

Course Proposal: Modify

CID and Name:

10192304----Canterberry, Sarah

1. Course: **BIO 121 Concepts of Biology**

2. Term/Year: **Fall 2014**

3. CIP CODE/10 Digit Program Code: **2601010002**

4. Current Course Title: **Concepts of Biology**

Modified Course Title: **N/A**

5. Modified Long Course Title: **N/A**

6. What is the primary reason you are modifying this course:

Separation of lecture and lab.

7. Enter course description exactly as it will appear in the general/graduation bulletin:

Four semester hours, three hours lecture per week, 2 hours laboratory per week. Concepts-oriented course for the non-science major. Study of the origin of life, the cell, growth and reproduction, genetics and evolution. May not be used to meet graduation requirements by students majoring in the College of Sciences and Mathematics or for certification of high school teachers in biology. Required lab fee.

8. Enter modified course description exactly as it will appear in the general/graduation bulletin:

Three semester hours. Concepts oriented course for the non-science major. Study of the origin of life, the cell, growth and reproduction, genetics and evolution. May not be used to meet graduation requirements by students majoring in the College of Sciences and Mathematics or for certification of high school teachers in biology. Co-requisite: BIO121L.

9. Current Prerequisites:

N/A

10. Modified Prerequisites:

N/A

11. College: **College of Science/Mathematics**

12. Department Teaching Course: **Biology**

13. Instruction Type: **N/A**

14. Modified Credit Hours Maximum: **3**

Credit Hours Minimum: **3**

Maximum Hours counted toward degree: **3**

15. Maximum contact hours each week Fall Semester: **3**

16. May this course be taken more than one time each semester? **N/A**

17. Grade Type: **N/A**

18. Describe the place of the modified course within your current curriculum. (Will it be elective or required? Part of a major or a minor?)

NA

19. How does the modified course differ from similar courses being offered at Stephen F. Austin?

NA

20. Syllabus: Course Learning Goals

List course objectives; describe what students who complete the course will now or be able to do.

Students who complete Concepts of Biology will be able to understand: 1. How the scientific method is used to critically evaluate scientific information (CO: 1, 4) 2. What characteristics distinguish living things from inanimate matter (CO: 1) 3. How chemical interactions are the basis for life (CO: 2, 3, 4) 4. How genetic information is passed from parents to offspring and how this genetic information is expressed by cells and how humans are utilizing this information for the benefit of society (CO: 1, 3, 4) 5. Classification systems used for the diversity of life forms from the species to kingdom level (CO: 1) 6. Analysis of the biological interactions that occur from the sub-cellular to the ecosystem level of organization (CO: 1, 2, 3, 4) 7. The Theory of Evolution and the history of life on Earth (CO: 1)

21. Syllabus: Course Outline

List the topics that the proposed course will cover and indicate the approximate proposed amount of time to be devoted to each, either by percent of course time or number of weeks. Please indicate which topics will be required in all sections of the course and which may vary.

N/A

22. Any Other Information.

NA

----Course Syllabus----

Must accurately reflect the course syllabus. (N/A is not acceptable response)

23. Program Learning Outcomes

List the program learning outcomes addressed in this course as identified in the course matrix for your degree program. If your department requires a listing of all Program Learning Outcomes (PLOs) on the syllabus, please identify those that are directly taught in this course. If this is a general education core curriculum course and no PLOs are taught in this course then insert the following statement under this heading:

This is a general education core curriculum course and no specific program learning outcomes for this major are addressed in this course.

This is a general education core curriculum course and no specific program learning outcomes for this major are addressed in this course.

24. General Education Core Curriculum Objectives/Outcomes

List the Exemplary Educational Objectives (EEOs) for this course if the course is included in the general education core curriculum. If you have reworded the EEOs as outcomes for your course, please be sure that the original intent of the EEO is retained.

1. Critical Thinking: Students will develop this ability by learning to use the scientific method to draw conclusions based on observations of some aspect of nature. Students will be exposed to the scientific method in lecture and will gain the ability to identify the components (hypothesis, experimental groups, conclusions, etc.). This skill will be further developed in lab when the students will utilize the scientific method to set up and conduct their own experiments, gather data and draw conclusions based on that data. **2. Communication Skills:** Students will develop both oral and visual communication skills in this course. Oral skills will be developed in lecture through class discussions and in laboratory as they communicate with their peers to complete each exercise. Visual communication will be developed through the process of converting experimental data into a meaningful graphical representation of that data. **3. Empirical and Quantitative Skills:** Students will develop their empirical and quantitative skills through many aspects of this course. Specifically, they will learn to calculate probabilities when tracing flow of genetic information from parents to offspring in lecture and will also use quantitative skills to estimate animal populations based on sampling in lab.

