

**BUSINESS
PROGRAM ASSESSMENT
GOALS AND EXPECTATIONS
FALL 2007**

Department Strengths:

- Highly qualified faculty
- Student leadership opportunities incorporating business curriculum
- Wide usage of technology through educational experiences

To maintain strengths:

- Faculty must keep abreast of changing business and economic demands
- Faculty must keep abreast of changing educational demands
- Continuous upgrade of technology
- Participation in our student organization
- Maintain strong community ties and involvement

Areas department/program need improvements:

- Upgrades to physical facility
- Acquire additional input from small business community members regarding needs for
 - Small Business Management
 - Technology consulting
 - Professional training

Resources needed by department:

- Financial – to update educational tools and equipment
- Staffing – to expand programs and offer variety of classes
- Physical – to upgrade facility
- Technology – to continuously upgrade classroom, office, and lab technology – both hardware and software

Obstacles may encounter:

- Staffing and/or specialist to meet teaching needs
- Budget, including priority status in overall college strategic plans

Timeline for implementation:

- 1 year for most
- 1-5 years for larger tasks that require more resources beyond department's control

BUSINESS PROGRAM GOALS 2007-2008:

-based on NJC Assessment Criteria

COMMUNICATIONS

NJC Business students will be able to...

- Give a professional presentation incorporating technology either as an individual or as a group.
- Prepare a professional resume.

CRITICAL THINKING:

NJC Business students will be able to...

- Analyze scenarios using ethical decision making skills
- Analyze financial transactions to determine the financial success of a business

TECHNOLOGY:

NJC Business students will be able to...

- Adapt to current trends in the technology available.
- Give a presentation incorporating technology either as an individual or a group.

GLOBAL AWARENESS/DIVERSITY/ETHICS:

NJC Business students will be able to...

- Analyze scenarios using ethical decision making skills.
- Understand their increasing role in the global business arena

**MATH SCIENCE
ACCUMULATED ASSESSMENTS
FALL 2007**

**Fall 2007
Assessment
Plan** **Goal: 75% of
students will score
75% or higher**

Scientific Method
Knowledge and Application

	Test/Quiz	Lab/Report Writing %	Observation %
AST 101	Eighty eight percent (88%) of the Fall 07 Astronomy 101 class demonstrated proficiency (75% or greater understanding) at using scientific methodology to solve a problem. This was assessed through an essay question on Exam 1.		
GEY 111	One hundred percent (100%) of the Geology 111 class was able to place the steps of the scientific method in correct order.		
CHE 101	Eighty percent (80%) of the Fall 07 Introduction to Chemistry (with lab) and Fundamentals of General Chemistry classes (assessed together) demonstrated proficiency (75% or greater understanding) at using scientific methodology to solve a problem. This was assessed through an essay question on Exam 1.		
Mat 125	The objective was to assess whether students had mastered basic derivative skills involving exponential and natural logarithm functions. Students were also assessed to see if they understood the basic evaluation of simple integrals. To assess this understanding I gave a test over those topics. I have attached the test to this sheet and I have attached a bar graph of the results. Sixteen out of the nineteen students that took the exam		

	<p>received a 75% or better. This was the highest percentage of students passing an exam I had this fall. I would like to do a better job creating the big picture of how integrals connect to area under a curve, but the students seemed to master the process. I think doing a better job with the big picture combined with the time students spent learning the process might create better memory retention, but I did not budget enough time this fall. I was pleased with the overall results. This activity fits in the Scientific Method category.</p>		
MAT 030	<p>Final Exam Culminating assessment for Math 030. Assessment covered student knowledge of the vocabulary, operations and applications of whole numbers, integers, fractions, mixed numbers, decimals, and percents. 80% of the students scored an 80% or higher on this assessment.</p>		
BIO 111 (Animal Behavior Lab)		<p>Students were given a handout containing the following information regarding an isopod lab: introduction, materials list, procedure, general observations, and data tables. After reading this material, they were to determine the lab's independent variable, dependent variable, constants, control, an appropriate hypothesis and conclusion, and accurately depict the data on a graph. Results: 30 of 56 students (53%) completed this task with 75% proficiency</p>	

