

**Assessment – Executive Summary
Fall 2007 – Spring 2008**

**Department of Computer Science
University of West Florida**

The Department of Computer Science has three ongoing assessment initiatives for its undergraduate and graduate programs, and academic foundations course. This document includes an executive summary for the three assessment initiatives.

1. Undergraduate Assessment Summary

The undergraduate Academic Learning Compact (ALC) outlines the learning outcomes for our students organized in five main domains: content, critical thinking, communication, integrity/values, and project management. See the Computer Science ALC document at <http://www.uwf.edu/cutla/ALC/compacts.html> for complete details.

ALC Domains Addressed in 2007 – 2008 and Corresponding Student Learning Outcomes

A. Project Management (PM)

PM-1. Develop and employ effective management skills to enable project planning, communication, and delivery

PM-2. Work as part of a team in the development of software systems

B. Critical Thinking (CT)

CT-1. Critically analyze and apply a range of computer science concepts, principles, and practices in the context of solving problems across a range of problem domains

CT-2. Demonstrate proficiency in software lifecycle principles, using a range of problem solving, programming, and software engineering skills

CT-3. Develop applications based upon the computer science body of knowledge

Assessment Methods

The outcomes were assessed using embedded assignments in several capstone courses, namely CIS4327 Systems Project and CEN4516 Networks. Students worked on assignments that met departmental standards, and reported the results of their work through programming projects, written reports, or presentations. The instructors use explicit criteria to evaluate student work. Each semester, the course instructors completed the Assessment Worksheet. Annually, the instructors or course coordinator reported data to the department at a departmental curriculum meeting. The department takes any appropriate actions to improve student learning outcomes or the assessment process. The department reports on meeting outcomes to the university and accreditation committees. All data is reviewed as part of the program review every five years, starting with the one in 2005-06.

Summary of Assessment Results

The completed assessment worksheets from CEN4516 Computer Networks and CIS4327 Systems Project for fall 2007 and spring 2008 are included in Appendix A. The completed worksheets include the recommendations made by the instructors for improving the course or assessment process. The 2007-08 assessment plan fulfilled its intended goal, namely to evaluate student achievement of our department's project management and critical thinking learning outcomes. By identifying key courses which emphasize those outcomes, we were able to evaluate how well our students met the desired learning objectives. The undergraduate curricula have been revised and the new programs are will take effect in fall 2008. For the 2008 – 2009 academic year, the undergraduate ALC and assessment plan will be revised to meet the needs of the new programs.

2. Graduate Assessment Summary

The graduate Academic Learning Plan (ALP) outlines the learning outcomes for our students organized in five main domains: content, critical thinking, communication, integrity/values, and project management. The Computer Science ALP is available at <http://www.uwf.edu/cutla/alp.cfm>. Student learning outcomes for all five domains were assessed in the 2007 – 2008 academic year.

Assessment Methods

The outcomes were assessed using embedded work in the graduate project and thesis courses for the Computer Science and Software Engineering programs, namely COT6931 Computer Science Project and CEN6015 Software Engineering Project. A rubric was developed for assessing the outcomes in these courses. Students worked on projects or theses according to departmental requirements, and the results of their work were reported through software systems, written reports, and/or presentations. Each project or thesis advisor evaluated their student(s) work using the rubric. Annually, the advisors reported data to the department at a departmental curriculum meeting. The department takes any appropriate actions to improve the student learning outcomes or assessment process. The department reports on meeting outcomes to the university and accreditation committees. All data is reviewed as part of the program review every five years, starting with the one in 2005-06.

Summary of Assessment Results

The completed rubrics from COT6931 Computer Science Project and CEN6015 Software Engineering Project for fall 2007 and spring 2008 are included in Appendix B. The completed rubrics include the recommendations made by the instructors for improving the course or assessment process. The 2007-08 assessment plan fulfilled its intended goal, namely to evaluate student achievement of the department's graduate student learning outcomes. By developing a rubric to assess those outcomes, we were able to keep the assessment process consistent among different project or thesis advisors. We will continue using the current model for the 2008 – 2009 academic year, and discuss ways to make the graduate assessment results easier to summarize, given the increased enrollment in our graduate programs.

3. General Education Assessment Summary

In the fall of 2007, the Computer Science department began offering a new General Education course, CGS2060 Excursions in Computing. From the Academic Foundations matrix, student learning outcomes from the project management and communication domains were identified for assessing student learning outcomes in the course. More information on the Academic Foundations assessment plan is available at http://www.uwf.edu/cutla/acad_foundations.cfm.

Academic Foundations Domains Addressed in 2007 – 2008 and Corresponding Student Learning Outcomes

A. Project Management

PM-1: Content is complete

PM-2: Delivers product on time

B. Communication

Speaking-1: Organization and logic of message

Speaking-2: Clarity of message

Assessment Methods

The outcomes were assessed using embedded assignments in the Computer Science general education course, namely CGS2060 Excursions in Computing. A rubric was developed for assessing the outcomes in this course. Students completed assignments according to the course requirements, and the results of their work were reported through the development and delivery of oral presentation. The course instructor evaluated students' work using the rubric. Annually, the course instructor or coordinator reported data to the department at a departmental curriculum meeting. The department takes any appropriate actions to improve the student learning outcomes or assessment process. The department reports on meeting outcomes to the university and accreditation committees. All data is reviewed as part of the program review every five years, starting with the one in 2005-06.

Summary of Assessment Results

The completed rubrics from CGS2060 Excursions in Computing for fall 2007 and spring 2008 are included in Appendix C. The completed rubrics include the recommendations made by the instructors for improving the course or assessment process. The assessment process resulted in numerous suggestions for improvement of the course and assessment rubric, as documented in the completed worksheets provided in the appendix. In addition, the development of a rubric to assess the outcomes helped keep the assessment process consistent among different instructors, and provided useful guidance and feedback to the students in completing the course assignments. We will continue using the current model for the 2008 – 2009 academic year, and report on the results of the any changes made to the course structure or assessment process.

Appendix A: Undergraduate Assessment Data for 2007 – 2008

Undergraduate Assessment Data Fall 2007 – Spring 2008

This appendix includes our undergraduate Academic Learning Compact (ALC) and assessment data collected from the following courses:

Fall 2007:

CEN4516 – Computer Networks

CIS4327 – Systems Project

Spring 2008:

CEN4516 – Computer Networks

CIS4327 – Systems Project

COMPUTER SCIENCE

Mission Statement

The mission of the Department of Computer Science is to provide a high-quality, student-oriented educational experience to undergraduate and graduate students in the Northwest Florida region. The department prepares students for successful careers in computing by empowering them with the knowledge and skills to contribute responsibly and creatively to a complex and ever-changing world, and to continue professional development and life-long learning.

Student Learning Outcomes

UWF Computer Science graduates should be able to do the following:

Content

- Demonstrate expertise in the main content knowledge of computer science:
 - Programming fundamentals
 - Discrete structures
 - Algorithms and complexity
 - Architecture and organization
 - Operating systems
 - Networks
 - Programming languages
 - Software development
- Effectively use computer science frameworks (concepts, principles, theories) to explain computer facts, practices, or trends
- Recognize the central role of data structures and algorithms, and apply fundamental programming skills to enable proper implementation of data structures and algorithms in software
- Research and make use of emerging technologies in the computing field

Critical Thinking

- Critically analyze and apply a range of computer science concepts, principles, and practices in the context of solving problems across a range of problem domains

- Demonstrate proficiency in software lifecycle principles, using a range of problem solving, programming, and software engineering skills
- Develop applications based upon the computer science body of knowledge

Communication

- **Demonstrate effective technical writing skills**
- Create and deliver effective oral presentations
- Communicate effectively using technology, including selecting and using appropriate tools

Integrity/Values

- Recognize ethical issues in computing contexts
- Articulate the responsibilities of a computing professional

Project Management

- Develop and employ effective management skills to enable project planning, communication, and delivery
- Work as part of a team in the development of software systems

Evaluation of Student Learning Outcomes

In the Computer Science major, you will demonstrate specific skills in regard to data structures, algorithms, programming, operating systems, databases, networks, and software engineering. Several upper level courses will give you the opportunity to identify and reflect on your best project management skill sets through the completion of assignments that meet departmental standards and integrate what you have learned. Opportunities to showcase your work will become available as your study progresses, and these include the opportunity to participate in undergraduate research projects with faculty, or to present the results of your work at university or external events.

