1. General Information

1a. Submitted by the College of: ARTS &SCIENCES

Date Submitted: 2/4/2013

1b. Department/Division: Biology

1c. Contact Person

Name: Ruth E. Beattie

Email: rebeat1@uky.edu

Phone: 859-257-7647

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

1d. Requested Effective Date: Semester following approval

1e. Should this course be a UK Core Course? No

2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: BIO 180

2c. Full Title: Special Topics in Biology (Introductory Level): Subtitle required

2d. Transcript Title:

2e. Cross-listing:

2f. Meeting Patterns

LECTURE: 0-4

LABORATORY: 0 -4

RECITATION: 0-4

SEMINAR: 0-4

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 1-4

2i. Is this course repeatable for additional credit? Yes

If Yes: Maximum number of credit hours: 12 - if different subtitles, course cannot be repeated with same subtitle.

If Yes: Will this course allow multiple registrations during the same semester? Yes

2j. Course Description for Bulletin: Interdisciplinary, topical or experimental course in introductory biology. Subtitle required. Prerequisites: Determined by Instructor May be repeated for a maximum of 12 credit hours under different subtitles. Variable credit 1 - 4 cr hr Course format: variable - Lecture and/or laboratory and/or recitation and/or seminar

2k. Prerequisites, if any: Determined by Instructor

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Winter,

Will the course be offered every year?: No

If No, explain: Depends on number of pilot courses being offered each year

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: variable 30- 300

7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: Yes

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: [var7InterestExplain]

8. Check the category most applicable to this course: Traditional – Offered in Corresponding Departments at Universities Elsewhere,

If No, explain:

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program?: No

If YES, name the proposed new program:

b. Will this course be a new requirement for ANY program?: No

If YES, list affected programs:

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: No

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached: Yes

Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1.How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2.How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3.How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4.Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5.How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6.How do course requirements ensure that students make appropriate use of learning resources?

7.Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8.How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (http://www.uky.edu/UKIT/)?

9.Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10.Does the syllabus contain all the required components? NO

11.I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|VCASS2|Vincent Cassone|Dept approval for ZCOURSE_NEW BIO 180|20121126

SIGNATURE|RHANSON|Roxanna D Hanson|College approval for ZCOURSE_NEW BIO 180|20121126

SIGNATURE|JMETT2|Joanie Ett-Mims|Undergrad Council approval for ZCOURSE_NEW BIO 180|20121211

BIO 180: Special Topics in Biology (Introductory Level): Subtitle required

Interdisciplinary, topical or experimental course in introductory biology. Subtitle required.

Prerequisites: Determined by Instructor
May be repeated for a maximum of 12 credit hours under different subtitles.
Variable credit 1 - 4 cr hr

This course will be used to pilot new introductory (100-level) biology courses. A course can only be offered under the same subtitle twice. After that time, the course must be submitted as a new course with its own course number.

Course offering/ subtitle must be approved by the Faculty of the Department of Biology each time the course is offered.

Variable format: lecture, laboratory, recitation and/or seminar.

A sample syllabus for a previously offered pilot course is attached.

Spring 2011
Bio180 sections 001 and 002
3 cr hr
Introductory Biology I: "What is the nature of biological diversity and how did it arise?"

Dept of Biology
College of Arts and Sciences

Section 001
Instructor: Dr. Ruth E. Beattie
Office: 219 T. H. Morgan Building
Telephone: 257-7647
E-Mail: rebeat1@uky.edu
Office Hours: W, 10am – 11.30am; T, R, 8.00am - 9.30am. **Any other time: By appointment**

Class Time and Location: Section 001: M, W, F 9.00am - 9.50am, 107 Morgan (107BS)

Section 002
Instructor: Dr. Bruce O'Hara
Office: 334A T. H. Morgan Building
Telephone: 257-2805
E-Mail: bohara@uky.edu
Office Hours: Tuesdays 4:00 - 6:00 **Any other time: By appointment**

Class Time and Location: Section 002: T,R 11.00am – 12.15pm, 107 Morgan (107BS)

YOU MUST ATTEND CLASS AND TAKE ALL EXAMS AND ASSIGNMENTS WITH THE SECTION IN WHICH YOU ARE OFFICIALLY REGISTERED. Credit will only be awarded for activities completed with the section in which you are officially registered.

