



MGMS 7402 – Life Science for Middle School Teachers

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SECTION 1: COURSE OVERVIEW

Text: Johnson & Losos (2008). Essentials of the Living World, 2nd Edition
(ISBN #139780073309354)

Course Description:

This is a life science course for middle school teachers with special emphasis on ecology, biomes, classification, phylogenetic trees, evolution and natural selection. This course will include a study of the biosphere, biochemistry, genetics, evolutionary biology and basic biological processes. Special emphasis will be made on the Georgia Performance Standards relevant to the middle grades classroom.

SECTION 2: COURSE STANDARDS AND EXPECTATIONS

Course Objectives:

- (1) Provide Master Teacher candidates with the content necessary to present life science topics at the Middle Grades level.
- (2) Apply the content through on-line lab explorations and simulations.
- (3) Develop an understanding of life processes and environmental principles related to ecosystems, energy flow in living systems, the evolution of life and diversity.
- (4) Analyze the Georgia Performance Standards relevant to the middle grades classroom.

General Expectations:

North Georgia College and State University is committed to the full inclusion of individuals with disabilities and the principal of individual rights and responsibilities. To that end, the policies and procedures of NGCSU reasonably ensure that a person with a disability is not, on the basis of that disability, denied full and equal access to and the enjoyment of academic programs and co-curricular activities or otherwise is subjected to discrimination in such programs and activities.

SECTION 3: COURSE INFORMATION

Accommodation for Students with Disabilities:

The policies for access by individuals with disabilities at NGCSU are designed to ensure full compliance with all pertinent federal and state legislation, specifically to include Section 504 of the Rehabilitation Act of 1973 and the Americans with Disability Act of 1990.

To receive disability accommodations, the student should contact the Coordinator of Disability Resources, Office of Academic Support Programs, Room 207 Barnes Hall. Approval of reasonable accommodations will be made on a case- by- case basis.

Academic Integrity Policy:

All students are expected to conduct themselves according to the NGCSU codes governing student conduct and academic integrity. Cheating or plagiarism will result in a grade of WF. Students may not submit work completed for other classes without written permission of the professor. Suspected violations of the academic integrity policy will be referred to the Academic Integrity Council. Research papers must be typed. Students should make copies of all assignments they wish to keep prior to submission for grading. The original document should be submitted for grading. Late assignments carry a penalty of 10% per day late. Should a student choose to withdraw from the course it is that student's responsibility to complete the withdrawal process. Student who cease attending class without formally withdrawing receive a grade of WF for the course. Students with two or more absences may receive a grade of WF.

Grades of I (Incomplete) are awarded only in cases of serious illness and other significant non-academic circumstances. The instructor reserves the right to make the final decision with regard to granting a grade of "I".

Multicultural/Global Component:

Multicultural/global education develops the knowledge, skills, and attitudes that are the basis for decision making and participation in a world characterized by cultural pluralism, interconnectedness, and international economic competition. Multicultural/global approaches to education recognize that teachers must understand the complexity of globalization and develop skills in cross-cultural interaction if they are to support the development of effective citizens in a pluralistic and interdependent world. Cross-cultural understanding, respectful behavior and communication, open-mindedness, anticipation of complexity, resistance to stereotyping or derision of cultural differences and perspectives, knowledge, and appreciation of other peoples' points of view--are essential in the development of a global perspective. Teachers in particular bear significant responsibility as a source of powerful influence in the lives of children and youth to challenge bias in thinking, behavior, curriculum and assessment. NGCSU preservice and inservice teachers communicate positively and respectfully with individuals without regard to disability status, socioeconomic, cultural or language background.

SECTION 4: COURSE OUTLINE AND ASSESSMENTS

SCHEDULE OF TOPICS

WEEK	TOPIC
1	Introduction
2	The Study of Life
3	The Chemistry of Life
4	Cells: The Building Blocks of Life
5	Energy and the Cell - Part I
6	Energy and the Cell – Part II
7	Cell Division and Reproduction
8	Foundations of Genetics
9	Modern Genetics
10	Modern Genetics – Part II
11	Populations and Communities
12	Ecosystems
13	Habitats and Biomes
14	Evolution
15	The Diversity of Life Global Climate Change
16	

ASSESSMENT

Your grade in this course will depend on a number of factors. The percentages for each area of evaluation are listed below. The instructor reserves the right to amend the evaluation topics and percentages with advance notice provided to the students. There will not be any bonus awarded in this class. The penalty for late work will be 20% off for each day late.

Assignment Category	% of Grade
Weekly Content Quiz	15
Content to Classroom Journal	10
Graded Assignments	15
Unit Tests	40
Final Project	20

WEEKLY CONTENT QUIZ

There will be a content quiz at the end of each weekly session. Questions will be derived from the weekly study/reading guide, readings, and activities posted for each weekly session. Format may include, but is not limited to multiple choice, completion, problems, and essay questions. Quizzes will have time limits, will be open notes, and will occur on Sunday evenings.

CONTENT TO CLASSROOM JOURNAL

Students will be reflecting on how the content learned during a weekly unit is currently covered in their own classroom and students will describe how their learning from this course will be transferred to their own classrooms.

