

## FLORIDA STATE COLLEGE AT JACKSONVILLE

## COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER:	BSC 1005
COURSE TITLE:	Life in Its Biological Environment
PREREQUISITE(S):	None
COREQUISITE(S):	None
CREDIT HOURS:	3
CONTACT HOURS/WEEK:	3
CONTACT HOUR BREAKDOWN:	
Lecture/Discussion:	3
Laboratory:	
Other _____:	
FACULTY WORKLOAD POINTS:	3
STANDARDIZED CLASS SIZE ALLOCATION:	35

## CATALOG COURSE DESCRIPTION:

This course is an introduction to biological structure, function processes, principles and concepts. This course fulfills the General Education Requirement.

## SUGGESTED TEXT(S):

Belk and Borden. Biology: Science for Life. Latest edition.  
Pearson, Prentice-Hall

Biology: Concepts and Connections, 3<sup>rd</sup> Edition, Campbell,  
N.A., Mitchell and Reece, J.A. Benjamin Cummings, 2001.

Essential Biology, Campbell, N.A. and Reece, J.A. Benjamin  
Cummings, 2001

The Living World, Johnson. McGraw-Hill, 2002.

SUGGESTED TEXT(S):

Starr, Cecie. Biology: Concepts and Applications, latest edition

IMPLEMENTATION DATE:

November 14, 1987

REVIEW OR MODIFICATION DATE:

Fall Term, 2002 (20031)

Fall Term, 2006 (20071)

Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Introduction to Life Processes	2
II. The Chemistry of Living Things	6
A. Basic Principles of Chemistry	(2)
B. Inorganic Molecules	(2)
1. Water	
2. Oxygen	
3. Carbon Dioxide	
4. Electrolytes	
C. Organic Groups	(2)
1. Carbohydrates	
2. Lipids	
3. Proteins	
4. Nucleic Acids	
III. The Cellular Basis of Life	9
A. Prokaryotes vs. Eukaryotes	(1)
B. Eukaryotic Cell Structure and Function	(4)
1. Cell Membrane	
2. Cell Organelles and Inclusions	
3. Nucleus and Nuclear Division	
C. Energy Transformation	(4)
1. Photosynthesis	
2. Respiration	
IV. Genetics	11
A. Cell Division Processes	(3)
B. Mendelian Genetics	(5)
1. Basic Principles	
2. Human Inheritance	
C. Molecular Genetics	(3)
1. DNA Structure and Replication	
2. Protein Synthesis	
3. Mutations	
V. Evolution	6
A. History	
B. Processes in Populations, Microevolution	
C. Macroevolution, Geologic Time Scale	
VI. Current Events or Emphasis at the Discretion Of the Professor	11



Course Prefix and Number: BSC 1005	Semester Credit Hours: 3
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Course Title: Life in its Biological Environment
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Discipline Area for the Course:		
<input type="checkbox"/> Communication	<input type="checkbox"/> Mathematics	<input type="checkbox"/> Social & Behavioral Sciences
<input type="checkbox"/> Humanities & Visual/Performing Arts	<input checked="" type="checkbox"/> Natural Sciences	<input type="checkbox"/> Other-Designated Option

INTELLECTUAL COMPETENCIES:				
<input checked="" type="checkbox"/> Reading	<input checked="" type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input checked="" type="checkbox"/> Quantitative Skills	<input checked="" type="checkbox"/> Scientific Method of Inquiry
<input checked="" type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input checked="" type="checkbox"/> Information Literacy	<input checked="" type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively

KNOWLEDGE	Primary	Secondary	N/A	VALUE	Primary	Secondary	N/A
A. Global and Historical Knowledge & Understanding				Intellectual honesty	<input checked="" type="checkbox"/>		
• Comprehends a general knowledge of the nature, origins and contributions of major civilizations		<input checked="" type="checkbox"/>		Curiosity and openness to new ideas	<input checked="" type="checkbox"/>		
• Comprehends the workings and interrelations of personal, business and government economies			<input checked="" type="checkbox"/>	Recognition of one's own creative potential	<input checked="" type="checkbox"/>		
• Comprehends political, social and economic systems and their effects upon society		<input checked="" type="checkbox"/>		Acceptance of and respect for differences among people and cultures	<input checked="" type="checkbox"/>		
B. Cultural and Aesthetic Knowledge and Understanding							
• Comprehends the contributions of the arts and humanities to the human experience on a personal, national or global level			<input checked="" type="checkbox"/>	Civic Engagement	<input checked="" type="checkbox"/>		
• Comprehends the historical development of the arts and sciences		<input checked="" type="checkbox"/>		Lifelong Learning	<input checked="" type="checkbox"/>		
• Comprehends religious and cultural systems and their effects upon society		<input checked="" type="checkbox"/>					
C. Human Awareness and Understanding							
• Comprehends the dynamics of human behavior and the process of increasing self-awareness, growth and development	<input checked="" type="checkbox"/>						
• Comprehends the stages of human development and the dynamics of human relationships in diverse cultures	<input checked="" type="checkbox"/>						
• Comprehends the factors that promote physical, mental and social well-being		<input checked="" type="checkbox"/>					
D. Mathematics, Science and Technology							
• Comprehends the basic concepts and investigative processes of the natural sciences	<input checked="" type="checkbox"/>						
• Comprehends the breadth, significance and development of the mathematical sciences	<input checked="" type="checkbox"/>						
• Comprehends the ways science and technology have shaped and continue to reshape human cultures and the environment	<input checked="" type="checkbox"/>						

Name of Person Completing This Form: Mandu Itiat  
 Signature: \_\_\_\_\_ Date: 12/10/04



**Florida State College  
At Jacksonville**

**General Education Review Checksheet  
and Learning Outcomes**

Course Prefix and Number: <b>BSC 1005</b>	Semester Credit Hours: <b>3</b>
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Course Title: <b>Life in its Biological Environment</b>
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Discipline Area for the Course:		
<input type="checkbox"/> <b>Communication</b>	<input type="checkbox"/> <b>Mathematics</b>	<input type="checkbox"/> <b>Social &amp; Behavioral Sciences</b>
<input type="checkbox"/> <b>Humanities &amp; Visual/Performing Arts</b>	<input checked="" type="checkbox"/> <b>Natural Sciences</b>	<input type="checkbox"/> <b>Other-Designated Option</b>

INTELLECTUAL COMPETENCIES:					
<input checked="" type="checkbox"/> <b>Reading</b>	<input checked="" type="checkbox"/> <b>Speaking</b>	<input checked="" type="checkbox"/> <b>Critical Analysis</b>	<input checked="" type="checkbox"/> <b>Quantitative Skills</b>	<input checked="" type="checkbox"/> <b>Scientific Method of Inquiry</b>	
<input checked="" type="checkbox"/> <b>Writing</b>	<input checked="" type="checkbox"/> <b>Listening</b>	<input checked="" type="checkbox"/> <b>Information Literacy</b>	<input checked="" type="checkbox"/> <b>Ethical Judgment</b>	<input checked="" type="checkbox"/> <b>Working Collaboratively</b>	

Learning Outcomes		Method Of Assessment
1	Explain and apply major concepts in general biology.	Written tests, reports and/or use of equipment to demonstrate student competency in field.
2	Demonstrate knowledge of scientific method.	Formulate problem, make observations, derive and test hypothesis and make conclusions.
3	Communicate scientific ideas through oral or written assignments.	Written reports and/or oral presentations demonstrate ability to communicate scientific ideas.
4	Interpret scientific models such as formulas, graphs, tables and schematics, draw inferences from them and recognize their limitations.	Written reports and/or written tests demonstrate student competency in the application of scientific knowledge.
5	Demonstrate problem solving methods in situations that are encountered outside of the classroom.	Students use demonstrations, group discussions, written tests, research projects and/or field experiences to illustrate competence in recognizing and evaluating various scientific processes.

Name of Person Completing This Form: Mandu Itiat

Signature: \_\_\_\_\_ Date: 12/10/2004