Course Pre-requisites: Math ACTE of 23 or above or MA 109, past or concurrent enrollment in CHE 105

Textbooks:

Required

1. Biological Science with MasteringBiology®, 4/e Freeman **©2011 | Benjamin Cummings ISBN-10: 0321597966 | ISBN-13: 9780321597960**

2. TurningPoint Remote Transmitter (Clicker) RF

Course Description / Overview

This course introduces the student to the biological mechanisms operating at the molecular, cellular, and population level that contribute to the origin, maintenance, and evolution of biodiversity including the origins and history of the evolutionary process. Course material is presented within a phylogenetic context, emphasizing the shared history of all living organisms on earth through common ancestry.

Course Objectives/Goals

- The student will develop an appreciation and understanding of the fundamental principles (with emphasis on molecular, cellular, evolutionary principles), which unify all life.
- The student will develop an understanding of the methods and processes of scientific inquiry.
- The student will be prepared for advanced courses in evolution and genetics.
- The student's need's will be met by fostering the development of critical thinking, reasoning, and problem-solving skills, scientific attitudes and values

Learning Outcomes

By the end of the course the student should be able to:

1) List the fundamental characteristics of living organisms and discuss the principles that unify living organisms.
2) Discuss the five kingdom and three domain system of classification of organisms, and give criteria used to assign members to each kingdom/domain.
3) Arrange in order the following categories of classification: domain/ kingdom, phylum, class, order, family, genus, species.
4) Demonstrate an understanding of the role of scientific method in scientific investigation.

Biodiversity

5) Compare the relative diversity and biomasses of the viruses and living systems of the different domains
6) Compare and contrast prokaryotic archaea, eubacteria and eukaryotic cells.
7) Describe the general characteristics of protists. Describe the criteria used to classify protists.
8) Describe the general characteristics of fungi. Describe the criteria used to classify fungi. Distinguish between sexual and asexual fungal spores. Discuss fungal adaptations as they relate to the evolution of fungi.
9) Describe the distinguishing characteristics of the four groups of plants. Compare and contrast gymnosperms and angiosperms.
10) Distinguish between radial and bilateral symmetry in animals
11) Distinguish acoelomates, pseudocoelomates and coelomates
12) Describe the distinguishing characteristics of major taxa

Evolution

13) Learn PreDarwinian history of evolutionary thought
14) Describe Charles Darwin and his insights
15) Discuss Mendelian Genetics
16) Describe the Modern Synthesis of Genetics and Evolutionary Thought.
17) Describe modern advances in evolutionary thought

Impact of Evolutionary Thought on Modern Life

18) Discuss evolution's impact on Medicine
19) Discuss biological principles in Conservation

Central Dogma

19) Describe the structure of DNA
20) Describe transcription to RNA
21) Describe translation to protein
22) Describe the role of protein structure to function

Cell Biology

23) Compare and contrast prokaryotic archaea, eubacteria and eukaryotic cells.
24) Describe the cell cycle and intermediary metabolism in these diverse organisms.
25) Compare and contrast photosynthesis in prokaryotes and plants

Disabilities/ Medical Conditions: If you have a documented disability that requires academic accommodations, please see me as soon as possible. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Attendance:

You are expected to attend all classes. **I lecture on material that is not in the textbook.** If you miss a class, it is your responsibility to get any information, assignments, etc. missed. Contact other students in class before seeing me for help. Any handouts missed may be obtained from my office during my office hours.

Course Policy on Classroom Civility and Decorum:
The university, college and department all have a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right -- and the responsibility -- to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.

Reading Assignments:
Reading assignments are listed on the lecture outline. These assignments must be read before coming to class**. All assigned readings are potential exam material whether covered in class or not.**

Grading:

Exam 1	100 points
Exam 2	100 points
Exam 3	100 points
Final Exam	150 points
Assignments (10)	100 points (10 x 10 pts)
	550 points total

Final grades will be based on total points earned and will be assigned as follows:

A = 495 - 550 points
B = 440 - 494.9 points
C = 385 – 439.5 points
D = 330 – 384.9 points
E = less than 330 points

NOTE: There will be no extra credit. Midterm grades will be posted by March 7, 2011
The Last day to withdraw from the course is April 1, 2011

Turning Point Transmitter

A Turning Point RF transmitter (clicker) is required for the course and should be brought to class every day. If you have already purchased a Turning Point transmitter for another class, you can use the same transmitter for this class. Whether you have purchased a new transmitter or are using one from a previous semester you **mus**t register the transmitter in the class roll.

