Degree Program Student Learning Report (rev. 7/14)

Fall 2014 – Spring 2015

The Department of Applied Technology in the School of Business & Technology

Game Development, B.S.

Effectively assessing a degree program should address a number of factors:

1) Valid student learning outcomes should be clearly articulated;
2) Valid assessment measures should be used, consistent with the standards of professional practice;
3) There should be evidence that assessment data are being used by faculty to make necessary instructional or assessment changes; and there should be evidence that instructional or assessment changes are being implemented to improve student learning.

PART 1 (A & B)

Relationship of Degree Program Learning Outcomes to Departmental and University Missions

A. Clearly state the school, department and degree program missions.

University Mission	School Mission	Department Mission	Degree Program Mission
Our mission is to ensure students develop the skills and knowledge required to achieve professional and personal goals in dynamic local and global communities.	The mission of the School of Business and Technology is to prepare students to compete and perform successfully in diverse careers in business, technology, sport management, and related fields by providing a quality	The mission of the Department of Applied Technology is to support the School of Business and Technology and RSU in their mission to prepare students to achieve professional and personal goals in dynamic local and global	To provide students with the highest possible quality education in the areas of game development and general education

University Mission	School Mission	Department Mission	Degree Program Mission
	academic experience. Undergraduate programs and their respective curricula will remain responsive to social, economic, and technical developments.	communities. Specifically, the organizational structure of the Department of Technology provides the technology course support for the Associate in Science and Associate in Applied Science degrees, as well as the Bachelor of Science in Business Information Technology, the Bachelor of Science in Game Development, and the Bachelor of Technology in Applied Technology. As indicated, many of the programs offered by the Department of Applied Technology are available online.	

B. Clearly state school purposes, department purposes and degree program student learning outcomes. Align student learning outcomes with their appropriate school and department purposes, and these outcomes and purposes with their appropriate university commitments.

University Commitments	School Purposes	Department Purposes	Student Learning Outcomes
To provide quality associate, baccalaureate, and graduate degree opportunities and educational experiences which foster student excellence in oral and written communications, scientific reasoning and critical and creative thinking.	The SBT provides this support by offering two-year and four-year educational opportunities in business, sport management, and technology.	To provide the technology course support for the AS in Computer Science and AAS in Applied Technology degrees as well as BS in Business Information Technology, BS in Game Development, and BT in Applied Technology.	Students will be able to utilize current professional 2-D and 3-D software to produce high-quality virtual worlds for animated games. Students will demonstrate skill in creating large scale computer graphics programs.
To promote an atmosphere of academic and intellectual freedom and respect for diverse expression	The associate and baccalaureate degrees are taught using a large array of innovative methods,		Students will express their satisfaction (or dissatisfaction) with, and offer suggestions on how to

University Commitments	School Purposes	Department Purposes	Student Learning Outcomes
in an environment of physical safety that is supportive of teaching and learning.	including regular classes, online courses, and compressed video.		improve the degree program.
To provide a general liberal arts education that supports specialized academic program sand prepares students for lifelong learning and service in a diverse society.	To prepare students to compete and perform successfully in diverse careers in business, technology, sport management, and related fields by providing a quality academic experience.	To provide the student with a bachelor-level education focused on preparing the student to gain employment in the technology field or continue his/her graduate education.	Students will demonstrate their proficiency in programming.
To provide students with a diverse, innovative faculty dedicated to excellence in teaching, scholarly pursuits and continuous improvement of programs.			
To provide university-wide student services, activities and resources that complement academic programs.			
To support and strengthen student, faculty and administrative structures that promote shared governance of the institution.			
To promote and encourage student, faculty, staff and community interaction in a positive academic climate that creates opportunities for cultural, intellectual and personal enrichment for the University and the communities it serves.			

PART 2

Discussion of Instructional Changes Resulting from 2013-2014 Degree Program Student Learning Report

List and discuss all instructional or assessment changes proposed in Part 5 of last year's Degree Program Student Learning Report, whether implemented or not. Any other changes or assessment activities from last year, but not mentioned in last year's report, should be discussed here as well. Emphasis should be placed on student learning and considerations such as course improvements, the assessment process, and the budget. If no changes were planned or implemented, simply state "No changes were planned or implemented."

Instructional or Assessment Changes	Changes Implemented (Y/N)	Impact of Changes on Degree Program Curriculum or Budget
SL1 :The student animation project will be evaluated multiple times as it progresses in CS 3353.	Y	Regular inspections of the student's work were conducted. This might be more difficult in larger classes.
SL 2:. Multiple surveys of the students' projects will be conducted throughout CS 4504.	N	Course was not offered.
SL3: Replace the single percentile ranking score with a category based standard.	N	Course was not offered.

