

2013-2014 LONG SIGNATURE SHEET

RECEIVED
12/02/13



UNC CHARLOTTE

Proposal Number: BIOL11-22-13b

Proposal Title: Establishment of new Graduate Elective Course BIOL5258 Epidemics and Plagues

Revised
RECEIVED
1-23-14

Originating Department: BIOLOGY

TYPE OF PROPOSAL: UNDERGRADUATE _____ GRADUATE _____ UNDERGRADUATE & GRADUATE XX_ (Separate proposals sent to UCC and Grad. Council)

DATE RECEIVED	DATE CONSIDERED	DATE FORWARDED	ACTION	SIGNATURES
			Approved	DEPARTMENT CHAIR [print name here:] <u>Dr. Martin G. Klotz</u>
			Approved	COLLEGE CURRICULUM COMMITTEE CHAIR [print name here:] <u>[Signature]</u>
			Approved	COLLEGE FACULTY CHAIR (if applicable) [print name here:] <u>STEVEN SABOL</u>
		2/15/14	Approved	COLLEGE DEAN [print name here:] <u>C. Brody</u>
			Approved	GENERAL EDUCATION (if applicable; for General Education courses) [print name here:]
			Approved	UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR (for undergraduate courses only)
2-28-14	3-11-14	4-28-14	Approved	GRADUATE COUNCIL CHAIR (for graduate courses only) [print name here:] <u>ALAN R. FREITAG</u>
				FACULTY GOVERNANCE ASSISTANT (Faculty Council approval on Consent Calendar)
				FACULTY EXECUTIVE COMMITTEE (if decision is appealed)



UNC CHARLOTTE

LONG FORM COURSE AND CURRICULUM PROPOSAL

*To: Course and Curriculum Committee and the Graduate Council

From: Dept of Biology, CLAS, UNC Charlotte

Date: November 22, 2013

Re: BIOL5258 New Graduate Course Proposal

The Long Form is used for major curriculum changes. Examples of major changes can include: creation of a new major, creation of a new minor, creation of a new area of concentration, or significant changes (more than 50%) to an existing program (Note: changing the name of an academic department does not automatically change the name(s) of the degree(s). The requests must be approved separately by the Board of Governors.)

Submission of this Long Form indicates review and assessment of the proposed curriculum changes at the department and collegiate level either separately or as part of ongoing assessment efforts.

*Proposals for undergraduate courses should be sent to the Undergraduate Course and Curriculum Committee Chair. Proposals related to both undergraduate and graduate courses, (e.g., courses co-listed at both levels) must be sent to both the Undergraduate Course and Curriculum Committee and the Graduate Council.

University of North Carolina at Charlotte

New: Graduate Degree Program

Proposal from: Department of Biology

Title: *Establishment of new Graduate Elective Course BIOL5258 Epidemics and Plagues*

A. Proposal Summary

1. Summary

The Department of Biology proposes a new elective course for the PhD and MS in Biology programs. The proposed new course is **BIOL 5258 Epidemics and Plagues**

B. Justification

1. Identify the need addressed by the proposal and explain how the proposed action meets the need.

Master's and Ph.D. students in the biological sciences that aspire for careers in health, environmental and human behavior-related professions would benefit from a detailed understanding of the history, modeling, epidemiology, environmental, and behavioral changes that contributed to the development of selected epidemics and plagues that have dramatically affected plants, agricultural animals, and humans. Currently, we have no such course in our curriculum, and the proposed new course will serve to introduce such content.

Specifically, this course will focus on the history and development of some of the greatest diseases challenging human, animal, and plant health. We will focus on an understanding of the behaviors that contributed to selected epidemics and plagues, as well as the efforts to cope, and their impact on economies and societies. We will also focus on the ethical challenges of disease control and how diseases ultimately can be reduced or eliminated through vaccination, quarantines, changes in behavior, and drugs. Presently no such course exists on the UNC Charlotte campus.

2. Discuss prerequisites/corequisites for courses including class standing.

Admission in the MS or PhD in Biology programs or permission from the instructor for graduate students from other programs. We would encourage students who have aspirations for careers in health, medical, dental, veterinary, pharmacology, physiology, and many other health and agricultural related professions to take this course.

3. Demonstrate that course numbering is consistent with the level of academic advancement of students for whom it is intended.

