

Add Course Request

Submitted on: 2014-04-08 10:07:25

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| 1. COURSE SUBJECT | ANSC |
| 2. COURSE NUMBER (OR PROPOSED NUMBER) | 2695 |
| 3. COURSE TITLE | Special topics: Probiotics and Prebiotics |
| 4. INITIATING DEPARTMENT or UNIT | Animal Science |
| 5. NAME OF SUBMITTER | Mary Anne R Amalaradjou |
| 6. PHONE of SUBMITTER | Phone: +1 860 486 6620 |
| 7. EMAIL of SUBMITTER | Email: mary_anne.amalaradjou@uconn.edu |
| 8. CONTACT PERSON | Gary Kazmer |
| 9. UNIT NUMBER of CONTACT PERSON (U-BOX) | 4040 |
| 10. PHONE of contact person | Phone: (860) 486-1011 |
| 11. EMAIL of of contact person | Email: gary.kazmer@uconn.edu |
| 12. Departmental Approval Date | 4/3/14 |
| 13. School/College Approval Date | 4/4/14 |
| 14. Names and Dates of additional Department and School/College approvals | |
| 15. Proposed Implementation Date | Term: Fall, Year: 2014 |
| 16. Offered before next printed catalog is distributed? | |
| 17. General Education Content Area | |
| 18. General Education Skill Code (W/Q). Any non-W section? | None |
| 19. Terms Offered | Semester: Fall Year: Every_Year |
| 20. Sections | Sections Taught: 1 |
| 21. Student Number | Students/Sections: |
| 22. Clarification: | |
| 23. Number of Credits | 3 if VAR Min: Max: credits each term |
| 24. INSTRUCTIONAL PATTERN | |

| | |
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| Two classes per week (75 min per class) | |
| 25. Will this course be taught in a language other than English? | No If yes, then name the language: |
| 26. Please list any prerequisites, recommended preparation or suggested preparation: There are no pre-requisites for the course. However a background in general microbiology or concurrent registration in a microbiology course would be recommended | |
| 27. Is Instructor, Dept. Head or Unit Consent Required? | No |
| 28. Permissions and Exclusions: | |
| 29. Is this course repeatable for credit? | If yes, total credits allowed: Allow multiple enrollments in same term? |
| 30. Grading Basis | Graded |
| 31. If satisfactory/unsatisfactory grading is proposed, please provide rationale: | |
| 32. Will the course or any sections of the course be taught as Honors? | |
| 33. Additional Details: | |
| 34. Special Attributes: | |
| 35. REGIONAL CAMPUS AVAILABILITY: | |
| 36. PROVIDE THE PROPOSED TITLE AND COMPLETE CATALOG COPY: | |
| ANSC 2695 Special Topics: Probiotics and Prebiotics | |
| Three credits. Two 75 min class periods. Recommended or concurrent registration preparation: MCB 2610 or equivalent. | |
| The biology, uses, effectiveness and safety of probiotics and prebiotics. Molecular mechanisms underlying the health benefits attributed to the consumption of pre and probiotics. Application of pre and probiotics to promote human and animal health, including safety and regulation. | |
| 37. RATIONALE FOR ACTION REQUESTED | |
| This course will cover topics not previously discussed in departmental courses and provide information about a topic of interest to students in Animal Science. | |
| 38. SYLLABUS: | |
| Online URL: (https://web2.uconn.edu/senateform/request/course_uploads/maa04003-1396966031-ANSC_2695_probiotics.docx) | |
| 39. Course Information: ALL General Education courses, including W and Q courses, MUST answer this question | |
| 40. Goals of General Education: All Courses Proposed for a Gen Ed Content Area MUST answer this question | |
| 41. Content Area and/or Competency Criteria: ALL General Education courses, including W and Q courses, MUST answer this question.: Specific Criteria | |

- a. **Arts and Humanities:**
- b. **Social Sciences:**
- c. **Science and Technology:**
 - i. **Laboratory:**
- d. **Diversity and Multiculturalism:**
 - 43. **International:**
- e. **Q course:**
- f. **W course:**

42. RESOURCES:

Does the department/school/program currently have resources to offer the course as proposed
YES

If NO, please explain why and what resources are required to offer the course.

43. SUPPLEMENTARY INFORMATION:

ADMIN COMMENT:

5/5/14 Senate approved one session special topics for fall 2014. // New2000-levelSpecTopics_04/14/14kcp.