25. Student Learning Outcomes

List all student learning outcomes (SLOs) for this course including the course specific student learning outcomes that support the PLOs above. In general, SLOs in a course that support the PLOs are specific and include the exact knowledge, skill or behavior taught in the course that

supports the more global PLOs. For additional information on meaningful and measurable learning outcomes see the assessment resource page <http://www.sfasu.edu/assessment/index>

Students who complete Concepts of Biology will be able to understand: 1. How the scientific method is used to critically evaluate scientific information (CO: 1, 4) 2. What characteristics distinguish living things from inanimate matter (CO: 1) 3. How chemical interactions are the basis for life (CO: 2, 3, 4) 4. How genetic information is passed from parents to offspring and how this genetic information is expressed by cells and how humans are utilizing this information for the benefit of society (CO: 1, 3, 4) 5. Classification systems used for the diversity of life forms from the species to kingdom level (CO: 1) 6. Analysis of the biological interactions that occur from the sub-cellular to the ecosystem level of organization (CO: 1, 2, 3, 4) 7. The Theory of Evolution and the history of life on Earth (CO: 1)

26. Syllabus: Modified Textbook/Assigned Reading Materials for course:

Campbell Essential Biology with Physiology 4th Edition

27. Course Requirements

Describe the major course requirements, assignments, examinations, projects.

Students must enroll in both lecture and lab and final grades will reflect both components. The lecture portion of the grade is based on student performance on examinations, quizzes, participation, and homework. Lab includes both a daily quiz and in-lab assignments. Students will complete a teamwork-based assignment in which they will be required to follow an experimental procedure, gather and analyze data, and prepare a final report of their results.

28. Course Calendar

Create a tentative timeline for the course. At a minimum, list the topics that the course will cover and indicate the approximate amount of time to be devoted to each, either by percent of course time or number of weeks. The calendar should provide information for the maximum number of weeks scheduled for the course.

Week 1 Introduction to Biology, Chemistry in Biology Week 2 Chemistry in Biology Week 3 Cell Structure Week 4 Cell Structure; Cell Division Week 5 Cell Division Week 6 Principles of Genetics Week 7 Principles of Genetics; DNA Structure and Function Week 8 DNA Structure and Function Week 9 Plant Structure Week 10 Cellular Metabolism Week 11 Cellular Metabolism; Biodiversity Week 12 Biodiversity Week 13 Principles of Ecology Week 14 Principles of Ecology; Principles of Evolution Week 15 Principles of Evolution

29. Grading Policy

Describe how the grade for the course is determined.

Your grades from lecture and lab will be computed into a single grade; the same grade is reported for both lecture and lab. The lab portion counts 1/3 (33%) while the lecture portion counts 2/3 (67%) of your final grade.

30. Attendance Policy

State your attendance policy.

Attendance is mandatory. Students will be allowed up to 9 absences (excused or unexcused). Students that exceed this maximum will no longer be eligible to make-up missed work and one letter grade will be deducted from their final grade at the end of the semester.

31. Academic Integrity (A-9.1)

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

32. Withheld Grades Semester Grades Policy (A-54)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

33. Students with Disabilities

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to <http://www.sfasu.edu/disabilityservices>.

Dept. Chair *Janet Moore* Date: 11/8/13

College Curriculum Chair _____ Date: _____

Dept. Dean _____ Date: _____

College Curriculum Dean _____ Date: _____

RELEASE: 8.3

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Course Proposal: Modify

CID and Name:

10192304----Canterberry, Sarah

1. Course: **BIO 121L Concepts of Biology Lab**

2. Term/Year: **Fall 2014**

3. CIP CODE/10 Digit Program Code: **2601010002**

4. Current Course Title: **Concepts of Biology Lab**

Modified Course Title: **N/A**

5. Modified Long Course Title: **N/A**

6. What is the primary reason you are modifying this course:

Seapration of lecture and lab

7. Enter course description exactly as it will appear in the general/graduation bulletin:

Four semester hours, three hours lecture per week, 2 hours laboratory per week. Concepts-oriented course for the non-science major. Study of the origin of life, the cell, growth and reproduction, genetics and evolution. May not be used to meet graduation requirements by students majoring in the College of Sciences and Mathematics or for certification of high school teachers in biology. Required lab fee.

8. Enter modified course description exactly as it will appear in the general/graduation bulletin:

One semester hour, 2 hours laboratory per week. Concepts oriented course for the non-science major. Study of the origin of life, the cell, growth and reproduction, genetics and evolution. May not be used to meet graduation requirements by students majoring in the College of Sciences and Mathematics or for certification of high school teachers in biology. Required lab fee. Co-requisite: BIO121.