PART 3

Discussion About the University Assessment Committee's 2013-2014 Peer Review Report

The University Assessment Committee in its Degree Program Peer Review Report provided feedback and recommendations for improvement in assessment. List or accurately summarize all feedback and recommendations from the committee, and state whether they were implemented or

will be implemented at a future date. If they were not or will not be implemented, please explain why. If no changes were recommended last year, simply state “No changes were recommended.”

Feedback and Recommended Changes from the University Assessment Committee	Suggestions Implemented (Y/N)	Changes that Were or Will Be Implemented, or Rationale for Changes that Were Not Implemented
Trend data should be displayed when they’re available. Whereas this cannot be done in every case, there are examples of historical data (e.g., BTAT exit exam) which could have been displayed. Also, it would be helpful to see data aggregated into common categories, such as standard percentage ranges, rather than reporting raw data.	Y	The results from SL1 from last year are reported.

PART 4

Analysis of Evidence of Student Learning Outcomes

For all student learning outcomes (as listed in Part 1 B above), describe the assessment measures and performance standards used, as well as the sampling methods and sample sizes. For each measure, document the results of the activity measured and draw relevant conclusions related to strengths and weaknesses of their performance.

A. Student Learning Outcomes	B. Assessment Measures	C. Performance Standards	D. Sampling Methods	E. Sample Size (N)	F. Results	G. Conclusions	H. Performance Standards Met (Y/N)
1. Students will be able to utilize current professional 2-D and 3-D software to	In CS 3733, students will complete a large 3D software project	In CS 3733 100% of the BS GD students will be able to complete a	All GD taking CS 3733.	1	In Class Score: 82% Previous year: 90.5%	Because of low enrollment, the class was offered as a directed study course which requires more discipline by the	Y

A. Student Learning Outcomes	B. Assessment Measures	C. Performance Standards	D. Sampling Methods	E. Sample Size (N)	F. Results	G. Conclusions	H. Performance Standards Met (Y/N)
produce high-quality virtual worlds for animated games	requiring the use of the industry standard OpenGL API. This project will be evaluated by the instructor. In CS 3553, students will complete an animation of a 3D world of their own creation.	large 3D project with an accuracy of 86%. In CS 3553, 100% of BS GD students will complete an animation of a 3D world of their own creation with an accuracy of 80%	All GD students taking CS 3553	0	Course was not offered.	students. The single students successfully completed his games using the OpenGL API in C++ although the score was lower than previous years. None	N
2. Students will demonstrate skill in creating large scale computer graphics programs.	Students will complete their Senior Game Project which will be evaluated by the general public.	75% of the projects would be rated at an overall score of 75% approval using a Likert survey. Questions were on 1) Creativity, 2) Artwork, 3)	All GD students in CS4503	0	Course was not offered.	None	N

A. Student Learning Outcomes	B. Assessment Measures	C. Performance Standards	D. Sampling Methods	E. Sample Size (N)	F. Results	G. Conclusions	H. Performance Standards Met (Y/N)
		Controls & Movement, 4) Puzzles, 5) Overall Enjoyment					
3. Students will demonstrate their proficiency in programming	The ETS Major Field Test in Computer Science will be given to all students enrolled in the Capstone CS4504.	50% of the students will score at the 25 percentile level.	All GD students in CS4503	0	Course was not offered.	None	N
4. Students will express their satisfaction (or dissatisfaction) with, and offer suggestions on how to improve the degree program.	Survey will be given to all graduating GD students.	Students will rate the program at an average of 4.0/5.0	All GD students in CS4503	0	Course was not offered.	None	N

PART 5

Proposed Instructional Changes Based on Conclusions Drawn from Evidence Presented Above

State any proposed instructional or assessment changes to be implemented for the next academic year. They should be based on conclusions reported in Part 4 (above) or on informal activities, such as faculty meetings and discussions, conferences, pilot projects, textbook adoption, new course proposals, curriculum modifications, etc. Explain the rationale for these changes and how they will impact student learning and other considerations, such as curriculum, degree plan, assessment process, or budget. If no changes are planned, simply state "No changes are planned."

Student Learning Outcomes	Instructional or Assessment Changes	Rationale for Changes	Impact of Planned Changes on Student Learning and Other Considerations.
SL 2	Allow the use of game engines to be use be used in Senior Projects	When a decline in the number of seniors, there are few opportunities for students to work as part of larger programming groups. Working singly or in groups of two limits the scope of the game projects. By using standard game engine tools like Unity and Unreal Engine students will be able to create larger and more detailed games.	Students should be able to create more impressive games in shorter time with a corresponding increase in evaluation of their projects.