Syllabus:

**ANSC 2695 Special Topics
Probiotics and Prebiotics
Fall 2014**

Instructor & General Course Information

Instructor: Mary Anne Amalaradjou, PhD
George White Building, Room 212B
Phone: 860-486-6620
Email: mary_anne.amalaradjou@uconn.edu
Office Hours: Wed 12-1 PM

Course Information: ANSC 2695: Special Topics, Probiotics and Prebiotics.
3 Credits
Class Meetings: Tues. & Thurs.
3:30-4:45 PM, GW, Room
8/26/2014-12/15/2014

Course Web Site: <http://huskyct.uconn.edu/>

Prerequisites: There are no pre-requisites for the course. However a background in general microbiology or concurrent registration in a microbiology course would be recommended

Textbook: There is no required text for this course. Suggested textbooks are:

1. Probiotics and prebiotics: scientific aspects. G.W. Tannock, ed., Caister Academic Press.
2. Prebiotics and probiotics. S. Jardine. Wiley, John & Sons.
3. Probiotics: biology, genetics and health. Min-Tze Liong. Springer.
4. Direct-fed microbials and prebiotics for animals. T. R. Callaway and S. C. Ricke. Springer
5. Bioactive foods in promoting health. Watson, Ronald Ross, Preedy, Victor R. Elsevier

Course Description

This course will provide students with an understanding of probiotics and prebiotics, their biology, uses, effectiveness, and safety. Students will be equipped with the tools and reference materials necessary to understand the molecular mechanisms underlying the health benefits attributed to the consumption of pre and probiotics. The remainder of the course will focus on the various applications of pre and probiotics in promoting human and animal health, their safety and regulation.

Student assignments will include: a written paper and an individual short presentation about a supplement or functional food chosen by the student, completion of two reading assignments, and two in class exams. Other in-class activities such as reading assignments or quizzes will be administered.

Course Learning Objectives

At the completion of this course, students should be able to:

- Understand pre and probiotics and their biology, mechanism of action and health benefits
- Understand the role of microbiome in health and disease
- Use library and internet resources to obtain primary scientific data.
- Write and present professionally about a dietary supplement, or functional food.

Course Format

The course will consist of regular class meetings as noted on the syllabus, in-class quizzes, and in-class exams. If you are absent, you are responsible for obtaining notes for material presented in class that day.

Grading

Examinations will be in-class. Your final course grade will be based completion of exams, an in-class presentation, and a paper. All assignments are required and due on the deadline. Late work will be deducted a minimum of one letter grade from the final grade.

Graded Assignments & Value Points / Final Grade

| | | Total | |
|-------------------------|------------|---------|------|
| | | 465-500 | = A |
| | | 450-464 | = A- |
| | | 435-449 | = B+ |
| | | 415-434 | = B |
| | | 400-414 | = B- |
| EXAM 1 | 100 points | 385-399 | = C+ |
| EXAM 2 | 100 points | 365-384 | = C |
| Weekly Quizzes/In-class | 50 points | 350-364 | = C- |
| Assignments (readings) | 100 points | 335-349 | = D+ |
| Paper | 100 points | 315-334 | = D |
| In-Class Presentations | 50 points | 300-314 | = D- |
| Total | 500 points | <300 | = F |

Assignments

Course assignments will include at least two take home assignments and various in-class assignments. You will be required to prepare a paper about a particular dietary supplement or functional food and present your work to the class. Other papers or readings will be assigned. **Collaboration with classmates on assignments is prohibited unless otherwise stated on the assignment guidelines.** Materials submitted for other courses are not permitted to be reused for any assignments or other coursework.

Exams and Quizzes

The exams will be completed in class, individually. **Collaboration with classmates or previous students on the exam is prohibited and will result in zero points.** Short in-class quizzes may also be given.

Course Policies

Attendance. Attendance will not be taken, but it will be the student's responsibility to attend all lectures and obtain all instructional materials. It will be the student's responsibility to take his/her

own lecture notes as these will be needed to properly complete the homework. **Make-ups for in class assignments or quizzes will only be provided in extreme circumstances with prior instructor approval.**

Email. Throughout the semester, your instructor may communicate important information to the class via email. The email address on file with UCONN (@uconn.edu, @huskymail.uconn.edu) will be used for all communications. If you use other email accounts (gmail, yahoo, etc.), check your UCONN e-mail regularly or forward it to your preferred account.

Classroom Etiquette. Class will start promptly as scheduled. Please turn off the ringer on cell phones during class time. Please be considerate of classmates during class time by minimizing comments to others, arriving on time, and not leaving before the end of class. *The topics of this course may lend itself to discussion of individuals' supplement use. Please do not feel obligated to discuss your supplement use/health, and please respect the privacy of others in the class who do, by not discussing others outside of class.*

Academic Responsibility. All students are expected to follow the student code with regard to academic honesty. Any breaches of that code will be dealt with according to procedures outlined in the UCONN Responsibilities of Community Life: The Student Code, which can be found online at <http://www.dosa.uconn.edu/>. Penalties include but are not restricted to: loss of credit on assignments, presentations, or exams; an automatic failing grade for the course.