9. Current Prerequisites:

N/A

10. Modified Prerequisites:

N/A

11. College: **College of Science/Mathematics**

12. Department Teaching Course: **Biology**

13. Instruction Type: **N/A**

14. Modified Credit Hours Maximum: **1**

Credit Hours Minimum: **1**

Maximum Hours counted toward degree: **1**

15. Maximum contact hours each week Fall Semester: **2**

16. May this course be taken more than one time each semester? **N/A**

17. Grade Type: **N/A**

18. Describe the place of the modified course within your current curriculum. (Will it be elective or required? Part of a major or a minor?)

NA

19. How does the modified course differ from similar courses being offered at Stephen F. Austin?

NA

20. Syllabus: Course Learning Goals

List course objectives; describe what students who complete the course will now or be able to do.

Students who complete Concepts of Biology will be able to understand: 1. How the scientific method is used to critically evaluate scientific information (CO: 1, 4) 2. What characteristics distinguish living things from inanimate matter (CO: 1) 3. How chemical interactions are the basis for life (CO: 2, 3, 4) 4. How genetic information is passed from parents to offspring and how this genetic information is expressed by cells and how humans are utilizing this information for the benefit of society (CO: 1, 3, 4) 5. Classification systems used for the diversity of life forms from the species to kingdom level (CO: 1) 6. Analysis of the biological interactions that occur from the sub-cellular to the ecosystem level of organization (CO: 1, 2, 3, 4) 7. The Theory of Evolution and the history of life on Earth (CO: 1)

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N/A

22. Any Other Information.

NA

----Course Syllabus----

Must accurately reflect the course syllabus. (N/A is not acceptable response)

23. Program Learning Outcomes

List the program learning outcomes addressed in this course as identified in the course matrix for your degree program. If your department requires a listing of all Program Learning Outcomes (PLOs) on the syllabus, please identify those that are directly taught in this course. If this is a general education core curriculum course and no PLOs are taught in this course then insert the following statement under this heading:

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1. Critical Thinking: Students will develop this ability by learning to use the scientific method to draw conclusions based on observations of some aspect of nature. Students will be exposed to the scientific method in lecture and will gain the ability to identify the components (hypothesis, experimental groups, conclusions, etc.). This skill will be further developed in lab when the students will utilize the scientific method to set up and conduct their own experiments, gather data and draw conclusions based on that data. **2. Communication Skills:** Students will develop both oral and visual communication skills in this course. Oral skills will be developed in lecture through class discussions and in laboratory as they communicate with their peers to complete each exercise. Visual communication will be developed through the process of converting experimental data into a meaningful graphical representation of that data. **3. Empirical and Quantitative Skills:** Students will develop their empirical and quantitative skills through many aspects of this course. Specifically, they will learn to calculate probabilities when tracing flow of genetic information from parents to offspring in lecture and will also use quantitative skills to estimate animal populations based on sampling in lab. **4. Teamwork:** Students will be instructed on good teamwork practices and will develop teamwork skills by working in groups to complete each lab exercise. This will require the students to divide tasks, communicate results with one another and discuss the results to reach a conclusion. They will complete peer evaluations using a multiple choice Likert Scale Questionnaire, and the teamwork experience as a whole by responding to short answer questions.

25. Student Learning Outcomes

List all student learning outcomes (SLOs) for this course including the course specific student learning outcomes that support the PLOs above. In general, SLOs in a course that support the PLOs are specific and include the exact knowledge, skill or behavior taught in the course that supports the more global PLOs. For additional information on meaningful and measurable learning outcomes see the assessment resource page <http://www.sfasu.edu/assessment/index>

Students who complete Concepts of Biology will be able to understand: 1. How the scientific method is used to critically evaluate scientific information (CO: 1, 4) 2. What characteristics distinguish living things from inanimate matter (CO: 1) 3. How chemical interactions are the basis for life (CO: 2, 3, 4) 4. How genetic information is passed from parents to offspring and how this genetic information is expressed by cells and how humans are utilizing this information for the benefit of society (CO: 1, 3, 4) 5. Classification systems used for the diversity of life forms from the species to kingdom level (CO: 1) 6. Analysis of the biological interactions that occur from the sub-cellular to the ecosystem level of organization (CO: 1, 2, 3, 4) 7. The Theory of Evolution and the history of life on Earth (CO: 1)

26. Syllabus: Modified Textbook/Assigned Reading Materials for course:

Concepts of Biology Laboratory Manual, 3rd ed.

27. Course Requirements

Describe the major course requirements, assignments, examinations, projects.