Job Prospects for Computer Science Graduates

programmer	software engineer
computer scientist	systems engineer
systems analyst	data analyst
network administrator	database administrator
software consultant	technical support specialist

***Find Out More about Computer Science at UWF:
www.cs.uwf.edu***

Student Learning Outcomes Assessment Worksheet

Department of Computer Science
University of West Florida

1. Course name and number: CEN4516 Semester: Fall 2007
2. Instructor(s): Sharon Simmons Coordinator: _____
(for multiple-section courses)
3. Number of sections of the course: 2
4. Initial course enrollment: 24
5. Number of students who completed course: 17
6. For each student learning outcome, describe how that outcome was assessed (assessment measure), and indicate 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 5 above) to calculate the percentages.

Student Learning Outcome	Assessment Measure	Exceeded Expectations	Met Expectations	Failed to Meet Expectations
PM-1: Develop and employ effective management skills to enable project planning, communication, and delivery	Time estimates and time sheets	0/17	14/17	3/17
	Oral demonstration	3/17	11/17	3/17
PM-2: Work as part of a team in the development of software systems	Protocol Development	3/17	13/17	1/17
	Group Testing	3/17	10/17	4/17
CT-1: Critically analyze and apply a range of computer science concepts, principles, and practices in the context of solving problems	Software written	3/17	11/17	3/17

across a range of problem domains				
CT-2: Demonstrate proficiency in software lifecycle principles, using a range of problem solving, programming, and software engineering skills	Protocol Design	3/17	13/17	1/17
	Independent software development and programming	3/17	11/17	3/17
	Independent testing	3/17	11/17	3/17
	System testing	3/17	11/17	3/17
CT-3: Develop applications based upon the computer science body of knowledge	Final project	3/17	11/17	3/17

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

Comparison of original protocol with changes to the protocol once project was completed.

Instructor(s) Signature

Date

Student Learning Outcomes Assessment Worksheet

Department of Computer Science
University of West Florida

8. Course name and number: Systems Project CIS4327 Semester: 200708
9. Coordinator: Ed Rodgers Instructor(s): Ed Rodgers
10. Total course enrollment: 14 Number of sections of the course: 1
11. For each student learning outcome, describe how that outcome was assessed (assessment measure), and indicate percentage of students who exceeded, met, or failed to meet expectations.

Student Learning Outcome	Assessment of Outcome	Exceeds Expectations	Meets Expectations	Fails to Meet Expectations
PM-1: Develop and employ effective management skills to enable project planning, communication, and delivery	Students submit a project proposal, including requirements, expected deliverables, estimated timeline, and expected work assignments of team members. Teams assess and report progress on a bi-weekly basis.		100%	
PM-2: Work as part of a team in the development of software systems	Students are organized into teams of up three members, however, an individual project is allowed due to individual circumstances.		100%	
CT-1: Critically analyze and apply a range of computer science concepts, principles, and practices in the context of solving problems across a range of problem domains	Depending on the nature of their project, students apply skills and principles learned in previous courses: programming, database design, network design, Website development, and/or other appropriate topics...		100%	

CT-2: Demonstrate proficiency in software lifecycle principles, using a range of problem solving, programming, and software engineering skills	Depending on the nature of their project, students apply principles learned in their previous software engineering courses in planning, implementing and managing one or more phases of the systems development life cycle: feasibility, requirements definition, design, programming, testing, implementation, and maintenance.		100%	
CT-3: Develop applications based upon the computer science body of knowledge	Projects proposals are reviewed by the professor to ensure that the experience will draw upon appropriate elements of the computer science body of knowledge and will enhance the background of the students.		100%	

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

Project reports could be made available for review by faculty and students.

Edward G. Rodgers, Ph.D.
Course Coordinator's Signature

9 January 2008
Date

Student Learning Outcomes Assessment Worksheet – Undergraduate Program

**Department of Computer Science
University of West Florida**

13. Course name and number: CEN4516 Semester: Spring 2008
14. Instructor(s): Sharon Simmons Coordinator: _____
(for multiple-section courses)
15. Number of sections of the course: 2
16. Initial course enrollment: 28
17. Number of students who completed course: 27
18. For each student learning outcome, describe how that outcome was assessed (assessment measure), and indicate 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 5 above) to calculate the percentages.

Student Learning Outcome	Assessment Measure	Exceeded Expectations	Met Expectations	Failed to Meet Expectations
PM-1: Develop and employ effective management skills to enable project planning, communication, and delivery	Time estimates and time sheets	6/27	17/27	4/27
	Oral demonstration	9/27	14/27	4/27
PM-2: Work as part of a team in the development of software systems	Protocol Development	10/27	13/27	4/27
	Group Testing	9/27	14/27	4/27
CT-1: Critically analyze and apply a range of computer science concepts, principles, and practices in the context of solving problems	Software written	8/27	14/27	5/27

across a range of problem domains				
CT-2: Demonstrate proficiency in software lifecycle principles, using a range of problem solving, programming, and software engineering skills	Protocol Design	10/27	13/27	4/27
	Independent software development and programming	8/27	14/27	5/27
	Independent testing	8/27	14/27	5/27
	System testing	8/27	14/27	5/27
CT-3: Develop applications based upon the computer science body of knowledge	Final project	8/27	14/27	5/27

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

Instructor(s) Signature

Date

Student Learning Outcomes Assessment Worksheet – Undergraduate Program

**Department of Computer Science
University of West Florida**

- 20. Course name and number: Systems Project CIS4327 Semester: 200801
- 21. Instructor(s): Ed Rodgers Coordinator: _____
(for multiple-section courses)
- 22. Number of sections of the course: 1
- 23. Initial course enrollment: 13
- 24. Number of students who completed course: 13
- 25. For each student learning outcome, describe how that outcome was assessed (assessment measure), and indicate 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 5 above) to calculate the percentages.

Student Learning Outcome	Assessment Measure	Exceeded Expectations	Met Expectations	Failed to Meet Expectations
PM-1: Develop and employ effective management skills to enable project planning, communication, and delivery			92%	8%
PM-2: Work as part of a team in the development of software systems			100%	
CT-1: Critically analyze and apply a range of computer science concepts, principles, and practices in the context of solving problems			92%	8%

across a range of problem domains				
CT-2: Demonstrate proficiency in software lifecycle principles, using a range of problem solving, programming, and software engineering skills			92%	8%
CT-3: Develop applications based upon the computer science body of knowledge			92%	8%

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

One student out of the 13 did a poor job in most categories. In the future, I need to be more proactive in making sure that students stay on track.

Suggested improvement: students could share useful sources. Project reports could be made available for review by faculty and students.

Instructor(s) Signature

Date

Appendix B: Graduate Assessment Data for 2007 – 2008

Graduate Assessment Plan and Data Fall 2007 – Spring 2008

This appendix includes our graduate Academic Learning Plan (ALP) and assessment data collected from the following courses:

Fall 2007:

CEN6015 – Software Engineering Project

COT6931 – Computer Science Project

Spring 2008:

COT6931¹ – Computer Science Project

¹ COT6931 replaced CEN6015 for SE students in the 2007 catalog year.