University Policy on Plagiarism. Academic misconduct is dishonest or unethical academic behavior that includes, but is not limited, to misrepresenting mastery in an academic area (e.g., cheating), intentionally or knowingly failing to properly credit information, research or ideas to their rightful originators or representing such information, research or ideas as your own (e.g., plagiarism). Plagiarism is taking the work of another person and passing it as your own. This means copying from print or electronic sources. **Plagiarized papers are typically:**

Downloaded off an Internet site
Copy & pasted from an online database
Copied verbatim from a book or article
Not cited accurately

Academic Integrity. In this course we aim to conduct ourselves as a community of scholars, recognizing that academic study is both an intellectual and ethical enterprise. You are encouraged to build on the ideas and texts of others; that is a vital part of academic life. You are also obligated to document every occasion when you use another's ideas, language, or syntax. You are encouraged to study together, discuss readings outside of class, share your drafts during peer review and outside of class, and go to the Writing Center with your drafts. In this course, those activities are well within the bounds of academic honesty. However, when you use another's ideas or language—whether through direct quotation, summary, or paraphrase—you must formally acknowledge that debt by signaling it with a standard form of academic citation. Even one occasion of academic dishonesty, large or small, on any assignment, large or small, will result in failure for the entire course and referral to Student Judicial Affairs. For University policies on academic honesty, please see UConn's Responsibilities of Community Life: The Student Code and the Office of Community Standards: <http://www.community.uconn.edu>

University Writing Center. All UConn students are invited to visit the University Writing Center for individualized tutorials. The Writing Center staff includes talented and welcoming graduate and undergraduate students from across the humanities, social sciences, and sciences. They

work with writers at any stage of the writing process, from exploring ideas to polishing final drafts. Their first priority is guiding each student's revisions, so they frequently provide a sounding board for a writer's ideas, arguments, analytical moves, and uses of evidence. They can also work with you on sentence-level concerns, but please note that they will not proofread for you; instead, they will help you become a better editor of your own work. You should come with a copy of the assignment you are working on, a current draft (or notes if you are not yet at the draft stage), and ideas about what you want out of a session. Tutorials run 45 minutes and are free. You can drop in or make an appointment. For hours, locations, and more information, please go to writingcenter.uconn.edu.

UConn Writing Center; <http://writingcenter.uconn.edu/>

Students With Disabilities: Please see the instructor to make arrangements for special assistance. Please see: http://www.csd.uconn.edu/accommodation_services.html for an overview of accommodations and services at UConn.

Rescheduling Finals: Please refer to the Office of Student Services policy on rescheduling of finals: <http://www.ossa.uconn.edu/> Accommodations may be arranged for bunched finals, extenuating circumstances, and University closings but must be approved first through OSSA.

Class Schedule (Tentative)

| <u>Date</u> | <u>Topic</u> |
|--------------------|--|
| 8/26 | Introduction to pre and probiotics |
| 8/28 | Probiotic biology, definition and classification |
| 9/2 | Sources/production and incorporation in food |
| 9/4 | Role of pre and probiotics in health and disease (Quiz 1) |
| 9/9 | Mechanism of action of probiotics: Physiology and production of antimicrobial substances |
| 9/11 | Role in gut health - barrier function/ cytoprotection |
| 9/16 | Immunomodulation/Inflammation/Gut-brain axis |
| 9/18 | Microbiome and probiotics (Quiz 2) |
| 9/23 | Prebiotics- Sources, chemistry and mechanism of action |
| 9/25 | Prebiotics in the gastrointestinal tract |
| 9/30 | Pre and probiotics in Oral health |
| 10/2 | Exam 1 |
| 10/7 | Role in gastrointestinal disturbances/infections |
| 10/9 | Metabolic disorders and obesity |
| 10/14 | Allergy and autoimmune diseases/HIV |

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| 10/16 | Neurology and psychiatry (Quiz 3) |
| 10/21 | Urogenital tract and Microbiota |
| 10/23 | Respiratory infections |
| 10/28 | Probiotics and cancer |
| 10/30 | Direct fed microbials in Animal health and nutrition (Quiz 4) |
| 11/4 | Bioengineering of Probiotics |
| 11/6 | Probiotic delivery and survival |
| 11/11 | Models to study probiotics (Paper due in-class) |
| 11/13 | Challenges to probiotic health claims, safety and regulations, market trends (Quiz 5) |
| 11/18 | Functional foods and personalized nutrition, Guest Speaker: Dr. Bradley Bolling, Nutritional Sciences |
| 11/18 | Lactoceuticals, Guest Speaker: Dr. Dennis D'Amico, Animal Sciences |
| 11/20 | Student presentations |
| 11/25 & 11/27 | No class Thanksgiving break |
| 12/2 | Student presentations |
| 12/4 | Student presentations |
| Finals week | Exam 2 |