Students must enroll in both lecture and lab and final grades will reflect both components. The lecture portion of the grade is based on student performance on examinations, quizzes, participation, and homework. Lab includes both a daily quiz and in-lab assignments. Students will complete a teamwork-based assignment in which they will be required to follow an experimental procedure, gather and analyze data, and prepare a final report of their results.

28. Course Calendar

Create a tentative timeline for the course. At a minimum, list the topics that the course will cover and indicate the approximate amount of time to be devoted to each, either by percent of course time or number of weeks. The calendar should provide information for the maximum number of weeks scheduled for the course.

Week 1 Introduction & The Microscope Week 2 Organic Molecules of the Cell Week 3 Cells Week 4 Molecular Movement and the Cell Membrane Week 5 Mitosis and Cytokinesis Week 6 Meiosis and Gametogenesis Week 7 Inheritance Week 8 Organization of the Flowering Plant Body Week 9 Enzymes Week 10 Photosynthesis Week 11 Biological Diversity Week 12 Ecology Week 13 Estimating Animal Population Sizes

29. Grading Policy

Describe how the grade for the course is determined.

Your lab grade is determined by daily quizzes (45%), daily assignments (45%) and a performance grade (10%). Total possible points = 2860. A. Quizzes, given at the beginning of each lab, will consist of three (3) questions. The questions will come from the exercise objectives, bold-faced terms and safety instructions that apply to the current days exercise. The daily quiz is worth 100 points. B. You will need a cover sheet and an answer sheet with only your quiz heading on them for each quiz. Your cover sheet will be picked up along with your completed quiz. Your quiz should always be covered by your cover sheet. If at any time your quiz is not covered by your cover sheet, any notes are on the cover sheet or you do not use your lab board as intended, your quiz will be picked up and you will be given a zero for that quiz. C. You are required to complete and turn in the day's lab assignment to your lab instructor. The in-class assignment is worth 100 points. D. For minor spelling errors 2 points will be taken off. E. To ensure that the lab runs efficiently, you will have ten (10) points taken off of your daily lab assignment grade for the following infractions: 1. Returning your microscope to the cabinet improperly. The scanning lens should be in the viewing position when you put your microscope away. 2. Failing to put your microscope slides in the proper place. 3. Failing to clean your microscope slides before returning them. 4. Leaving your lab table or glassware messy. 5. Failing to return instruments to the lab kit. 6. Marking on your lapboard. 7. Bringing a used lab manual to lab. 8. Failure to bring a lab manual to lab. 9. Bringing food or beverages into lab. 10. Use of cell phones, MP3's or other non-lab equipment during lab. 11. Tardiness. Twenty points may be deducted for extreme tardiness. F. During every lab period your lab instructor will evaluate your performance in class with regard to preparation, adherence to lab safety, attitude, cooperation with lab partners, participation in the exercise and effort. Your class participation is worth 20 points. G. Any grade appeal must be accompanied by your graded quizzes/assignments. H As per departmental policy, you are required to evaluate the lab. This online course assessment is administered near the end of the semester. If you have not completed the assessment by the deadline, one point will be deducted from your lab grade. You will be notified of the deadline by ITS. I. Your lecture instructor will calculate your course grade as follows: Lab avg. = 25% Lecture avg. = 75% J. All lab work is to be done in the laboratory. K. You may leave the lab after completing the exercise and checking with your lab instructor. Leaving early will result in a zero for all of the day's grades.

30. Attendance Policy

State your attendance policy.

A. All students are required to attend the scheduled lab. B. Those students who have excused absences will be given make-up work. C. Excused absences will be allowed for these reasons (university policy A-10): 1. School trips and/or functions - arrangements with the lab coordinator for make-up must be made prior to absence. 2. Death in the immediate family - a notice from the Office of Student Rights and Responsibilities may be sent to the lab coordinator. 3. Too ill to attend class - a note from the physician must be brought to the lab coordinator. (If you go to the school

infirmary, be sure to pick up a form at the desk before you see a doctor or nurse, and have them initial the form when you see them.) 08/21/2013 D. Only the lab coordinator may excuse a student's absence from lab. E. All make-ups will be in the form of a quiz ten question long. Arrangements to complete a make-up quiz must be made prior to the date of the next scheduled lab exercise. F. No make-up quizzes are permitted after 3 absences, whether they are excused or unexcused. Additionally, ten points will be deducted from a student's lab grade for every four absences. G. Students are responsible for all work missed. Notes, data, etc for missed labs may be obtained from the lab instructors or fellow students. You are expected to take the daily quiz for the next lab.

31. Academic Integrity (A-9.1)

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

32. Withheld Grades Semester Grades Policy (A-54)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

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Dept. Chair  Date: 11/8/13

College Curriculum Chair _____ Date: _____

Dept. Dean _____ Date: _____

College Curriculum Dean _____ Date: _____