MASTER OF SCIENCE IN COMPUTER SCIENCE

Mission Statement

The mission of the Department of Computer Science is to provide a high-quality, student-oriented educational experience to undergraduate and graduate students in the Northwest Florida region. The department prepares students for successful careers in computing by empowering them with the knowledge and skills to contribute responsibly and creatively to a complex and ever-changing world, and to continue professional development and life-long learning.

Student Learning Outcomes

The Computer Science Department offers a Master of Science program in Computer Science with two specializations: Computer Science (CS) and Software Engineering (SE). Upon successful completion of the graduate program, students will be able to do the following:

Content

- Describe, compare, and evaluate at an expert level one or more contemporary topics of specialization in modern computing
- Apply computing principles to a specific problem domain (e.g., medical software, high-performance computing)
- (For students who choose the CS specialization) Develop and analyze relevant algorithms and their efficient implementation in a variety of environments
- (For students who choose the SE specialization) Explain and adapt to the software life cycle, including communicating with users, developing requirements, testing and deploying systems, and managing the whole of the Software Engineering process

Critical Thinking

- Identify and analyze alternate approaches to solving computing problems
- Implement and analyze relevant algorithms in a variety of environments

Communication

- Employ effective and professional technical writing skills
- Present summary of thesis or project results using appropriate technologies

Integrity/Values

- Identify ethical issues and responsibilities within the computing profession

Project Management

- Demonstrate ability to conceive, plan, organize and execute a significant months-long project in computing
- Collaborate with team members where appropriate and defend results and outcomes at the end of the project timeline

Evaluation of Student Learning Outcomes

Computer Science graduate students will acquire advanced skills and knowledge that enable them to join the computing profession or continue a path of higher education towards a doctoral degree. They will gain expertise through courses in their chosen area of specialization: Computer Science or Software Engineering. They will be assessed in a capstone experience, thesis or project, which is required at the end of their program of study. The capstone requirement allows students to demonstrate an integrative grasp of the outcomes by developing a research thesis or software system of appropriate complexity that must abide by ethical standards and make a creative contribution to the field.

Career Paths and Job Prospects

Computer Scientist
Project Manager
Senior Programmer / Analyst
Network Administrator
Database Administrator
Computing Researcher

Software Engineer
Software Consultant
Systems Engineer
Requirements Engineer
Software Quality Assurance Engineer
Advanced Graduate Studies

For more information on the Computer Science Master's Program at UWF, please visit:

<http://www.cs.uwf.edu/>

Student Name: _Carnley, Cash, and Jarrell___

Course: _CEN6015___

Semester: _Fall 2007_

Supervisor: _White_

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Content						
Summarize, compare and evaluate, at an advanced level, concepts, research findings and current theories and models in core content areas of computer science.	Literature review in thesis or project is incomplete and/or omits important research findings or theoretical positions.	Literature review is incomplete and includes excessive discussion of unrelated issues and/or significant errors in content. Assertions are made without adequate support from evidence.	Literature review is brief, with insufficient detail. Unrelated issues are introduced and/or minor errors in content. Assertions made without adequate support from evidence.	Literature review is brief but complete; review focuses only on issues related to question; review is factually correct; assertions are clearly supported with evidence and appropriate use of logic.	Literature review is complete; sufficient detail is provided to support assertions; assertions supported with evidence; includes original and relevant insight or analysis of topic.	0
Identify computing principles and algorithms that are relevant to thesis or project topic and apply them within specific problem domain.	Unable to identify relevant computer science theories or algorithms.	Basic understanding of computing principles. Fails to apply them within specific problem domain.	Basic principles and techniques relevant to project or thesis are included, but some are missing. Fails to develop complete theoretical or design framework for thesis or project.	Provides good computing framework for thesis or project; applies principles and algorithms correctly to problem domain.	Project or thesis is completely grounded in computing theories and techniques. Applies them to problem correctly and clearly establishes their relevance.	2
Critical Thinking						
Evaluate and integrate computer science literature to address specific theory or practical problem. Describe and select appropriate scientific methods to answer question.	No clear research question posed. Relevance to existing literature and theory not established. Major errors in choice of research methods or analysis. Conclusions inconsistent with evidence presented.	Question posed is of questionable relevance or has clearly been answered. Question unrelated to existing literature. Errors in choice, execution or interpretation of methods and/or data. Conclusions weakly justified by evidence.	Question has been adequately answered in prior research; no clear rationale for reexamination of question given. Research and methods selected are flawed or inadequately carried out. Conclusions overreach evidence presented.	Meaningful question is posed, but may not be fully explicated. Research and methods selected appropriate for project. Conclusions follow logically from evidence presented.	Project addresses question or problem that is meaningfully connected to existing literature and theory. Student provides clear explanation of relationship. Research methods selected are appropriate for project. Conclusions follow logically from evidence presented.	3

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Communication						
Written: Organization and logic	No logical order to information provided.	Weak organization; sentences rambling; ideas repeated.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Presentation is organized, but does not present clear argument for given position.	Clear and logical presentation; good development of argument; transitions made clearly and smoothly.	2
Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	Major problems with mechanics of language; Awkward sentence construction; poor or absent transitions; frequently difficult to understand.	Frequent problems with mechanics of language; Occasional awkward sentences and poor transitions reduce readability.	Infrequent and minor mechanical problems; Errors do not impair readability.	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	3
Use of relevant APA Style (Title page, citations & references, use of language, etc.)	No evidence APA style used.	Minimal use of APA style; multiple errors in use of APA style.	Attempts to use APA style, but errors frequent and include errors in citations & references.	Infrequent errors in APA style; errors involve minor aspects of APA style – no errors in style for citations & references.	All relevant aspects of APA style used correctly.	0
Oral: Communication skills during presentation	Unable to respond effectively to questions posed by committee members.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Provides complete answers to questions posed. Presents thesis or project work in coherent manner.	Appropriate use of technology during presentation (where relevant). Presentation of thesis or project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner.	3

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Integrity/Values						
Clear understanding of and adherence to scientific and professional ethics.	Evidence of transgression of scientific, professional, or academic integrity.	Lack of understanding of scientific and professional ethics. Lack of compliance with academic-conduct code.	Compliance with principals of scientific, professional and/or academic integrity is likely, but may be poorly documented.	Complies with academic integrity guidelines. Adheres to principles of scientific and professional ethics.	Clear documentation of compliance with relevant ethical guidelines. Clearly establishes authorship of thesis or project work.	3
Project Management						
Work, as part of team where appropriate, to formulate, analyze, design, and implement significant computing project on timeline.	Unable to formulate project idea. No timeline constructed. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member.	Problem formulation and solution design contain no faults, but retain places of improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member and leader.	2
Student strengths: Team exhibited innovation in problem-solving.						
Student weaknesses: Due to low enrollment in recent years and transition in Master's program, students were not properly prepared for this course and had to make up deficiencies which negated the opportunity to fully engage in the course as planned.						