The numbering for BIOL 5258 is consistent with numbering policy.

1st digit: 5 designates graduate level course work

2nd digit: 2 indicates a concentration course

3rd digit: consistent with established numbering systems:

- 2 - Plant Biology
- 3 - Animal Biology
- 4 - Ecology and Behavior
- 5 - Microbiology/Immunology/Virology
- 6 - Biotechnology
- 7- Physiology

- 8- Developmental Biology
- 9- Anatomy & Morphology

4th digit: at the discretion of the individuals who developed the specific proposals

4. In general, how will this proposal improve the scope, quality and/or efficiency of programs and/or instruction?

Master's and Ph.D. students in the biological sciences that aspire for careers in health, environmental and human behavior-related professions would benefit from an understanding of selected epidemics and plagues that have dramatically affected plants, agricultural animals, and humans. Currently, we have no such course in our curriculum, and the proposed new course will serve to alleviate this deficiency.

Furthermore, this course would add significant understanding to other graduate level courses which are presently being taught in Biology. For example, Microbiology, Plant Physiology, Immunology, Parasitology, and Animal Behavior, are just a few examples where there would be synergistic learning opportunities. Presently such content is not being presented in depth in these other courses. Stated simply, this new course would be a logical extension that would add substantial content for many existing courses.

5. If course(s) has been offered previously under special topics numbers, give details of experience including number of times taught and enrollment figures.

This course has not previously been offered in Biology.

C. Impact

1. What group(s) of students will be served by this proposal? Describe how you determined which students will be served.

As noted above, the impact within the Biology department would be positive. Not only would this new course alleviate a deficiency in our course offerings, but would also add significant understanding to other graduate level courses which are presently being taught in the department. Campus-wide, there were no such graduate-level (5000, 6000, or 8000 level) course offerings that would conflict with the content of this newly proposed course. This new course will expand course offerings for Biology Master's and Ph.D. level students in a subject that is pertinent to their training, but currently lacking. We anticipate that students who have aspirations for careers in health, environmental and human behavior-related professions would benefit from taking this course. Due to the timely subject matter and course content, we would anticipate that graduate students in other disciplines (e.g. History) would also benefit from such a course.

2. What effect will this proposal have on existing courses and curricula?

a. *When and how often will the added course be taught?*

Dr. Bost anticipates teaching this new course every Fall Semester beginning in 2015.

b. *How will the content and/or frequency of offering of other courses be affected.*

The content and/or frequency of other graduate course offerings in Biology will not be affected since Dr. Bost will continue teaching his other courses in addition to the new course. Course content in other Biology courses does not overlap with this course.

c. *What is the anticipated enrollment in the courses added?*

We anticipate the enrollment to be approximately 5 to 8 Master's and/or Ph.D. students per semester. This represents a portion of the number of new students that enroll in graduate studies in Biology each

year and all would be taking the course for credit. As noted above there is also the possibility that graduate students from other programs might participate in this course due to its content and subject matter.

d. *How will enrollment in other courses be affected? How did you determine this?*

We do not anticipate a significant effect on the enrollment in other 5000, 6000, or 8000 level graduate courses in Biology. The Department of Biology is currently restructuring its curriculum to define paths of study for our graduate students as well as providing courses that fill needs for their instruction. We anticipate that this new, elective course will fill such a need and serve those students most interested in careers in the health, environmental and human behavior-related professions.

e. *If the course has been offered previously under special topics numbers, give details of experience including number of times taught and enrollment figures.*

This course has not been previously taught.

f. *Identify other areas of catalog copy that would be affected, e.g., curriculum outlines, requirements for degree, etc.*

As this will be an ongoing course offering, we would establish a 4258/5258 course number along with inclusion of a new catalog entry.

D. RESOURCES REQUIRED TO SUPPORT PROPOSAL

1. Personnel

a. *New faculty*

No new faculty are required.

b. *Qualified faculty members interested in teaching the course.*

Instruction will be by existing tenure track faculty. Dr. Ken Bost developed and will teach this course each Fall semester.

2. Physical Facility

None required beyond existing classrooms.

3. Equipment and Supplies

No additional equipment and supplies are required.

4. Computer

No additional computing resources are required beyond MOODLE 2.