PART 6

Shared Pedagogical Insight that Improves Student Learning or Classroom Engagement

(OPTIONAL) If your department or a faculty member has developed a method or technique of teaching that seems especially effective in improving student learning or student engagement in the classroom, please provide a brief description below. More detail can be communicated during the face to face peer review session.

Description

Description

PART 7 (A & B)

Assessment Measures and Faculty Participation

A. Assessment Measures:

1) How many different assessment measures were used? Only 1 of 5 was given

2) List the direct measures (see rubric): Standardized test, programming assignments, animation project and programming projects

3) List the indirect measures (see rubric): Survey

B.

1) Provide the names and signatures of all faculty members who contributed to this report and indicate their respective roles:

Faculty Members	Roles in the Assessment Process (e.g., collect data, analyze data, prepare report, review report, etc.)	Signatures
Dr. Peter Macpherson	Collect data, analyze data, prepare report	On separate sheet

2) Reviewed by:

Titles	Names	Signatures	Date
Department Head	Dr. Roy Gardner	On separate sheet	
Dean	Dr. Susan Willis	On separate sheet	

RUBRIC FOR STUDENT LEARNING STUDENT LEARNING REPORT

1) A. Are the school, department and program missions clearly stated?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
The program, department, and school missions are clearly stated.	The program, department, and school missions are stated, yet exhibit some deficiency (e.g., are partial or brief).	The program, department, and school missions are incomplete and exhibit some deficiency (e.g., are partial or brief).	The program, department, and school missions are not stated.

B. Are student learning outcomes and department purposes aligned with university commitments and school purposes?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
Student learning outcomes and department purposes are aligned with university commitments and school purposes.	Student learning outcomes and department purposes demonstrate some alignment with university commitments and school purposes.	Student learning outcomes and department purposes demonstrate limited alignment with university commitment and school purposes.	Student learning outcomes and department purposes do not demonstrate alignment with university commitment and school purposes.

2) How well did the department incorporate instructional or assessment changes from last year's report or from other assessment activities?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
All planned changes were listed, whether they were implemented or not, and their impact on curriculum or program budget was discussed thoroughly.	Most planned changes were listed, and their status or impact on curriculum or program budget was discussed.	Some planned changes were listed, and their status or impact on curriculum or program budget was not clearly discussed.	No planned changes were listed, and their status or impact on curriculum or program budget was not discussed.

3) Did the department include peer review feedback and provide rationale for implementing or not implementing suggestions?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
All reviewer feedback was listed, and for each suggestion a clear rationale was given for its being implemented or not.	Most reviewer feedback was listed, and for most suggestions a rationale was given for their being implemented or not.	Some reviewer feedback was listed, and for some suggestions a rationale was given for their being implemented or not.	Feedback from reviewers was not included.

4) A. Are the student learning outcomes listed and measurable?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
All student learning outcomes are listed and measurable in student behavioral action verbs (e.g., Bloom's Taxonomy).	Most student learning outcomes are listed and measurable in student behavioral action verbs (e.g., Bloom's Taxonomy).	Some student learning outcomes are listed and measurable in student behavioral action verbs (e.g., Bloom's Taxonomy).	Student learning outcomes are either not listed or not measurable.

B. Are the assessment measures appropriate for the student learning outcomes?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
All assessment measures are appropriate to the student learning outcomes.	Most assessment measures are appropriate to the student learning outcomes.	Some assessment measures are appropriate to the student learning outcomes.	None of the assessment measures are appropriate to the student learning outcomes.

C. Do the performance standards provide a clearly defined threshold at an acceptable level of student performance?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
All performance standards provide a clearly defined threshold at an acceptable level of student performance.	Most performance standards provide a clearly defined threshold at an acceptable level of student performance.	Some of the performance standards provide a clearly defined threshold at an acceptable level of student performance.	No performance standards provide a clearly defined threshold at an acceptable level of student performance.

D. Is the sampling method appropriate for all assessment measures?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
The sampling methodology is appropriate for all assessment measures.	The sampling methodology is appropriate for most assessment measures.	The sampling methodology is appropriate for some assessment measures.	The sampling methodology is appropriate for none of the assessment measures.

E. Is the sample size listed for each assessment measure?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
Sample size was listed for all assessment measures.	Sample size was listed for most assessment measures.	Sample size was listed for some assessment measures.	Sample size was not listed for any assessment measures.

F. How well do the data provide clear and meaningful overview of the results?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
For all student learning outcomes the results were clear, more than a single year's results were included, and meaningful information was given that reveals an overview of student performance.	For most student learning outcomes the results were clear, more than a single year's results were included, and meaningful information was given that reveals an overview of student performance.	For some student learning outcomes the results were clear, more than a single year's results were included, and meaningful information was given that reveals an overview of student performance.	For none of the student learning outcomes were the results clear, more than a single year's results were included, and meaningful information was given that reveals an overview of student performance.