Student Name: _Dhawal Harsora_

Course: _COT6931_

Semester: _Fall 2007_

Supervisor: _Bagui_

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Content						
Summarize, compare and evaluate, at an advanced level, concepts, research findings and current theories and models in core content areas of computer science.	Literature review in thesis or project is incomplete and/or omits important research findings or theoretical positions.	Literature review is incomplete and includes excessive discussion of unrelated issues and/or significant errors in content. Assertions are made without adequate support from evidence.	Literature review is brief, with insufficient detail. Unrelated issues are introduced and/or minor errors in content. Assertions made without adequate support from evidence.	Literature review is brief but complete; review focuses only on issues related to question; review is factually correct; assertions are clearly supported with evidence and appropriate use of logic.	Literature review is complete; sufficient detail is provided to support assertions; assertions supported with evidence; includes original and relevant insight or analysis of topic.	3.5
Identify computing principles and algorithms that are relevant to thesis or project topic and apply them within specific problem domain.	Unable to identify relevant computer science theories or algorithms.	Basic understanding of computing principles. Fails to apply them within specific problem domain.	Basic principles and techniques relevant to project or thesis are included, but some are missing. Fails to develop complete theoretical or design framework for thesis or project.	Provides good computing framework for thesis or project; applies principles and algorithms correctly to problem domain.	Project or thesis is completely grounded in computing theories and techniques. Applies them to problem correctly and clearly establishes their relevance.	3.5
Critical Thinking						
Evaluate and integrate computer science literature to address specific theory or practical problem. Describe and select appropriate scientific methods to answer question.	No clear research question posed. Relevance to existing literature and theory not established. Major errors in choice of research methods or analysis. Conclusions inconsistent with evidence presented.	Question posed is of questionable relevance or has clearly been answered. Question unrelated to existing literature. Errors in choice, execution or interpretation of methods and/or data. Conclusions weakly justified by evidence.	Question has been adequately answered in prior research; no clear rationale for reexamination of question given. Research and methods selected are flawed or inadequately carried out. Conclusions overreach evidence presented.	Meaningful question is posed, but may not be fully explicated. Research and methods selected appropriate for project. Conclusions follow logically from evidence presented.	Project addresses question or problem that is meaningfully connected to existing literature and theory. Student provides clear explanation of relationship. Research methods selected are appropriate for project. Conclusions follow logically from evidence presented.	3.5

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Communication						
Written: Organization and logic	No logical order to information provided.	Weak organization; sentences rambling; ideas repeated.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Presentation is organized, but does not present clear argument for given position.	Clear and logical presentation; good development of argument; transitions made clearly and smoothly.	3.5
Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	Major problems with mechanics of language; Awkward sentence construction; poor or absent transitions; frequently difficult to understand.	Frequent problems with mechanics of language; Occasional awkward sentences and poor transitions reduce readability.	Infrequent and minor mechanical problems; Errors do not impair readability.	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	3
Use of relevant APA Style (Title page, citations & references, use of language, etc.)	No evidence APA style used.	Minimal use of APA style; multiple errors in use of APA style.	Attempts to use APA style, but errors frequent and include errors in citations & references.	Infrequent errors in APA style; errors involve minor aspects of APA style – no errors in style for citations & references.	All relevant aspects of APA style used correctly.	3
Oral: Communication skills during presentation	Unable to respond effectively to questions posed by committee members.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Provides complete answers to questions posed. Presents thesis or project work in coherent manner.	Appropriate use of technology during presentation (where relevant). Presentation of thesis or project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner.	3

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Integrity/Values						
Clear understanding of and adherence to scientific and professional ethics.	Evidence of transgression of scientific, professional, or academic integrity.	Lack of understanding of scientific and professional ethics. Lack of compliance with academic-conduct code.	Compliance with principals of scientific, professional and/or academic integrity is likely, but may be poorly documented.	Complies with academic integrity guidelines. Adheres to principles of scientific and professional ethics.	Clear documentation of compliance with relevant ethical guidelines. Clearly establishes authorship of thesis or project work.	3.5
Project Management						
Work, as part of team where appropriate, to formulate, analyze, design, and implement significant computing project on timeline.	Unable to formulate project idea. No timeline constructed. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member.	Problem formulation and solution design contain no faults, but retain places of improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member and leader.	3
Student strengths: Collecting literature, synthesizing material						
Student weaknesses: Writing could be better in some areas						

Student Name: Charles Carnley Course: COT6931 Semester: Spring 2008 Supervisor: White
 Assessment of: first semester X second semester

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Content						
Summarize, compare and evaluate, at an advanced level, concepts, research findings and current theories and models in core content areas of computer science.	Literature review in thesis or project is incomplete and/or omits important research findings or theoretical positions.	Literature review is incomplete and includes excessive discussion of unrelated issues and/or significant errors in content. Assertions are made without adequate support from evidence.	Literature review is brief, with insufficient detail. Unrelated issues are introduced and/or minor errors in content. Assertions made without adequate support from evidence.	Literature review is brief but complete; review focuses only on issues related to question; review is factually correct; assertions are clearly supported with evidence and appropriate use of logic.	Literature review is complete; sufficient detail is provided to support assertions; assertions supported with evidence; includes original and relevant insight or analysis of topic.	2
Identify computing principles and algorithms that are relevant to thesis or project topic and apply them within specific problem domain.	Unable to identify relevant computer science theories or algorithms.	Basic understanding of computing principles. Fails to apply them within specific problem domain.	Basic principles and techniques relevant to project or thesis are included, but some are missing. Fails to develop complete theoretical or design framework for thesis or project.	Provides good computing framework for thesis or project; applies principles and algorithms correctly to problem domain.	Project or thesis is completely grounded in computing theories and techniques. Applies them to problem correctly and clearly establishes their relevance.	4
Critical Thinking						
Evaluate and integrate computer science literature to address specific theory or practical problem. Describe and select appropriate scientific methods to answer question.	No clear research question or project posed. Relevance to existing literature and theory not established. Major errors in choice of research methods or analysis. Conclusions inconsistent with evidence presented.	Project/Question posed is of questionable relevance or has clearly been answered. Question unrelated to existing literature. Errors in choice, execution or interpretation of methods and/or data. Conclusions weakly justified by evidence.	Project is not very innovative. Question has been adequately answered in prior research; no clear rationale for reexamination of question given. Research and methods selected are flawed or inadequately carried out. Conclusions overreach evidence presented.	Meaningful question/project is posed, but may not be fully explicated. Research and methods selected appropriate for project. Conclusions follow logically from evidence presented.	Project addresses question or problem that is meaningfully connected to existing literature and theory. Student provides clear explanation of relationship. Research methods selected are appropriate for project. Conclusions follow logically from evidence presented.	4

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Communication						
Written: Organization and logic	No logical order to information provided.	Weak organization; sentences rambling; ideas repeated.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Presentation is organized, but does not present clear argument for research position/project rationale.	Clear and logical presentation; good development of argument/project rationale; transitions made clearly and smoothly.	4
Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	Major problems with mechanics of language; Awkward sentence construction; poor or absent transitions; frequently difficult to understand.	Frequent problems with mechanics of language; Occasional awkward sentences and poor transitions reduce readability.	Infrequent and minor mechanical problems; Errors do not impair readability.	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	3
Use of relevant APA Style (Title page, citations & references, use of language, etc.)	No evidence APA style used.	Minimal use of APA style; frequent errors in all aspects of APA style.	Adequate use of APA style, but frequent errors in citations & references.	Infrequent errors in APA style; errors involve minor aspects of APA style – no errors in style for citations & references.	All relevant aspects of APA style used effectively and correctly.	N/A
Oral: Communication skills during presentation	Unable to respond effectively to questions posed by committee members.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Provides complete answers to questions posed. Presents thesis/project work in coherent manner.	Appropriate use of technology during presentation (where relevant). Presentation of thesis/project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner.	3

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Integrity/Values						
Clear understanding of and adherence to scientific and professional ethics.	Evidence of transgression of scientific, professional, or academic integrity.	Lack of understanding of scientific and professional ethics. Inadvertent violation of academic-conduct code.	Exhibits incomplete understanding but still complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Exhibits understanding and complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Clear documentation of compliance with all relevant ethical guidelines. Clearly establishes authorship of thesis or project work.	4
Project Management						
Work individually, or as part of team where appropriate, to formulate, analyze, design, and implement a significant thesis, or computing project.	Unable to formulate project idea. No timeline constructed. Fails to meet most timeline goals. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team if applicable.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member if applicable.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member if applicable.	Problem formulation and solution design contain no faults, but retain areas for significant improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member if applicable.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member if applicable.	3
Student strengths: Well-organized. Works well in a team. S Student team poster presented at SEASTARS -- the UWF Annual Research Symposium -- won a Computer Science award.						
Student weaknesses: None noted.						
General Comments: The course schedule will be modified in the future to provide more time for the final written artifacts (e.g., poster, journal article). The learning experience would also be improved by separating faculty mentorship from product manager interests by the use of a non-faculty client when possible.						