5. Audio

No additional equipment or services will be needed from Media Services. Standard classroom podium is adequate.

6. Other Resources

None

7. Sources of Funding

No new funding required.

E. CONSULTATION WITH THE LIBRARY AND OTHER DEPARTMENTS/UNITS

1. Library Consultation

Attached

2. Consultation with Other Departments and Units

Other graduate school departments were not specifically consulted on this addition since there are no courses being taught at the 5000, 6000, or 8000 levels that resemble the content to be presented in this new course.

The Ph.D. in Biology program has an interdisciplinary approach that involves faculty from the departments of Chemistry, Kinesiology, Mechanical Engineering, Public Health Sciences, Anthropology, Physics and Optical Sciences, and the Carolinas Medical Center. We have a Doctoral Advisory Panel composed of faculty representatives from the participating units, which functions to provide input to the Biology Graduate Committee about doctoral program matters. The members of the Advisory Panel (Dr. Jerry Troutman, Chemistry; Dr. Farah Bahrani, CMC; Dr. Eric Wikstrom, Kinesiology; Dr. Gloria Elliott, Mechanical Engineering; Dr. Craig Allan, Geography and Earth Sciences; Dr. Diane Brockman, Anthropology; and Dr. Irina Nesmelova, Physics and Optical Sciences) were informed of the proposed addition and asked for any input. Their input was incorporated into the final proposal.

F. INITIATION, ATTACHMENTS AND CONSIDERATION OF THE PROPOSAL

1. Originating Unit

The Biology Graduate Faculty initiated discussions for development and implementation of several new graduate level courses in the Fall 2012. Ken Bost developed this course to meet the growing needs for students in the fields of biotechnology, biomedicine, health related fields, and molecular and cellular bases of disease. The Graduate Committee voted on the proposal and unanimously passed on November 18, 2013. The Department of Biology Graduate faculty voted on the proposal and unanimously passed on November 22, 2013.

2. Credit Hour

The Graduate Committee in the Department of Biology has reviewed the course syllabus and has agreed that the new course should receive 3 credit hours.

3. Attachments

a. Course Syllabus attached

b. Proposed Catalog Copy

For a new course or revisions to an existing course, check all the statements that apply:

This course will be cross listed with another course.

4000 and 5000 level designations

- There are prerequisites for this course.
 Admission to graduate school in Biology or permission from the instructor
- There are corequisites for this course.
- This course is repeatable for credit.
- This course will increase/decrease the number of credits hours currently offered by its program.
- This proposal results in the deletion of an existing course(s) from the degree program and/or catalog.

[BIOL 5258. Epidemics and Plagues. \(3\) Prerequisite: Admission to the PhD or Masters program in Biology or permission of the instructor. A study of the history, modeling, epidemiology, environmental, and behavioral changes that contributed to the development of selected epidemics and plagues which have dramatically affected plants, agricultural animals, and humans. \(Fall\)](#)

4. Student Learning Outcomes

Learning outcomes will be assessed using tests, a final exam, and a epidemic or plague essay to be completed by each graduate student (see Syllabus).

This course is cross listed with BIOL4258. A parallel proposal has been submitted through the appropriate undergraduate curriculum approval channels for the BIOL 4258 companion course.

Students enrolled in the 5258 course will have the following additional expectations as copied from the syllabus. This task will count for 10% of the final exam grade:

The Epidemic/Plague of your choice Essay will be due on or before the date of the final exam. Try to follow the outline below when writing about your Epidemic/Plague of choice. Some topics in this outline might have more content than others depending upon your particular Epidemic/Plague. In fact, some of these topics may not be applicable, and you may want to add some other topics that are not listed. Also, feel free to change the order of the topics around if they do not fit the way that you would like to present them. The text length should be at least 2500 words. Feel free to go over. You can format the text pages anyway that you like. In addition to the text, provide a list of sources that you used to obtain the information. If you want to quote references in the text you can, or you can just provide an inclusive list of sources at the end. Feel free to use URLs from the web as sources. Microsoft Word documents or PDFs are fine, and you can submit these via email or as a hard copy. Be sure to give them to me prior to or during the final exam. This task will count for 10% of your final exam grade (i.e. 15% final exam + 10% Essay).

Suggested outline topics for the Epidemic/Plague of choice

Setting the stage: a general description of the Epidemic/Plague including era, setting, historical perspective, etc.

