraduate level.

Assessment question(s) to be addressed in 2013-2014
What measures should be taken to make assessing different courses taught by different instructors more comparable? Can the assessment process be further improved along the lines of ABET standards?

Appendix: Undergraduate Program Assessment Summarized Data & Evaluation

2008-2009

Domain	Total	Exceed%	Meet%	Fail%
Content	90	2.2	97.8	0
Critical Thinking	42	0	100	0
Communication	42	9.5	88.1	2.4
Integrity & Values	37	8.1	91.9	0
Project Management	37	5.4	91.9	2.7

2009-2010

Domain	Total	Exceed%	Meet%	Fail%
Content	264	18.6	81.4	0
Critical Thinking	114	14	86	0
Communication	114	25.4	74.6	0
Integrity & Values	93	15.1	84.9	0
Project Management	72	0	100	0

2010-2011

Domain	Total	Exceed%	Meet%	Fail%
Content	153	6.1	93.9	0
Critical Thinking	102	2	98	0
Communication	102	11.8	86.2	2
Integrity & Values	102	4	96	0
Project Management	100	0	98	2

2011-2012

Domain	Total	Exceed%	Meet%	Fail%
Content	53	30	63.7	6.3
Critical Thinking	54	16.7	68.5	14.8
Communication	54	33	65	2
Integrity & Values	54	31	65	4
Project Management	54	0	96	4

2012-2013

Domain	Total	Exceed%	Meet%	Fail%
Content	60	19.6	76.3	4.1
Critical Thinking	60	29.2	62.5	8.3
Communication	60	20	78.3	1.7
Integrity & Values	60	8.3	86.7	5
Project Management	60	12.8	85.2	3

Appendix: Undergraduate Assessment Summary Worksheet

Student Learning Outcomes Undergraduate Assessment Worksheet

Department of Computer Science
University of West Florida

*If you have taught this course in both online **and** classroom sections, please fill out separate assessment worksheets for the online and for the classroom section(s).*

.(a) **Course name and number:** _____ (b) **Semester:** _____

1. (a) Instructor(s): _____ (b) Number of sections: _____

2. Assessment for (check all programs that apply): _____ CIS _____ CS _____ SE

3. Online/classroom: _____ Number of sections of the course: __1_

4. (a) Initial course enrollment: _____ (b) Number of students who completed course: _____

5. For each student learning outcome assessed in the course, please describe how that outcome was assessed (assessment measure), and indicate the **number and percentage** of students who exceeded, met, or failed to meet expectations. **Use the number of students who completed the course** (indicated in item 4(b) above) to calculate the percentages. For learning outcomes that were not assessed in this course offering, indicate N/A.

   Learning outcomes listed in the first column are defined in the Computer Science Academic Learning Compact (ALC) available at http://uwf.edu/cutla/ALC/Comp_Sci_ALC.pdf.

Student Learning Outcome	Assessment Measure	Exceeded Expectations	Met Expectations	Failed to Meet Expectations
[Sample row]	Research paper	10/20 (50%)	6/20 (30%)	4/20 (20%)
Content–1				
Content–2				
Content–3				
Content–4				
Content–5				
Critical thinking–1				
Critical thinking–2				
Communication–1				
Communication–2				
Integrity/values–1				
Integrity/values–2				
Project management–1				
Project management–2				

6. Recommendations to improve or update student learning outcomes or assessment measures, if any:

_____   _____

Instructor(s) Signature   **Date**