Student Name: Patrick Cash Course: COT6931 Semester: Spring 2008 Supervisor: White
 Assessment of: first semester X second semester

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Content						
Summarize, compare and evaluate, at an advanced level, concepts, research findings and current theories and models in core content areas of computer science.	Literature review in thesis or project is incomplete and/or omits important research findings or theoretical positions.	Literature review is incomplete and includes excessive discussion of unrelated issues and/or significant errors in content. Assertions are made without adequate support from evidence.	Literature review is brief, with insufficient detail. Unrelated issues are introduced and/or minor errors in content. Assertions made without adequate support from evidence.	Literature review is brief but complete; review focuses only on issues related to question; review is factually correct; assertions are clearly supported with evidence and appropriate use of logic.	Literature review is complete; sufficient detail is provided to support assertions; assertions supported with evidence; includes original and relevant insight or analysis of topic.	2
Identify computing principles and algorithms that are relevant to thesis or project topic and apply them within specific problem domain.	Unable to identify relevant computer science theories or algorithms.	Basic understanding of computing principles. Fails to apply them within specific problem domain.	Basic principles and techniques relevant to project or thesis are included, but some are missing. Fails to develop complete theoretical or design framework for thesis or project.	Provides good computing framework for thesis or project; applies principles and algorithms correctly to problem domain.	Project or thesis is completely grounded in computing theories and techniques. Applies them to problem correctly and clearly establishes their relevance.	4
Critical Thinking						
Evaluate and integrate computer science literature to address specific theory or practical problem. Describe and select appropriate scientific methods to answer question.	No clear research question or project posed. Relevance to existing literature and theory not established. Major errors in choice of research methods or analysis. Conclusions inconsistent with evidence presented.	Project/Question posed is of questionable relevance or has clearly been answered. Question unrelated to existing literature. Errors in choice, execution or interpretation of methods and/or data. Conclusions weakly justified by evidence.	Project is not very innovative. Question has been adequately answered in prior research; no clear rationale for reexamination of question given. Research and methods selected are flawed or inadequately carried out. Conclusions overreach evidence presented.	Meaningful question/project is posed, but may not be fully explicated. Research and methods selected appropriate for project. Conclusions follow logically from evidence presented.	Project addresses question or problem that is meaningfully connected to existing literature and theory. Student provides clear explanation of relationship. Research methods selected are appropriate for project. Conclusions follow logically from evidence presented.	4

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Communication						
Written: Organization and logic	No logical order to information provided.	Weak organization; sentences rambling; ideas repeated.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Presentation is organized, but does not present clear argument for research position/project rationale.	Clear and logical presentation; good development of argument/project rationale; transitions made clearly and smoothly.	4
Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	Major problems with mechanics of language; Awkward sentence construction; poor or absent transitions; frequently difficult to understand.	Frequent problems with mechanics of language; Occasional awkward sentences and poor transitions reduce readability.	Infrequent and minor mechanical problems; Errors do not impair readability.	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	3
Use of relevant APA Style (Title page, citations & references, use of language, etc.)	No evidence APA style used.	Minimal use of APA style; frequent errors in all aspects of APA style.	Adequate use of APA style, but frequent errors in citations & references.	Infrequent errors in APA style; errors involve minor aspects of APA style – no errors in style for citations & references.	All relevant aspects of APA style used effectively and correctly.	N/A
Oral: Communication skills during presentation	Unable to respond effectively to questions posed by committee members.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Provides complete answers to questions posed. Presents thesis/project work in coherent manner.	Appropriate use of technology during presentation (where relevant). Presentation of thesis/project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner.	3

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Integrity/Values						
Clear understanding of and adherence to scientific and professional ethics.	Evidence of transgression of scientific, professional, or academic integrity.	Lack of understanding of scientific and professional ethics. Inadvertent violation of academic-conduct code.	Exhibits incomplete understanding but still complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Exhibits understanding and complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Clear documentation of compliance with all relevant ethical guidelines. Clearly establishes authorship of thesis or project work.	4
Project Management						
Work individually, or as part of team where appropriate, to formulate, analyze, design, and implement a significant thesis, or computing project.	Unable to formulate project idea. No timeline constructed. Fails to meet most timeline goals. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team if applicable.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member if applicable.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member if applicable.	Problem formulation and solution design contain no faults, but retain areas for significant improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member if applicable.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member if applicable.	3
Student strengths: Excellent ability to synthesize research discussions and material. Works well in a team. Student team poster presented at SEASTARS -- the UWF Annual Research Symposium -- won a Computer Science award.						
Student weaknesses: None noted.						
General Comments: The course schedule will be modified in the future to provide more time for the final written artifacts (e.g., poster, journal article). The learning experience would also be improved by separating faculty mentorship from product manager interests by the use of a non-faculty client when possible.						

Student Name: Jesse Jarrell Course: COT6931 Semester: Spring 2008 Supervisor: White
 Assessment of: first semester X second semester

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Content						
Summarize, compare and evaluate, at an advanced level, concepts, research findings and current theories and models in core content areas of computer science.	Literature review in thesis or project is incomplete and/or omits important research findings or theoretical positions.	Literature review is incomplete and includes excessive discussion of unrelated issues and/or significant errors in content. Assertions are made without adequate support from evidence.	Literature review is brief, with insufficient detail. Unrelated issues are introduced and/or minor errors in content. Assertions made without adequate support from evidence.	Literature review is brief but complete; review focuses only on issues related to question; review is factually correct; assertions are clearly supported with evidence and appropriate use of logic.	Literature review is complete; sufficient detail is provided to support assertions; assertions supported with evidence; includes original and relevant insight or analysis of topic.	2
Identify computing principles and algorithms that are relevant to thesis or project topic and apply them within specific problem domain.	Unable to identify relevant computer science theories or algorithms.	Basic understanding of computing principles. Fails to apply them within specific problem domain.	Basic principles and techniques relevant to project or thesis are included, but some are missing. Fails to develop complete theoretical or design framework for thesis or project.	Provides good computing framework for thesis or project; applies principles and algorithms correctly to problem domain.	Project or thesis is completely grounded in computing theories and techniques. Applies them to problem correctly and clearly establishes their relevance.	4
Critical Thinking						
Evaluate and integrate computer science literature to address specific theory or practical problem. Describe and select appropriate scientific methods to answer question.	No clear research question or project posed. Relevance to existing literature and theory not established. Major errors in choice of research methods or analysis. Conclusions inconsistent with evidence presented.	Project/Question posed is of questionable relevance or has clearly been answered. Question unrelated to existing literature. Errors in choice, execution or interpretation of methods and/or data. Conclusions weakly justified by evidence.	Project is not very innovative. Question has been adequately answered in prior research; no clear rationale for reexamination of question given. Research and methods selected are flawed or inadequately carried out. Conclusions overreach evidence presented.	Meaningful question/project is posed, but may not be fully explicated. Research and methods selected appropriate for project. Conclusions follow logically from evidence presented.	Project addresses question or problem that is meaningfully connected to existing literature and theory. Student provides clear explanation of relationship. Research methods selected are appropriate for project. Conclusions follow logically from evidence presented.	4