What was the cause of the epidemic/plague?

Details of the infectious agent, parasite, transmissible agent, or deficiency?

Who usually was most affected by this Epidemic/Plague?

Were their gender, geographic, racial, or species biases? If so, why?

What was the magnitude of the Epidemic/Plague on humans, animals, plants, etc.

What was the estimated cost of the Epidemic/Plague?

Where did the Epidemic/Plague occur, including cartography?

What was the biometric pattern for spreading of this Epidemic/Plague ?

How was the Epidemic/Plague investigated? Were governmental agencies involved?

What was the "politics" and/or sociology of the Epidemic/Plague?

What policies or methods were instituted to limit the Epidemic/Plague?

Is there any way to "cure" or overcome this Epidemic/Plague in the future?

Why did you pick this Epidemic/Plague?

5. Textbook Costs: *Have electronic textbooks, textbook rentals, or the buyback program been considered and adopted?*

Not applicable. All course materials will be distributed through MOODLE 2 online.

Title: Epidemics and Plagues: BIOL 5258 (3 credit hours)

Ken Bost, Ph.D., Instructor

Time: Friday 11:00 AM to 12:15 PM Location: Woodward 154

Office Hours by appointment: Woodward 390 D

Email: klbost@uncc.edu

Web page: <http://clas-pages.uncc.edu/kenneth-bost/>

Course Catalog

BIOL 5258 Epidemics and Plagues: Prerequisites: Biology graduate student or permission from instructor. A study of the history, modeling, epidemiology, environmental, and behavioral changes that contributed to the development of selected epidemics and plagues that have dramatically affected plants, agricultural animals, and humans. Fall

Course Summary:

This course will explore the history and development of some of the greatest diseases challenging human, animal, and plant health. We will focus on an understanding of the behaviors that contributed to selected epidemics and plagues, as well as the efforts to cope, and their impact on economies and societies. We will also focus on the ethical challenges of disease control and how diseases ultimately can be reduced or eliminated through vaccination, quarantines, changes in behavior, and drugs.

Format:

Hybrid course consisting of 1.5 hours of class meeting per week and accompanying online tasks to be completed. Course material will be presented in the form of lectures, readings, videos, and in-class demonstrations. Class materials and assignments can be accessed via MOODLE 2.

What you will need for this course:

Content for this course will be accessible online through MOODLE 2, therefore you will need access to a computer. It would be most convenient to have a personal computer, but you can also access the course from common computers at the university (e.g. Atkins Library). Your computer will need to be able to read PDF files, as well as PowerPoint presentations.

The required text for the course will be **SCOURGE** by Jonathan B. Tucker, copyright 2001 (ISBN-10: 0802139396 ISBN-13: 978-0802139399)

Grading for the course: Your grade for the course will be determined by scores on 2 tests and a final exam.

Test #1	25%
Test #2	25%
Online Assignments	25%
Comprehensive Final Exam	15%
Epidemic/Plague Essay	10%

Grading Scale: A = 90-100, B = 80-89, C = 70-79, U = <69

Tests #1 and #2 are not meant to be cumulative. Each particular test will focus on the material presented in that particular segment of lectures indicated below. Having said this, the information given in this course builds on previous lessons. For example, the material presented in Lecture #1 will form a basis for information given in later lectures and subsequent tests.

You will have 75 minutes to complete Tests #1 and #2, and 150 minutes to complete the Final Exam. Tests and the Final exam are to be taken without any assistance. You cannot use your notes or any books. You cannot use any online information. You cannot get assistance from any other person while you are taking the test. Signing each test indicates that you adhered to these conditions and the honor code while taking tests and exam, and indicates that you received no outside assistance.

Online Assignments will constitute 25% of the final grade. These tasks will be accessible online in MOODLE 2, and will be based on the reading assignments given for each class period. Tasks could include one or more of the following: 1) a careful reading of the required texts or other materials provided; 2) a written summary of the reading assignment; 3) using the reading assignment to address specific questions that are posed; and 4) using the reading assignment as a basis for additional questions that are posed.

Outputs for each of these tasks could include one or more of the following; 1) a written document that is turned in for a grade; or 2) written notes that can be used at exams for reference.

The Final Exam will be cumulative. We will talk in greater detail about the structure of the final exam during the final lecture period.