1. Log into BlackBoard using MyUK, Click on the A&S 100 course link

2. Click on the TurningPoint Registration Button. Fill in and submit the form.

Registration must be completed by 9am on **Monday January 24, 2011**. This will be the last date on which the registration data will be downloaded on the Instructor's laptop. Any registrations that occur after that time will not be downloaded. It is your responsibility to register your TurningPoint number in a timely manner.

Examinations
Exam dates are listed below. Exams 1, 2 and 3 will consist of 50 2-point questions. Exam 2 will consist of material covered following exam 1. Exam 3 will consist of material covered following exam 2. The final exam will consist of 100 points (50 2-point questions) on material covered following exam 2 and 50 points (50 1-point questions) on the total course material (comprehensive). Exams will consist of multiple choice questions and possibly some true/false and matching questions. Bring a pencil and UK Student I.D. to the examinations. **YOU WILL NOT BE PERMITTED TO TAKE AN EXAMINATION IF YOU DO NOT HAVE YOUR UK ID WITH YOU AT THE TIME OF THE EXAMINATION**. **Make-up exams will only be given for excused absences as defined by University Senate Rules V, 2.4.2.and will consist of short-answer**

questions. Make-up exams will be administered at a single scheduled time. Make-up exams (for both sections) are scheduled for Monday April 25, 2011 from 6pm – 7pm in BS 116. This is the ONLY time make-up exams will be administered. A missed exam will result in a score of zero for that exam, unless an **acceptable** written excuse is presented **within one week of the absence.**

Exam scores will be posted in the grade book on BlackBoard by 10am on the Tuesday after either exam 1, 2 or 3, and 60 hours after the final examination. Questions and answer keys for exams 1, 2 and 3 will be posted on BlackBoard at the same time as the exam scores are posted.

Exam Dates

Section 001
Exam 1: February 4, 2011
Exam 2: March 4, 2011
Exam 3: April 8, 2011
Final Exam: Wednesday May 4, 2011, 8.00am – 10.00am, BS 107

Section 002
Exam 1: February 3, 2011
Exam 2: March 3, 2011
Exam 3: April 7, 2011
Final Exam: Tuesday May 3, 2011, 10.30am – 12.30pm, BS 107

YOU MUST TAKE ALL EXAMS WITH THE SECTION IN WHICH YOU ARE OFFICIALLY REGISTERED. Credit will only be awarded for examinations completed with the section in which you are officially registered.

Any student with more than two **final** examinations scheduled on any one date is entitled to have the examination for the class with the **highest catalog number** rescheduled. The option to reschedule must be exercised **in writing** to the appropriate instructor **two weeks prior** to the scheduled examination.

Exam scores will be posted in the grade book on BlackBoard by 10am on the Tuesday after either exam 1, 2 or 3, and 60 hours after the final examination. Questions and answer keys for exams 1, 2 and 3 will be posted on BlackBoard at the same time as the exam scores are posted.

Assignments
There are ten assignments, which must be completed during the semester. The specifics of each assignment are detailed on the course BlackBoard web pages (Click on ASSIGNMENTS) and are administered through Mastering Biology. Each assignment will be available at least one week before the due date/time. It is YOUR responsibility to ensure that you access each assignment in a timely manner so that you have enough time to adequately complete the assigned work.

Each assignment will normally consist of several interactive activities and tutorials that you will be required to work through. Once you have completed the activities/tutorials you will then answer some multiple choice questions The entire assignment is sequenced – you have to work through the activities in a set sequence – you cannot skip parts and jump ahead. Allow at least one hour to complete each assignment. Note: The first response that you submit for any question is the response used in the determination of your score for that assignment. You cannot go back and change a response at a later date (even if it is before the deadline). Take your time and answer each question carefully.

WARNING: Once the deadline for submission of an assignment has passed, you will no longer be able to submit the assignment for a SCORE. The computer is very unforgiving – if you go past the deadline by even one second you will not receive a score for the assignment. The computer/ software records the time of submission for the Instructor.