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Communication						
Written: Organization and logic	No logical order to information provided.	Weak organization; sentences rambling; ideas repeated.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Presentation is organized, but does not present clear argument for research position/project rationale.	Clear and logical presentation; good development of argument/project rationale; transitions made clearly and smoothly.	4
Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	Major problems with mechanics of language; Awkward sentence construction; poor or absent transitions; frequently difficult to understand.	Frequent problems with mechanics of language; Occasional awkward sentences and poor transitions reduce readability.	Infrequent and minor mechanical problems; Errors do not impair readability.	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	3
Use of relevant APA Style (Title page, citations & references, use of language, etc.)	No evidence APA style used.	Minimal use of APA style; frequent errors in all aspects of APA style.	Adequate use of APA style, but frequent errors in citations & references.	Infrequent errors in APA style; errors involve minor aspects of APA style – no errors in style for citations & references.	All relevant aspects of APA style used effectively and correctly.	N/A
Oral: Communication skills during presentation	Unable to respond effectively to questions posed by committee members.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Provides complete answers to questions posed. Presents thesis/project work in coherent manner.	Appropriate use of technology during presentation (where relevant). Presentation of thesis/project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner.	4

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Integrity/Values						
Clear understanding of and adherence to scientific and professional ethics.	Evidence of transgression of scientific, professional, or academic integrity.	Lack of understanding of scientific and professional ethics. Inadvertent violation of academic-conduct code.	Exhibits incomplete understanding but still complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Exhibits understanding and complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Clear documentation of compliance with all relevant ethical guidelines. Clearly establishes authorship of thesis or project work.	4
Project Management						
Work individually, or as part of team where appropriate, to formulate, analyze, design, and implement a significant thesis, or computing project.	Unable to formulate project idea. No timeline constructed. Fails to meet most timeline goals. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team if applicable.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member if applicable.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member if applicable.	Problem formulation and solution design contain no faults, but retain areas for significant improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member if applicable.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member if applicable.	3
Student strengths: Demonstrated very good leadership with project team. Student team poster presented at SEASTARS -- the UWF Annual Research Symposium -- won a Computer Science award.						
Student weaknesses: None noted.						
General Comments: The course schedule will be modified in the future to provide more time for the final written artifacts (e.g., poster, journal article). The learning experience would also be improved by separating faculty mentorship from product manager interests by the use of a non-faculty client when possible.						

Student Name: Joel Becker Course: COT6931 Semester: Spring 2008 Supervisor: El-Sheikh
 Assessment of: first semester second semester

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Content						
Summarize, compare and evaluate, at an advanced level, concepts, research findings and current theories and models in core content areas of computer science.	Literature review in thesis or project is incomplete and/or omits important research findings or theoretical positions.	Literature review is incomplete and includes excessive discussion of unrelated issues and/or significant errors in content. Assertions are made without adequate support from evidence.	Literature review is brief, with insufficient detail. Unrelated issues are introduced and/or minor errors in content. Assertions made without adequate support from evidence.	Literature review is brief but complete; review focuses only on issues related to question; review is factually correct; assertions are clearly supported with evidence and appropriate use of logic.	Literature review is complete; sufficient detail is provided to support assertions; assertions supported with evidence; includes original and relevant insight or analysis of topic.	3
Identify computing principles and algorithms that are relevant to thesis or project topic and apply them within specific problem domain.	Unable to identify relevant computer science theories or algorithms.	Basic understanding of computing principles. Fails to apply them within specific problem domain.	Basic principles and techniques relevant to project or thesis are included, but some are missing. Fails to develop complete theoretical or design framework for thesis or project.	Provides good computing framework for thesis or project; applies principles and algorithms correctly to problem domain.	Project or thesis is completely grounded in computing theories and techniques. Applies them to problem correctly and clearly establishes their relevance.	4
Critical Thinking						
Evaluate and integrate computer science literature to address specific theory or practical problem. Describe and select appropriate scientific methods to answer question.	No clear research question or project posed. Relevance to existing literature and theory not established. Major errors in choice of research methods or analysis. Conclusions inconsistent with evidence presented.	Project/Question posed is of questionable relevance or has clearly been answered. Question unrelated to existing literature. Errors in choice, execution or interpretation of methods and/or data. Conclusions weakly justified by evidence.	Project is not very innovative. Question has been adequately answered in prior research; no clear rationale for reexamination of question given. Research and methods selected are flawed or inadequately carried out. Conclusions overreach evidence presented.	Meaningful question/project is posed, but may not be fully explicated. Research and methods selected appropriate for project. Conclusions follow logically from evidence presented.	Project addresses question or problem that is meaningfully connected to existing literature and theory. Student provides clear explanation of relationship. Research methods selected are appropriate for project. Conclusions follow logically from evidence presented.	3

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Communication						
Written: Organization and logic	No logical order to information provided.	Weak organization; sentences rambling; ideas repeated.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Presentation is organized, but does not present clear argument for research position/project rationale.	Clear and logical presentation; good development of argument/project rationale; transitions made clearly and smoothly.	4
Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	Major problems with mechanics of language; Awkward sentence construction; poor or absent transitions; frequently difficult to understand.	Frequent problems with mechanics of language; Occasional awkward sentences and poor transitions reduce readability.	Infrequent and minor mechanical problems; Errors do not impair readability.	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	4
Use of relevant APA Style (Title page, citations & references, use of language, etc.)	No evidence APA style used.	Minimal use of APA style; frequent errors in all aspects of APA style.	Adequate use of APA style, but frequent errors in citations & references.	Infrequent errors in APA style; errors involve minor aspects of APA style – no errors in style for citations & references.	All relevant aspects of APA style used effectively and correctly.	N/A
Oral: Communication skills during presentation	Unable to respond effectively to questions posed by committee members.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Provides complete answers to questions posed. Presents thesis/project work in coherent manner.	Appropriate use of technology during presentation (where relevant). Presentation of thesis/project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner.	4

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Integrity/Values						
Clear understanding of and adherence to scientific and professional ethics.	Evidence of transgression of scientific, professional, or academic integrity.	Lack of understanding of scientific and professional ethics. Inadvertent violation of academic-conduct code.	Exhibits incomplete understanding but still complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Exhibits understanding and complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Clear documentation of compliance with all relevant ethical guidelines. Clearly establishes authorship of thesis or project work.	4
Project Management						
Work individually, or as part of team where appropriate, to formulate, analyze, design, and implement a significant thesis, or computing project.	Unable to formulate project idea. No timeline constructed. Fails to meet most timeline goals. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team if applicable.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member if applicable.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member if applicable.	Problem formulation and solution design contain no faults, but retain areas for significant improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member if applicable.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member if applicable.	4
Student strengths: Very self-motivated and well-organized. Excellent software development skills. Able to integrate different aspects of the project effectively.						
Student weaknesses: Needs more experience connecting own work to existing literature.						

Student Name: Jonathan Berg Course: COT 6931 Semester: fall/spring Supervisor: Pinto
 Assessment of: x first semester x second semester