G. Are the conclusions reasonably drawn and significantly related to student learning outcomes?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
All conclusions are reasonably drawn and significantly based on the results and related to the strengths and weaknesses in student performance.	Most conclusions are reasonably drawn and significantly based on the results and related to the strengths and weaknesses in student performance.	Some conclusions are reasonably drawn and significantly based on the results and related to the strengths and weaknesses in student performance.	No conclusions are reasonably drawn and significantly based on the results or related to the strengths and weaknesses in student performance.

H. Does the report indicate whether the performance standards were met?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
Stated for all performance standards.	Stated for most performance standards.	Stated for some performance standards.	Not stated for any performance standard.

5) How well supported is the rationale for making assessment or instructional changes? The justification can be based on conclusions reported in Part 4 or on informal activities, such as faculty meetings and discussions, conferences, pilot projects, textbook adoption, new course proposals, curriculum modifications, etc. Explain the rationale for these changes and how they will impact student learning and other considerations, such as curriculum degree plan, assessment process, or budget.

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
All planned changes are specifically focused on student learning and based on the conclusions. The rationale for planned changes is well grounded and convincingly explained.	Most planned changes are specifically focused on student learning and based on the conclusions. The rationale for planned changes is mostly well grounded and convincingly explained.	Some planned changes are specifically focused on student learning and based on the conclusions. The rationale for planned changes is lacking or is not convincingly explained.	No planned changes are specifically focused on student learning and based on the conclusions. There is no rationale.

6) Did the faculty include at least one teaching technique they believe improves student learning or student engagement in the classroom?

Yes	No		
The faculty has included at least one teaching technique they believe improves student learning or student engagement in the classroom.	The faculty has not included any teaching techniques they believe improve student learning or student engagement in the classroom.		

7) A. How well did the faculty vary the assessment measures?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
Assessment measures vary and include multiple direct measures and at least one indirect measure. The number of measures is	Assessment measures vary, but they are all direct. The number of measures is consistent with those listed.	Assessment measures do not vary or are all indirect. There is some inconsistency in the number of measures recorded and the total	Assessment measures are not all listed or are listed in the wrong category. The total number of measures is not consistent with

consistent with those listed.		listed.	those listed.

B. Does the list of faculty participants clearly describe their role in the assessment process?

4 = Exemplary	3 = Established	2 = Developing	1 = Undeveloped
The faculty role is clearly identified and it is apparent that the majority of the faculty participated in the process. The roles are varied.	The faculty role is identified and it is apparent that the majority of the faculty participated in the process. The roles are not varied.	The faculty roles are not identified. Few faculty participated.	The faculty roles are not identified. Faculty participation is not sufficiently described to make a determination about who participated.

EXPLANATION & EXAMPLES OF DIRECT AND INDIRECT EVIDENCE

DIRECT EVIDENCE of student learning is tangible, visible, self-explanatory evidence of exactly what students have and haven't learned. Examples include:

1) Ratings of student skills by their field experience supervisors.
2) Scores and pass rates on licensure/certification exams or other published tests (e.g. Major Field Tests) that assess key learning outcomes.
3) Capstone experiences such as research projects, presentations, oral defenses, exhibitions, or performances that are scored using a rubric.
4) Written work or performances scored using a rubric.
5) Portfolios of student work.
6) Scores on locally-designed tests such as final examinations in key courses, qualifying examinations, and comprehensive examinations that are accompanied by test blueprints describing what the tests assess.
7) Score gains between entry and exit on published or local tests or writing samples.
8) Employer ratings of the skills of recent graduates.
9) Summaries and analyses of electronic class discussion threads.
10) Student reflections on their values, attitudes, and beliefs, if developing those are intended outcomes of the program.

INDIRECT EVIDENCE provides signs that students are probably learning, but the evidence of exactly what they are leaning is less clear and less convincing. Examples include:

1) Course grades.
2) Assignment grades, if not accompanied by a rubric or scoring guide.

3) For four year programs, admission rates into graduate programs and graduation rates from those programs.
4) For two year programs, admission rates into four-year institutions and graduation rates from those programs.
5) Placement rates of graduates into appropriate career positions and starting salaries.
6) Alumni perceptions of their career responsibilities and satisfaction.
7) Student ratings of their knowledge and skills and reflections on what they have learning over the course of the program.
8) Those questions on end-of-course student evaluations forms that ask about the course rather than the instructor.
9) Student/alumni satisfaction with their learning, collected through surveys, exit interviews, or focus groups
10) Honors, awards, and scholarships earned by students and alumni.

Suskie, L. (2004). *Assessing Student Learning: A Common Sense Guide*. Anker Publishing Company: Bolton, MA