The Epidemic/Plague of your choice Essay will be due on or before the date of the final exam. Try to follow the outline below when writing about your Epidemic/Plague of choice. Some topics in this outline might have more content than others depending upon your particular Epidemic/Plague. In fact, some of these topics may not be applicable, and you may want to add some other topics that are not listed. Also, feel free to change the order of the topics around if they do not fit the way that you would like to present them. The text length should be at least 2500 words. Feel free to go over. You can format the text pages anyway that you like. In addition to the text, provide a list of sources that you used to obtain the information. If you want to quote references in the text you can, or you can just provide an inclusive list of sources at the end. Feel free to use URLs from the web as sources. Microsoft Word documents or PDFs are fine, and you can submit these via email or as a hard copy. Be sure to give them to me prior to or during the final exam. This task will count for 10% of your final exam grade (i.e. 15% final exam + 10% Essay).

Suggested outline topics for the Epidemic/Plague of choice

Setting the stage: a general description of the Epidemic/Plague including era, setting, historical perspective, etc.

What was the cause of the epidemic/plague?

Details of the infectious agent, parasite, transmissible agent, or deficiency?

Who usually was most affected by this Epidemic/Plague?

Were their gender, geographic, racial, or species biases? If so, why?

What was the magnitude of the Epidemic/Plague on humans, animals, plants, etc.

What was the estimated cost of the Epidemic/Plague?

Where did the Epidemic/Plague occur, including cartography?

What was the biometric pattern for spreading of this Epidemic/Plague ?

How was the Epidemic/Plague investigated? Were governmental agencies involved?

What was the "politics" and/or sociology of the Epidemic/Plague?

What policies or methods were instituted to limit the Epidemic/Plague?

Is there any way to "cure" or overcome this Epidemic/Plague in the future?

Why did you pick this Epidemic/Plague?

Assignments will be due at the class period immediately following the one in which they were assigned.

Attendance: As active learning will occur during class meetings, attendance is strongly encouraged for all students.

Documentation: Participation in the course will be monitored and documented by the completion of tests, the final exam, and accessing lecture notes, articles, reviews, and web links via MOODLE 2. Learning outcomes will be assessed by performance on tests and a final exam to evaluate knowledge gained.

Disability accommodations: Students in this course seeking accommodations to disabilities must first consult with the Office of Disability Services and follow the instructions of that office for obtaining accommodations. The University disability policy can be found at <http://legal.uncc.edu/policies/up-501>

Academic Integrity: All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as

provided in the Code. Definitions and examples of plagiarism are set forth in the Code. The Code can be accessed at the following URL:

<http://legal.uncc.edu/policies/up-407>

Nondiscrimination Policy: All students are required to abide by the UNC Charlotte non-discrimination policy found at <http://legal.uncc.edu/nondiscrimination> . This includes adherence to the disability policy found at <http://legal.uncc.edu/policies/up-501> , sexual harassment policy found at <http://legal.uncc.edu/policies/up-502> , fighting word harassment policy found at <http://legal.uncc.edu/policies/up-503> , sexual orientation policy found at <http://legal.uncc.edu/policies/up-504> , and the policy on responsible use of University computing and electronic communication resources found at <http://legal.uncc.edu/policies/up-307>

Religious accommodation: Flexibility in scheduling will be made to accommodate religious practices and holidays for those students with "sincerely held religious beliefs, in keeping with UNC-Charlotte policy found at: <http://legal.uncc.edu/policies/up-409>

Copyright statement for the course materials: The images, artwork, videos, and text presented in class and contained within the Powerpoint Presentations on the BIOL 52XX MOODLE 2 site will be used for teaching purposes in the context of this course. Students can only use this material for learning, and cannot disseminate these images, artwork, videos, or text in the Powerpoint Presentations for any other purpose. This is in keeping with the policy on responsible use of University computing and electronic communication resources found at <http://legal.uncc.edu/policies/up-307>

Changes to the syllabus: The standards and requirements set forth in this syllabus may be modified at any time. Notice of such changes will be by announcement in class or by changes to this syllabus posted on the MOODLE 2 site.