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Content						
Summarize, compare and evaluate, at an advanced level, concepts, research findings and current theories and models in core content areas of computer science.	Literature review in thesis or project is incomplete and/or omits important research findings or theoretical positions.	Literature review is incomplete and includes excessive discussion of unrelated issues and/or significant errors in content. Assertions are made without adequate support from evidence.	Literature review is brief, with insufficient detail. Unrelated issues are introduced and/or minor errors in content. Assertions made without adequate support from evidence.	Literature review is brief but complete; review focuses only on issues related to question; review is factually correct; assertions are clearly supported with evidence and appropriate use of logic.	Literature review is complete; sufficient detail is provided to support assertions; assertions supported with evidence; includes original and relevant insight or analysis of topic.	4
Identify computing principles and algorithms that are relevant to thesis or project topic and apply them within specific problem domain.	Unable to identify relevant computer science theories or algorithms.	Basic understanding of computing principles. Fails to apply them within specific problem domain.	Basic principles and techniques relevant to project or thesis are included, but some are missing. Fails to develop complete theoretical or design framework for thesis or project.	Provides good computing framework for thesis or project; applies principles and algorithms correctly to problem domain.	Project or thesis is completely grounded in computing theories and techniques. Applies them to problem correctly and clearly establishes their relevance.	3
Critical Thinking						
Evaluate and integrate computer science literature to address specific theory or practical problem. Describe and select appropriate scientific methods to answer question.	No clear research question or project posed. Relevance to existing literature and theory not established. Major errors in choice of research methods or analysis. Conclusions inconsistent with evidence presented.	Project/Question posed is of questionable relevance or has clearly been answered. Question unrelated to existing literature. Errors in choice, execution or interpretation of methods and/or data. Conclusions weakly justified by evidence.	Project is not very innovative. Question has been adequately answered in prior research; no clear rationale for reexamination of question given. Research and methods selected are flawed or inadequately carried out. Conclusions overreach evidence presented.	Meaningful question/project is posed, but may not be fully explicated. Research and methods selected appropriate for project. Conclusions follow logically from evidence presented.	Project addresses question or problem that is meaningfully connected to existing literature and theory. Student provides clear explanation of relationship. Research methods selected are appropriate for project. Conclusions follow logically from evidence presented.	4

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Communication						
Written: Organization and logic	No logical order to information provided.	Weak organization; sentences rambling; ideas repeated.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Presentation is organized, but does not present clear argument for research position/project rationale.	Clear and logical presentation; good development of argument/project rationale; transitions made clearly and smoothly.	4
Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	Major problems with mechanics of language; Awkward sentence construction; poor or absent transitions; frequently difficult to understand.	Frequent problems with mechanics of language; Occasional awkward sentences and poor transitions reduce readability.	Infrequent and minor mechanical problems; Errors do not impair readability.	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	4
Use of relevant APA Style (Title page, citations & references, use of language, etc.)	No evidence APA style used.	Minimal use of APA style; frequent errors in all aspects of APA style.	Adequate use of APA style, but frequent errors in citations & references.	Infrequent errors in APA style; errors involve minor aspects of APA style – no errors in style for citations & references.	All relevant aspects of APA style used effectively and correctly.	3
Oral: Communication skills during presentation	Unable to respond effectively to questions posed by committee members.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Provides complete answers to questions posed. Presents thesis/project work in coherent manner.	Appropriate use of technology during presentation (where relevant). Presentation of thesis/project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner.	3

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Integrity/Values						
Clear understanding of and adherence to scientific and professional ethics.	Evidence of transgression of scientific, professional, or academic integrity.	Lack of understanding of scientific and professional ethics. Inadvertent violation of academic-conduct code.	Exhibits incomplete understanding but still complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Exhibits understanding and complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Clear documentation of compliance with all relevant ethical guidelines. Clearly establishes authorship of thesis or project work.	3
Project Management						
Work individually, or as part of team where appropriate, to formulate, analyze, design, and implement a significant thesis, or computing project.	Unable to formulate project idea. No timeline constructed. Fails to meet most timeline goals. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team if applicable.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member if applicable.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member if applicable.	Problem formulation and solution design contain no faults, but retain areas for significant improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member if applicable.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member if applicable.	3
Student strengths: Solid researcher and writer; very organized.						
Student weaknesses: Technical aspects of CS, design, programming etc.						

Student Name: Gene Hasty

Course: COT6931 Semester: Fall/Spring Supervisor: Pinto

Assessment of: ___x___ first semester ___x___ second semester

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Content						
Summarize, compare and evaluate, at an advanced level, concepts, research findings and current theories and models in core content areas of computer science.	Literature review in thesis or project is incomplete and/or omits important research findings or theoretical positions.	Literature review is incomplete and includes excessive discussion of unrelated issues and/or significant errors in content. Assertions are made without adequate support from evidence.	Literature review is brief, with insufficient detail. Unrelated issues are introduced and/or minor errors in content. Assertions made without adequate support from evidence.	Literature review is brief but complete; review focuses only on issues related to question; review is factually correct; assertions are clearly supported with evidence and appropriate use of logic.	Literature review is complete; sufficient detail is provided to support assertions; assertions supported with evidence; includes original and relevant insight or analysis of topic.	3
Identify computing principles and algorithms that are relevant to thesis or project topic and apply them within specific problem domain.	Unable to identify relevant computer science theories or algorithms.	Basic understanding of computing principles. Fails to apply them within specific problem domain.	Basic principles and techniques relevant to project or thesis are included, but some are missing. Fails to develop complete theoretical or design framework for thesis or project.	Provides good computing framework for thesis or project; applies principles and algorithms correctly to problem domain.	Project or thesis is completely grounded in computing theories and techniques. Applies them to problem correctly and clearly establishes their relevance.	4
Critical Thinking						
Evaluate and integrate computer science literature to address specific theory or practical problem. Describe and select appropriate scientific methods to answer question.	No clear research question or project posed. Relevance to existing literature and theory not established. Major errors in choice of research methods or analysis. Conclusions inconsistent with evidence presented.	Project/Question posed is of questionable relevance or has clearly been answered. Question unrelated to existing literature. Errors in choice, execution or interpretation of methods and/or data. Conclusions weakly justified by evidence.	Project is not very innovative. Question has been adequately answered in prior research; no clear rationale for reexamination of question given. Research and methods selected are flawed or inadequately carried out. Conclusions overreach evidence presented.	Meaningful question/project is posed, but may not be fully explicated. Research and methods selected appropriate for project. Conclusions follow logically from evidence presented.	Project addresses question or problem that is meaningfully connected to existing literature and theory. Student provides clear explanation of relationship. Research methods selected are appropriate for project. Conclusions follow logically from evidence presented.	4

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Communication						
Written: Organization and logic	No logical order to information provided.	Weak organization; sentences rambling; ideas repeated.	Minor problems of organization or logic; Needs work on creating transitions between ideas.	Presentation is organized, but does not present clear argument for research position/project rationale.	Clear and logical presentation; good development of argument/project rationale; transitions made clearly and smoothly.	4
Mechanics of writing (spelling, punctuation, grammar, clarity of writing)	Problems with mechanics of language serious enough to interfere with effective communication. Frequent errors in punctuation, spelling, sentence structure, etc.	Major problems with mechanics of language; Awkward sentence construction; poor or absent transitions; frequently difficult to understand.	Frequent problems with mechanics of language; Occasional awkward sentences and poor transitions reduce readability.	Infrequent and minor mechanical problems; Errors do not impair readability.	Clear, readable writing. Good use of transitions; no problems with spelling, punctuation, or grammar.	3
Use of relevant APA Style (Title page, citations & references, use of language, etc.)	No evidence APA style used.	Minimal use of APA style; frequent errors in all aspects of APA style.	Adequate use of APA style, but frequent errors in citations & references.	Infrequent errors in APA style; errors involve minor aspects of APA style – no errors in style for citations & references.	All relevant aspects of APA style used effectively and correctly.	3
Oral: Communication skills during presentation	Unable to respond effectively to questions posed by committee members.	Answers to several questions incomplete; needs frequent assistance from thesis/project advisor.	Answers to few questions incomplete; needs occasional assistance from thesis/project advisor.	Provides complete answers to questions posed. Presents thesis/project work in coherent manner.	Appropriate use of technology during presentation (where relevant). Presentation of thesis/project work is clear and well-organized. Responds to questions in poised, articulate, and professional manner.	4

