



**Class Schedule:** <https://sis.rutgers.edu/soc/#home>

**Instructor:** Dr. Chitra Ponnusamy (“Dr. P”)  
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Food Science Room #203, Rutgers University  
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Office Hours: After class; By appointments

For appointments: [MicrosoftBookings](#)

DO NOT SEND ANY E-MAIL MESSAGE VIA CANVAS.

### Course Website, Resources, and Materials

All of the materials that you will need for this course will be posted in the class Canvas website (<https://tlt.rutgers.edu/canvas>). Textbook: There is NO mandatory textbook required for this course.

### Course Description

The course starts with an introduction to nutrients, food microbial ecology and human microbiome, and their roles in health and disease processes and prevention. Recent studies on the various health claims of probiotic foods and supplements will be discussed. The course provides an understanding into the functional food components (e.g., antioxidants, phytochemicals, bioactive peptides) inherent in various foods and how they are being tapped and utilized for their health promoting benefits.

### SAS Core Curriculum Learning Goals



This course is core certified for Natural Sciences (NS)- e & f Goals.

Goal e. Understand and apply basic principles and concepts in the physical or biological sciences.

Goal f. Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis

### Objectives of the Course

At the end of the course, students will be able to:

1. Define the key terms – Human Microbiome, Microbial Ecology, Probiotics, prebiotics, Synbiotics, Functional Foods and nutraceuticals- that are used to discuss the scientific relationship between food and health.
2. Identify the potential impact of functional foods/supplements and learn their mechanistic actions on health.
3. Understand and be able to assess how the functional food ingredients are being utilized by food processing industry.

ATTENDANCE IN CLASS:

8 random lecture days will be chosen to take attendance in class. Your being in class really would help me round off your final score. For absences, follow the self-reporting absences given below in this syllabus (pages 4-5).

## Assignments/Responsibilities, Grading, and Assessment

### GRADING & ASSESSMENT

#### 3 Graded Submissions for this course

1. 3 exams (not cumulative): Exams will be ONLINE in Canvas via Respondus browser with monitor.

All 3 exams will be open for 24-48 hours. Respondus lockdown browser with monitor will be used for all 3 exams in this course. ALL EXAM DATES MUST BE FOLLOWED; If extension is needed by any student for exam(s), you need to request Dean of Students, Rutgers to email me per pages 4-5 in the syllabus.

2. Assignment (divided into 4 parts submissions; AP 1-4). Follow the date posted for each submission in Canvas. All late submissions will be graded for 50% of the points. Follow comments posted in Canvas for each Assignment part.

3. Course Evaluations (2 CE): Via Respondus Lockdown Browser with monitor  
CE test your existing knowledge. These evaluations are timed; one submission only.  
Full points will be given to you for answering all questions. Points will be adjusted at the end of the semester.

3 Exams	Exam 1-3 25-50 MCQs. <i>Not cumulative.</i> 25 points each exam	25X3= 75 points
Assignment (Parts 1-4)	AP 1-4 5 points each part (Late submission- 2.5 points each part)	5X4= 20 points
2 Course Evaluations	Pre- & Post- Course Evaluations (CE 1-2) 2.5 points each CE (NO LATE SUBMISSION)	2.5X2= 5 points
Total		100 points

**Final Exam/Paper Date and Time:** [Online Final Exam Schedule](#).

EXAM POLICY: Be honest and face the exams. Anyone caught cheating on the exams will be dealt with **harshly**. It is not that hard to do well in this class; do not risk your academic career by cheating. Cheating is a high risk, low payoff gamble.