Problems associated with printers, computers, corrupted files, parking, traffic, library services, loss of wireless signal, computer labs, procrastination, over-sleeping or forgetfulness are not acceptable excuses for late submission of assignments. It is **YOUR** responsibility to make sure that assignments are submitted on time. If you leave submitting the assignment to the last minute and then get caught out by unexpected events – this is not considered an excused late submission**.** If you are

participating in a university-approved event on a due date, then you must submit the assignment before you leave campus/start that activity.

Submission of late assignments will only be permitted for excused absences as defined by University Senate Rules V, 2.4.2.. WRITTEN SUPPORTING DOCUMENTATION regarding the late submission of an assignment MUST be presented to the course instructor within a week after a student returns to class after the excused absence otherwise an automatic score of zero will be earned for the assignment.

Due Dates for Assignments (for both sections)

Assignment Number	Due Date Submission deadline is 5.00pm (Lexington, KY time) on the due date
Assignment #1	Friday January 21, 2011
Assignment #2	Friday January 28, 2011
Assignment #3	Friday February 11, 2011
Assignment #4	Friday February 18, 2011
Assignment #5	Friday February 25, 2011
Assignment # 6	Friday March 11, 2011
Assignment # 7	Friday March 25, 2011
Assignment # 8	Friday April 1, 2011
Assignment # 9	Friday April 15, 2011
Assignment # 10	Friday April 22, 2011

Scores for assignments will be available in Mastering Biology immediately following the deadline for submission of an assignment (5.00pm on due date). These scores will be transferred to the BlackBoard grade book within one week of the deadline for submission of a particular assignment.

If you have a concern regarding your posted score for an assignment or exam, you have 1 week from the day the scores are posted (in Blackboard) to contest that score. After one week the score remains as posted. It is your responsibility to check your scores in a timely manner and to follow-up immediately if you have a concern.

Mastering Biology (MB)

Mastering Biology is an online learning environment that provides an extensive array of review materials for the course. Each student is REQUIRED to have a Mastering Biology account. You cannot share your account with another student in the class. All assignments are administered through Mastering Biology (MB). Failure to set up your MB account will result in automatic scores of zero for the assignments.

To set up your MB account: follow the instructions on the last page of this syllabus. Internet Explorer is not recommended for use with Mastering Biology. Firefox is the recommended browser for use with Mastering Biology

In order to facilitate your introduction to the use of MB, there is a short no-credit assignment available on MB. This assignment consists of four activities that take you through how to use the various features of MB.

In addition to the assignments, there will be a number of additional no-credit practice quizzes and pre-tests available to you. These are not worth points towards your final grade but can be used to determine your readiness for the exams.

*****A Note Concerning Academic Offenses (READ THIS INFORMATION CAREFULLY)**

PLAGIARISM and CHEATING are serious academic offenses.

The following is an excerpt taken from the "***Students Rights and Responsibilities Handbook, University of Kentucky***" regarding cheating.

"Cheating is defined by its general usage. It includes, but is not limited to, the wrongful giving, taking, or presenting any information or material by a student with the intent of aiding himself/herself or another on any academic work which is considered in any way in the determination of the final grade."

The following is an excerpt taken from the "***Students Rights and Responsibilities Handbook, University of Kentucky***" regarding plagiarism.

"All academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.
Plagiarism includes reproducing someone else's work..... If the words of someone else are used, the student MUST put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic."

Charges of an academic offense will be made against any student that cheats or commits plagiarism. Penalties for such an offense will be assessed according to University Regulations regarding Academic Offenses. The most severe penalties include suspension or dismissal from the University. **We have a zero-tolerance policy regarding academic offenses.**

NOTE* In addition to the circumstances listed above, the following activities are considered evidence of cheating:
1) **Any talking** to another student during an examination.
2) **Looking** at another students work during an examination, or **allowing** another student to look at your work.
3) **Use of a cell phone or any electronic device during an examination** (this includes receiving calls). All cell phones and electronic devices MUST be turned off and put away during an examination period. They must not be turned back on again until after exiting the examination room.