		<p>Average score of all students is 70%/ (506 total points/ 56 students =9.0/13.0 points = 70%)</p> <p>I believe student improvement will be seen with a second assessment of similar format. Many of these concepts are new to students, and their ability to apply these terms to a lab scenario will improve with use of the terms.</p> <p>Students were given a second handout containing the following information regarding a tadpole lab: introduction, materials and methods, and observation data table. After reading this material they were to determine the lab's independent variable, dependent variable, constants, control, an appropriate hypothesis and conclusion, and accurately depict the data on a graph.</p> <p>Results: 49 of 53 students (92%) completed this task with 75% proficiency Average score of all students is 91%. (627 total points/53 students = 11.8/13.0 points = 91%) Student proficiency improved significantly from the first to second scientific method</p>	
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		assessment. The average score for students increased from 70% to 91%, and the percentage of students to complete the task with 75% proficiency improved from 53% of the class to 92% of the class.	
BIO 211	<p>Students completed Cell Biology Write-up Quiz which included the following:</p> <ul style="list-style-type: none"> Title of the Lab Reference Objective(s) Theoretical Background Materials and Methods Modifications Data and Observations Discussion Conclusions/Applications Bibliography <p>Seven out of seven students scored 75% or higher. One hundred percent of students scored 75% or higher.</p>		
CHE 111	<p>An understanding of the scientific method.</p> <p>Students in CHE 111 (General Chemistry I) were asked to list the steps of the scientific methods and apply them to an everyday example. 75% of the class received a 75% or better on the assignment.</p>		
CHE 111	<p>The ability to use a balance.</p> <p>Students in CHE 111 (General Chemistry I) were evaluated on their ability to correctly operate a top loader balance: turn it on, zero it, tare a piece of weighing paper, and correctly read the mass of a graduated cylinder to</p>		

	three decimal places. 100% of those tested received a 100% score.		
PHY 111			<p>Mastered a basic understanding of the relationship between linear motion and graphical representation of linear motion. To assess this understanding I prepared graphs of linear motion and had them model the motion by walking. The graphs can be provided if needed.</p> <p>80% students correctly modeled motion #1 (distance vs. time) on the first attempt.</p> <p>Motion #2 (velocity vs. time) is always more difficult for students and the activity had to be repeated several times for the students to become proficient.</p>

Use of Technology/Scientific Equipment

Calculator, Lab Equipment, etc.

	Test/Quiz	Lab/Report Writing %	Observation %
BIO 204			Technique quiz to inoculate broth to broth. 100% of students scored 90% or higher when observed. Students had to demonstrate aseptic technique

			when transferring a microbial culture during lab.
BIO 111	•		<p>Used the Microscope Quiz to evaluate student's ability to properly use and store a compound light microscope. Approximately 79% of the students performed this task with 75% proficiency. They were quizzed on the following.</p> <p>Focusing the microscope:</p> <ul style="list-style-type: none"> • Proper positioning of microscope on the table top • Proper placement of the slide on the stage while in its lowest position • Proper use of the mechanical stage knobs to center the slide under the beam of

			<p>light</p> <ul style="list-style-type: none">• Stage in highest position before viewing object through ocular lens• Focus image under low power objective lens• Use of coarse adjustment knob• Focus image under high power objective lens <p>Storage of microscope:</p> <ul style="list-style-type: none">• Turn off power• Lock low power objective lens in place• Center mechanical stage• Stage in lowest position• Wrap cord• Apply dust cover• Use two hands to
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			put away (arm and base)
MAT 121	<p>The objective was for students to develop a technique to solve polynomial equations that are third degree or higher. The activity involves using graphing calculators and an understanding of graphs to determine rational answers. Once a student has used technology to discover all the rational answers they use synthetic division and algebra techniques to finish solving the polynomial equations. Students also needed to have a basic understanding of graphs to know if the graph on the calculator is realistic. To assess this understanding I gave a quiz over solving polynomials and creating rough sketches of graphs. I have attached the quiz to this sheet and I have attached a bar graph of the results. Twenty-four out of the thirty-one students that took the exam received a 75% or better. Students really did well mixing the graphing calculator with the algebra techniques to solve these problems. I am confident that I will use the same techniques to teach the topic again. I could improve the activity by making sure that all students have calculators before starting and bringing in extras for those that don't. That way they can be more active while learning the material.</p>		
BIO 201	<p>Students labeled the parts of a microscope. Of 28 students total, 4 students were below 75%. 24/28 students were 75% or higher. 85.7% of class was 75% or higher on the microscope quiz.</p>		

PHY 111			<p>This was similar to assessment 1 except the motion graphs were modeled by moving a card in front of a sonic range finder. 90% of the students successfully modeled the motion after they developed an understanding of the equipment and how it worked. I believe these activities have improved students understanding of the topic as compared to years when the activities were not done.</p>

Scientific Analysis

3-Ring Binder, Class Assignments, etc.

	Test/Quiz	Lab/Report Writing %	Observation %
MAT 030	Binder Project		Project to help students become organized and keep study materials easily accessible. 86% of students scored 82% or higher. Students had to demonstrate organizational skills by arranging all class materials neatly into a 3-ring binder.
BIO 204		82% of Microbiology students determined identity of an unknown bacteria to genus level by analyzing data from numerous lab tests. The data was obtained via their own experiments & represented in numerous tables.	