GRADED ASSIGNMENTS

During Weekly Sessions, there may be one or more graded assignments to be completed. These are often ways to monitor your own progress in that week's lesson.

UNIT TESTS

There will be 4-5 tests covering multiple sessions/weeks of content. The format may include, but is not limited to multiple choice, completion, problem solving, and essay questions. The Unit Tests will have time limits, will be open note, and will occur on Sunday evenings.

FINAL PROJECT

Students will assemble a multi-day lesson plan with activities and labs that specifically demonstrate how the content learned in MGMS 7402 will be applied in your middle grades classroom. Specific details about the project will be provided within the first few weeks of class.

Appendix:
Examples of course objectives and assessment alignment

1. Additional information for graduate level courses:

Please ensure that graduate level courses have expressed rigorous demands for reading and production of research in the form of literature reviews and/or action research projects. Graduate courses must be clearly differentiated from undergraduate courses in this regard.

2. Examples of statements of course objectives and assessments – Thank you Dr. Bellon!

Be sure to include one more column that addresses GSTEP. Use the BASIC level for undergrad and the ADVANCED level standards for grads.

Targeted Standards & Course Objectives

National Middle School Association Standards			
1. Middle level masters candidates understand and analyze the major concepts, principles, theories, and research related to young adolescent development, and they apply that knowledge in their practice.			
2. Middle level masters candidates understand and analyze the major concepts, principles, theories, and research underlying the philosophical foundations and organizational components of highly effective middle level schools, and they apply that knowledge in their practice.			
Course Objectives	CF Roles	CF- Competencies	Standards NMSA

Knowledge

1. The middle level masters candidate demonstrates an understanding of the research that underpins adolescent development. Based on scholarly literature, they discriminate among the best practices that promote the positive development of early adolescence.	F L	Individual Differences Professional Leadership Research/Evaluation	1.K1 1.K3 1.K4 1.K5 2.K4
2. The middle level masters candidate demonstrates an understanding of how health and sexuality issues impact the lives of adolescents as well as the implications of media portrayal of adolescents.	F L	Individual Differences Professional Leadership	1.K2 1.K7
3. The middle level masters candidate demonstrates an understanding of the research that underpins the philosophical/historical foundations of developmentally responsive middle level schools. Based on scholarly literature, they discriminate among the best school organizational practices including teaming and flexible use of instructional time.	L	Ethical Perspectives Professional Leadership Research/Evaluation	1.K6 2.K1 2.K2

Performance

4. The middle level masters candidate works to share their expanding knowledge of early adolescent development and philosophical/historical foundations within a community wider than their own classroom.	D, L	Research/Evaluation Professional Leadership Communication/ Interpersonal Skills	1.P6
5. The middle level masters candidate participates in activities to restructure programs and policies that create more responsive schools.	F, L	Individual Differences Ethical Perspectives	1.P2 2.P3
6. The middle level masters candidate analyzes their professional practice in light of current research and	D, L	Communication/ Interpersonal Skills	1.P6 2.P1

trends to determine the match/mismatch between their own school/classroom organization, the philosophical foundations of middle level education, National Middle School Association position, and the nature and needs of young adolescents.		Professional Leadership	2.P5
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Dispositions

The middle level masters candidate is positive and enthusiastic about all young adolescent students.	F	Individual Differences	1.D1
Believe that their role includes helping all young adolescents develop to their full potentials.	F	Individual Differences	1.D7
The middle level masters candidate believes in the philosophical foundations that support developmentally responsive, socially equitable programs for all young adolescents.	F, L	Individual Differences, Professional Leadership	2. D1
The middle level masters candidate is committed to the application of middle level philosophical foundations in their practice.	L	Professional Leadership	2. D2

Course Projects, Outcomes, Methods of Instruction and Evaluation

Course Objective	Projects	Instructional Strategies Used	Integration of Technology	Assessment Approach
1 3 4	Candidates will develop a webpage, I-Movie, or professional presentation about an assigned topic related to middle school philosophy/historical foundations. This project should include, but is not limited to: <ul style="list-style-type: none"> ✚ Clear connections to scholarly literature <ul style="list-style-type: none"> ○ Organizational practices ○ Adolescent development ○ Use of instructional time ✚ Identification of related best practices that promote the positive development of early adolescence ✚ Photos or video examples from their own classroom practice ✚ Ability to share information with a wider community of educators 	Research	PowerPoint, I-Movie, or web editor with digital photos of students & schools to augment theoretical information presented	Project assessed via LiveText checklist/rubric Prospect for presentation or dissemination of information.
2 5	Candidate will complete a case study analyzing how health and sexuality issues impact the lives of adolescents as well as the media portrayal of adolescent behaviors. Students will then work collaboratively to investigate related district	Case study	Electronic Discussion on WebCT (Vista) Word Processing	LiveText Rubric

	programs/policies and suggest changes that would create more responsive schools.			
6	Candidate will complete an analysis of their professional practice in light of current research and trends to determine the match/mismatch between their own school/classroom organization, the philosophical foundations of middle level education, National Middle School Association position, and the nature and needs of young adolescents.	Scavenger Hunt utilizing library and online resources Video analysis	Use of online databases	Self-Assessment Against Standards Peer feedback using the GAPSS observation form