Detailed Course Topics and Readings

Date	Topic	Readings	Tasks
Class 1	The 14 steps of an Epidemic Investigation: The CDC	MMWR PDF	Pick an Epidemic
	The History of disease		
Class 2	Epidemic and Plague Networks & Modeling		Chart your disease
	Chartography		
Class 3	Smallpox 1	Scourge 1-5	
Class 4	Smallpox 2	Scourge 6-8	
Class 5	Smallpox 3	Scourge 9-12	
Class 6	Exam 1		
Class 7	Plant Epidemics 1	Reading 1	Assignment 1
Class 8	Plant Epidemics 2		
Class 9	The Pellagra Epidemic	Reading 2	Assignment 2
Class 10	Prion Disease: The Mad Cow Disease Epidemic	Readings 3&4	Assignment 3
Class 11	Exam 2		
Class 12	The Cancer Epidemic	Readings 5&6	Assignment 4

Class 13	The AIDS Epidemic	Reading 7&8	Assignment 5
Class 14	The new AIDS: Chagas Disease	Reading 9	Assignment 6
Final	Comprehensive Final Exam		
	Epidemic/Plague Essay		



J. Murrey Atkins Library

Consultation on Library Holdings

To: Dr. Kenneth Bost

From: Dr. Melanie Sorrell

Date: 9/17/13

Subject: BIOL 42XX/52XX: Epidemics and Plagues

Summary of Librarian's Evaluation of Holdings:

Evaluator: Melanie Sorrell

Date: 9/17/13

Check One:

1. Holdings are superior
2. Holdings are adequate
3. Holdings are adequate only if Dept. purchases additional items.
4. Holdings are inadequate

Comments:

This is a proposal for a new undergraduate and graduate level course, which includes a major writing assignment. Library holdings should be adequate to support student research for this course (see list of items held by subject heading below). Students will have access to relevant databases including Academic Search Complete, Biological Sciences, Historical Abstracts, MasterFILE Complete, PubMed, Science Direct, Web of Science, Springer Link, and Science Reference Center.

LC Subject Heading	Total items held
Epidemiology--Methodology	32 monographs
Epidemics	258 monographs
Plant diseases	66 monographs
Immunization	50 monographs
Diseases and history	22 monographs
Journal of the History of Medicine and Allied Sciences	Journal title
Epidemiology and Infection	Journal title

Melanie Sorrell

Evaluator's Signature

9/17/13

Date

Summary Sheet of Responses to Comments on BIOL 11-22-13b
*Establishment of new Graduate Elective Course BIOL5258 Epidemics and
Plagues*

? If both Master and PhD students are taking this, shouldn't the number be a 6000 or 8000?

Response: Our Doctoral and MS programs specify how many graduate credit hours must be taken at the 8000 and 6000 levels, respectively. This allows graduate students to also take 5000 level courses for credit. The course is designed at the advanced UG / graduate level to serve a particular cohort of students, including some that are not enrolled in Biology degree programs but have the necessary prerequisite(s). Therefore, offering this course at the 5000 level is the best way to serve our students at UNC Charlotte.

? There needs to be a statement in the proposal indicating that a parallel proposal has been submitted through the appropriate undergraduate curriculum approval channels for the BIOL 4258 companion course; this could be added in section F.4.

Response: The Long form now includes this statement in F4.

? Undergraduate & Graduate (Separate proposals went to UCCC and Grad Council)?

Response: BIOL 4258 has been approved by the UCCC.

? Clarify semester offered - there are two different references regarding the semester the course will be offered. On page 4 (**under "C. Impact -- 2a"**), the proposal states "Dr. Bost anticipates teaching this new course every Spring semester...". However on page 7 the proposed catalog copy lists Fall semester. The two should agree.

Response: This course will be taught in the Fall semester. The discrepancy in the document has been changed.

? The grading scheme provided in the BIOL 5258 syllabus is an undergraduate scheme; this needs to be replaced with a graduate grading scheme.

Response: The grading scheme is now corrected in the syllabus.

? Recommend that the syllabus needs to include a stronger explanation of what activities make up the online component since this makes up 25% of their grade.

Response: This is now included as a separate section on the syllabus titled Online Assignments.

? There are some textual issues especially under **Impact (page 4)** that should be re-written for clarity:

o Section C. Impact (response to Question 1)

1. second line: delete "this course would"

2. third line: delete "could be identified which would"

Response: This section has been clarified.