LECTURE SCHEDULE

Week of	SUBJECT	READING
Jan 10	Introduction	Freeman Ch. 1
Jan 17	Unity of Life-DNA DNA structure	Freeman Ch. 2-6
Jan 24	DNA Structure *continued* Central Dogma: DNA-RNA-Protein	Freeman Ch 14-16
Jan 31	Protein Structure Enzymes	Freeman Ch. 3
Feb 7	Intermediary Metabolism Origin and Diversity of Life, Tree Thinking	Freeman Ch. 7-9
Feb 14	Viruses Three Domains: Archaea	Freeman Ch. 35 Freeman Ch. 28

Feb 21	Three Domains: Eubacteria Three Domains: Eukaryota	 Freeman Ch. 29-34
Feb 28	Three Domains: Eukaryota *continued* Unity and Diversity: Evidence for Common Descent Homology and Homoplasy	 Freeman Ch. 24
March 7	Homology and Homoplasy Reconstructing Phylogeny Evolution of Diversity over Time, Molecular Clock	 Freeman Ch. 27
March 21	Evolution of Diversity over Time, Molecular Clock *continued* Pre-Cambrian Life Paleozoic Era	
March 28	Mesozoic Era Cenozoic Era	
April 4	History of Evolutionary Thought Genetics and Genetic Variation Mitosis and Meiosis	 Freeman Ch. 13 Freeman Ch. 11, 12
April 11	Mitosis and Meiosis continued Molecular Evolution	
April 18	Evolution and Medicine Evolution of Populations: Drift and selection Speciation	 Freeman Ch. 25-26
April 25	Conservation Human Evolution	Freeman Ch. 55 Freeman Ch. 34

MasteringBIOLOGY®

In this course you will be using MasteringBiology®, an online tutorial and homework program that accompanies your textbook.

What You Need:

- ✓ **A valid email address**
- ✓ **A student access code** (Comes in the Student Access Kit that may have been packaged with your new textbook or is available separately in your school's bookstore. Otherwise, you can purchase access online at www.masteringbiology.com.)
- ✓ **The ZIP code for your school: 40506**
- ✓ **A Course ID:**
- ✓ **IF YOU ARE REGISTERED IN SECTION 001 (DR. BEATTIE) : the Course ID is: AS100BEATTIESPRING2011**
- ✓ **IF YOU ARE REGISTERED IN SECTION 002 (DR. O'HARA) : the Course ID is: AS100OHARASPRING2011**

Make sure that you register in the correct section of Mastering Biology

- ✓

Register

- Go to www.masteringbiology.com and click **New Students** under **Register**.
- To register using the Student Access Code inside the MasteringBiology Student Access Kit, select **Yes, I have an access code**. Click **Continue**.

  –OR– ***Purchase access online*:** Select **No, I need to purchase access online now**. Select your textbook and whether you want to include access to the eText, and click **Continue**. Follow the on-screen instructions to purchase access using a credit card. The purchase path includes registration, but the process may differ slightly from the steps printed here.
- **License Agreement and Privacy Policy:** Click **I Accept** to indicate that you have read and agree to the license agreement and privacy policy.
- Select the appropriate option under "Do you have a Pearson Education account?" and supply the requested information. Upon completion, the **Confirmation & Summary** page confirms your registration. This information will also be emailed to you for your records. You can either click **Log In Now** or return to www.masteringbiology.com later.

Log In

- Go to www.masteringbiology.com.
- Enter your Login Name and Password and click **Log In**.

Enroll in Your Instructor's Course and/or Access the Self-Study Area

Upon first login, you'll be prompted to do one or more of the following:

- **Join your MasteringBiology course** by entering the **MasteringBiology Course ID** provided by your instructor**. (see above)**
- Enter a Student ID

Click **Save** and **OK**.

Congratulations! You have completed registration and have enrolled in your instructor's MasteringBiology course. To access your course from now on, simply go to www.masteringbiology.com, enter your Login Name and Password, and click **Log In**. If your instructor has created assignments, you can access them in the **Assignments Due Soon** area or by clicking **View All** in this area. Otherwise, click on **Study Area** to access self-study material.

Support

Access Customer Support at www.masteringbiology.com/support, where you will find:

- System Requirements
- Answers to Frequently Asked Questions
- Additional contact information for Customer Support, including Live Chat