GRADING GRID:	“A” = 90 and above	“B+” = 85-89
“B” = 80 – 84	“C+” = 75-79	“C” = 70 - 74
“D”: 60-69	“F” = below 60% <u>and/or</u> if you do not attempt 1 or more exam(s)	

## Course Schedule

Topics	
Introduction to Food as Medicine & Syllabus	CE-1 opens
Nutrients in Foods- I	
Nutrients in Foods- II	
Human Microbial Ecology	
Disease Processes- I	
Disease Processes- II	
Pre- & Pro-biotics in Foods- I	AP-1 opens
Pre- & Pro-biotics in Foods- II	
Exam- 1	
Guest lecture- Microbial Control of Human Genome	
How does brain control our eating- video?	AP- 1 submission
How do you study microorganisms in the gut?	
Nutraceuticals & Functional Foods	
Carbohydrates: Functional components	AP-2 opens
Fats: Is the butter back?	
Peptides & Proteins: The Builder Stuff	
Insect Proteins, Microalgae & Fish: Up on a Pedestal	
Red Wine, Coffee & Chocolate: The Ultimate for Health	AP-2 submission
Soy, nuts, Seeds, Mushrooms: The Giants	AP-3 opens
Exam- 2	
Phytochemicals: Eat them up	
Plant Extracts & Supplements- I	
Plant Extracts & Supplements- II	AP-3 submission
Science behind the foods that we consume	AP-4 opens
Processing Technologies- I	
Non-Thermal Processing Technologies	
Conventional vs Organic Foods	
Molecular Biological Processes in Foods	AP-4 Submission
Processing Technologies- II	
<b>Final Exam/Paper Date and Time:</b> <a href="#">Online Final Exam Schedule.</a>	

## ACADEMIC INTEGRITY

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated, and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

### **Cheating and Plagiarism**

(From Spring 2010 Andy Egan 01:730:252 Eating Right): “Cheating on tests or plagiarizing materials in your papers deprives you of the educational benefits of preparing these materials appropriately. It is personally dishonest to cheat on a test or to hand in a paper based on unacknowledged words or ideas that someone else originated. It is also unfair, since it gives you an undeserved advantage over your fellow students who are graded on the basis of their own work. In this class we will take cheating very seriously”.

Turnitin will be used to assess students’ submissions and all suspected cases of cheating and plagiarism will be automatically referred to the Rutgers Academic Integrity office.

**Rutgers Dean of Students** <http://deanofstudents.rutgers.edu/>

The University does recognize that temporary conditions and injuries can be problematic and may adversely affect a student’s ability to fully participate in class.

**Absences or making up work:** <https://temporaryconditions.rutgers.edu/>

The Dean of Students Office at Rutgers University-New Brunswick provides solutions, services, and support to help students navigate Rutgers University. By focusing on students' educational, social, and personal development, staff in the Office promote academic success and student retention. The Office serves as a student support network by providing advocacy, problem resolution, and critical incident intervention for those times when additional assistance is needed.

- **Self-Reporting Absences:** For absences in class or labs less than a week that are not confidential in nature, students need to inform faculty directly by using the Absence Reporting System (ARS) (<https://sims.rutgers.edu/ssra/>).
- **Longer Periods of Absence:** If you anticipate missing more than one week of classes for serious illness, confidential, or sensitive personal reasons, you should also consult with a New Brunswick Dean of Students who will help to verify your extended absences from classes.
- **Absences due to illnesses:** If your absence is due to illness, visit New Brunswick Health Services for information about campus health services, including information about: how to make an appointment, self-care advice for colds/flu, mental health and counseling options.

**Just In Case Web App** <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

### **Counseling, ADAP & Psychiatric Services (CAPS)**

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ [www.rhscaps.rutgers.edu/](http://www.rhscaps.rutgers.edu/)  
CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

### **Violence Prevention & Victim Assistance (VPVA)**

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / [www.vpva.rutgers.edu/](http://www.vpva.rutgers.edu/)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932- 1181.

### **ACCOMODATIONS FOR STUDENTS WITH DISABILITIES**

Please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

**Disability Services:** (848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

**Scarlet Listeners**

(732) 247-5555 / <http://www.scarletlisteners.com/>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.