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Integrity/Values						
Clear understanding of and adherence to scientific and professional ethics.	Evidence of transgression of scientific, professional, or academic integrity.	Lack of understanding of scientific and professional ethics. Inadvertent violation of academic-conduct code.	Exhibits incomplete understanding but still complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Exhibits understanding and complies with principles of scientific, professional and/or academic integrity. Adherence is poorly documented.	Clear documentation of compliance with all relevant ethical guidelines. Clearly establishes authorship of thesis or project work.	3
Project Management						
Work individually, or as part of team where appropriate, to formulate, analyze, design, and implement a significant thesis, or computing project.	Unable to formulate project idea. No timeline constructed. Fails to meet most timeline goals. Implementation falls below expected minimum standards. Demonstrates lack of ability to function as part of team if applicable.	Problem formulation and solution contain numerous faults. Significant milestones in timeline not met. Implementation minimally meets expected standards. Unable to work effectively as team member if applicable.	Problem formulation and solution design contain some faults. Some milestones in timeline not met. Implementation exceeds minimal requirements but does not represent significant computing project. Demonstrates marginal effectiveness as team member if applicable.	Problem formulation and solution design contain no faults, but retain areas for significant improvement. Major milestones in timeline are met within acceptable timeframe. Implementation represents significant computing project with minor mistakes. Demonstrates effectiveness as team member if applicable.	Well-formulated, designed, and implemented project. Completes project according to timeline. Implementation represents significant computing project. Demonstrates effectiveness as team member if applicable.	4
Student strengths: Great Software Engineer, project well thought out, organized, well researched in practical aspect of project.						
Student weaknesses: Although acceptable, could use some practice in the research aspects of theoretical part of the project.						

Appendix C: General Education Assessment Data for 2007 – 2008

General Education Assessment Data and Rubric Fall 2007 – Spring 2008

This appendix includes assessment data collected from our General Education course, and the grading rubric developed and used for assessment.

Fall 2007 and Spring 2008:

CGS2060 – Excursions in Computing

Computer Science Rubric for Assessment of ALP Based on Graduate Thesis or Project

Student Learning Outcomes Assessment Worksheet

**Department of Computer Science
University of West Florida**

27. Course name and number: CGS2060 Semester: Fall 2007
28. Coordinator: Sharon Simmons Instructor(s): Sharon Simmons
29. Total course enrollment: 40 (no withdrawals)
30. Number of sections of the course: 2
31. For each student learning outcome, describe how that outcome was assessed (assessment measure), and indicate percentage of students who exceeded, met, or failed to meet expectations.

Student Learning Outcome	Assessment of Outcome	Exceeds Expectations	Meets Expectations	Fails to Meet Expectations
PM-1: Content is complete	Oral presentation and PowerPoint	8/40	30/40	2/40
PM-2: Delivers product on time	Delivery of presentation	33/40	5/40	2/40
Speaking-1: Organization and logic of message	Oral presentation and PowerPoint	27/40	11/40	2/40
Speaking-2: Clarity of message	Oral presentation and PowerPoint	30/40	8/40	2/40

Computer Science Rubric for Assessment of ALP Based on Graduate Thesis or Project

32. Recommendations to improve or update student learning outcomes or assessment measures, if any: More thorough explanation of content expectations.

Course Coordinator's Signature

Date

Computer Science Rubric for Assessment of ALP Based on Graduate Thesis or Project

Student Learning Outcomes Assessment Worksheet – Academic Foundations

Department of Computer Science
University of West Florida

Course name and number: CGS2060: Excursions in Computing Semester: Spring 2008

Instructor: Dennis Edwards Coordinator: Sharon Simmons
 (for multiple-section courses)

Number of sections of the course: 1

Initial course enrollment: 37 Final course enrollment: 35

For each student learning outcome, describe how that outcome was assessed (assessment measure), and indicate number and percentage of students who exceeded, met, or failed to meet expectations. Use the number of students who completed the course to calculate the percentages.

Student Learning Outcome	Assessment of Outcome	Exceeds Expectations	Meets Expectations	Fails to Meet Expectations
PM-1: Content is complete	Final presentation with required elements	62%	15%	23%
PM-2: Delivers product on time	Final presentation with allotted time	26%	18%	56%
Speaking-1: Organization and logic of message	Final presentation	82%	3%	15%
Speaking-2: Clarity of message	Final presentation	29%	35%	36%

Recommendations to improve or update student learning outcomes or assessment measures, if any: See attached sheet

Instructor's Signature

Date

Computer Science Rubric for Assessment of ALP Based on Graduate Thesis or Project

Recommendations

- Course
 - Include an “Attendance” item in the course grade calculation
 - Deduct points for excessive missed lectures – Allow some for “personal days”
 - No excuses needed or excepted
 - Require attendance during guest speakers and student presentations
- Assignments
 - Include an additional assignment to practice “What to leave in and what to leave out” of presentations
 - Deductions for inclusion of irrelevant information / images/ sounds/ etc.
 - Deductions for excessive use of animation and other “cute” items
- Presentations
 - Provide list of required topics (all are required)
 - Career choice; Brief overview of Career and what specifically they do
 - How computers are used in career of choice
 - Not just PCs
 - Include specialized hardware & embedded devices
 - How do computers help do the job?
 - Are computers required, helpful, or just convenient?
 - What software is needed?
 - Explicitly show how software will meet a stated need
 - Provide package names, specifications, hardware requirements and cost
 - What hardware is needed to run software?
 - Include peripherals such as printers, scanners, etc.
 - Provide specifications and cost
 - Provide three systems: minimally configured (just enough to do the job), dream system (if money were no object), and compromise system (nice, but frugal)
 - Describe what capabilities are added to make minimal system the dream system and how they could be used
 - Provide example list of suggested additional topics (at least one required)
 - What advances in software technology would be useful to this career?
 - What advances in hardware technology would be useful in this career?
 - What are the ethical considerations to the use of computers in this career?
 - Stress timing constraints and press students to rehearse presentation timing
- Evaluation rubric
 - Replace qualitative terms with quantitative values
 - Few → “less than 3”
 - Many → “more than 30”

Rubric for Assessment of Student Presentations

Student Name: _____

Course: **CGS2060: Excursions in Computing**

Semester: _____

Criteria & Points Assigned	Missing	Unacceptable	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
	0	1	2	3	4	
Project Management						
Content completeness	Presentation does not meet stated criteria or does not include any of the required items	Presentation contains few of the required items or has many omissions of information	Presentation contains most required items with only some omissions of information. Additional information would have clarified aspects of the presentation	Presentation contains all required items with only slight omissions of information. Additional information would have clarified aspects of the presentation	Presentation contains all required items. No obvious omissions of information	
On-time product delivery	Presentation was more than 120 seconds over or under the timing restrictions	Presentation was more than 90 seconds over or under the timing restrictions	Presentation was more than 60 seconds over or under the timing restrictions	Presentation was more than 30 seconds over or under the timing restrictions	Presentation was delivered within the timing restrictions	
Speaking						
Organization and logic	Presentation lacked a logical pattern and the message was presented as a collection of disorganized items	Presentation either lacked a logical pattern or the message was presented as a collection of disorganized items	Presentation had underlying flow, but did not stick to logical pattern. Message was presented in disorganized form with occasional moments of organization	Presentation followed a pattern with only slight deviations from logical order. Message was presented in organized form with few instances of divergence from the organizational structure	Presentation followed a logical pattern from beginning to end. Message was presented in organized form with no divergence from the organizational structure	
Clarity	Student was either not heard or not understood by audience members. Self-questioning was the standard. Audience questions could not be answered or were answered ungraciously	Student was often not easily heard or understood by most audience members. Many instances of self-questioning were noted. Audience questions were either answered incorrectly or ungraciously	Student was sometimes not easily heard or understood by many audience members. Some instances of self-questioning were noted. Audience questions were either answered incorrectly or ungraciously	Student was easily heard and understood by most audience members. Few instances of self-questioning were noted. Most audience questions were answered graciously and with authority	Student was easily heard and understood by all audience members. No instances of self-questioning were noted. Audience questions were answered graciously and with authority	

Required Content: Chosen career (in major or dream job), use of computers in career, hardware and software for career

06/27/2008