Course Approval Form

For approval of new courses and deletions or modifications to an existing course.

More information is located on page 2.

Action Requested:

- [X] Create new course
- [ ] Delete existing course
- [ ] Modify existing course (check all that apply)
  - [ ] Title
  - [ ] Prereq/coreq
  - [ ] Credits
  - [ ] Schedule Type
  - [ ] Repeat Status
  - [ ] Restrictions
  - [ ] Grade Type

Course Level:

- [X] Undergraduate
- [ ] Graduate

College/School: Science
Department: Biology
Submitted by: Geoffrey Birchard
Ext: 3-1065
Email: gbirchar@gmu.edu

Subject Code: BIOL
Number: 270
(Do not list multiple codes or numbers. Each course proposal must have a separate form.)

Effective Term:

- [ ] Fall
- [X] Spring
- [ ] Summer

Year 2011

Title:
Current: Dinosaurs and Their Ancestors
Banner (30 characters max including spaces):
New:

Credits: (check one)

- [X] Fixed: 2
- [ ] Variable: or to

Repeat Status: (check one)

- [X] Not Repeatable (NR)
- [ ] Repeatable within degree (RD)
- [ ] Repeatable within term (RT)

Total repeatable credits allowed:

Grade Mode: (check one)

- [X] Regular (A, B, C, etc.)
- [ ] Satisfactory/No Credit
- [ ] Special (A, B C, etc. +IP)

Schedule Type Code(s): (check all that apply)

- [X] Lecture (LEC)
- [ ] Lab (LAB)
- [ ] Recitation (RCT)
- [ ] Internship (INT)
- [ ] Independent Study (IND)
- [ ] Seminar (SEM)
- [ ] Studio (STU)

Prerequisite(s):
Biology 103-104 and 60 hours or permission of the instructor

Corequisite(s):

Special Instructions: (restrictions for major, college, or degree; cross-listed courses; hard-coding; etc.)
Not for COS majors credit

Catalog Copy for NEW Courses Only (Consult University Catalog for models)

Description (No more than 60 words, use verb phrases and present tense)	**Notes** (List additional information for the course)
An introduction to the evolution, diversity and biology of the dinosaurs and their descendents. Emphasis on how current biological knowledge is used to estimate and infer the morphology, physiology and ecology of these extinct animals.	

Indicate number of contact hours: Hours of Lecture or Seminar per week: 2 Hours of Lab or Studio: 0
When Offered: (check all that apply) [ ] Fall [ ] Summer [X] Spring

Approval Signatures

Department Approval Date

College/School Approval Date

If this course includes subject matter currently dealt with by any other units, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

For Graduate Courses Only

Graduate Council Member

Provost Office

Graduate Council Approval Date

Course Number and Title: BIOL 270 Dinosaurs and Their Ancestors (2:2:0)

Prerequisites: BIOL 103-104 or permission of instructor

Catalog Description:
An introduction to the evolution, diversity and biology of the dinosaurs and their descendants. Emphasis on how current biological knowledge is used to estimate and infer the morphology, physiology and ecology of these extinct animals.

Course Justification:
The dinosaurs remain one of the most discussed groups of vertebrates. Their large size, incredible diversity and long evolutionary history and relatively sudden demise have fascinated biologists since the earliest fossils were recovered.

Relationship to similar courses in other departments:
No other similar courses for non majors in Biology. Vertebrate Paleontology is taught within the undergraduate curriculum but this is for majors in Geology and Biology students.

Audience and enrollment:
Open to any major.

List of potential instructors:
Dr. Geoffrey Birchard

Anticipated frequency:
Spring semester, every other year.

Additional Resources necessary:
None at this time.

Spring 2011
Biology 270 Dinosaurs and Their Ancestors

Dr. Geoffrey Birchard
Office: DK 3063
Office Hours: W 9:00-10:30
Contact Information: phone: 703-993-1065, e-mail: gbirchar@gmu.edu

Course Web Site: http://mason.gmu.edu/~gbirchar/Dinobiol/index.htm

This syllabus is subject to change depending upon the time allotted to class discussion.

Text: *Dinosaurs a Concise Natural History;* Fastovsky and Weishampel, 2009

Date	Topics	Readings (text chapters)
Jan. 22	Part I: Introduction, Fossils, Geologic Time	Chapt. 1, 2
Jan. 29	Cladistics, Vertebrate Relationships	Chapt. 3,4
Feb 3	Plate Tectonics, Climates	Chapt. 2
Feb 10	Origins of Dinosaurs	Chapt. 4
Feb 17	Part II: Stegosauria	Chapt. 5
Feb 24	Ankylosauria, Pachycephalosauria	Chapt. 6
March 3	Ceratopsia, Ornithopoda	Chapt. 6
March 5	**Exam 1**	
March 10	**No Class Spring Break**	
March 17	Sauropodomorpha, Dinosaur Size	Chapt. 8
Sat March 21	Trip to museum (scheduled time TBA)	
March 24	Dinosaur Reproduction	readings
April 7	**Reports due**, Dinosaurs and plants	Chapt 13 and assigned readings
April 14	Theropoda and Dinosaur Endothermy	Chapt. 9,12
April 21	Origin of Birds	Chapt. 10,11
April 28	Videos and Critiques	
May 5	Extinction	Chapt. 15
May	**Final exam 1:30-4:15**	

Grading:

Grades will be based on two exams, a report, a critique and a museum trip. The relative value will be first Exam 35%, Final Exam 45%, Report 10% and Critique 5%, Museum Trip 5%.

Exams

Exams will be a combination of multiple choice and short answer questions.

Reports:
Reports will be on an assigned dinosaur. You will be responsible for determining what information is available on the species assigned and follow the format described on the web page devoted to this subject. The length of the report will be 3.5 double-spaced pages. http://mason.gmu.edu/~gbirchar/Dinobiol/report.htm

Critiques:
The critique will be done in two parts. Part one will be a short critique of an article in news source or a children's book. Part 2 will involve the watching of selected portions of movies and/or videos about dinosaurs in class in which you will do a summary of issues/problems you observe. For Part one see http://mason.gmu.edu/~gbirchar/Dinobiol/dinocrit.htm

For part 2 I will hand out a form for you to use while in class.

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