

Syllabus–Fall 2016

Science of Foods for Health

TAMU-HORT 641

<http://agrilife.org/foodsforhealth/>

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Texas A&M University-College Station-Room: CTQ 120B

Lecture: Tue and Thur 2:00 to 3:30 P.M.

This course will be offered simultaneously on TTVN (Trans Texas Video Network) to three different locations originated from Texas A&M University.

Office Hours: Tue: 4:00 – 5:00 PM or Arranged by appointment, and also through phone and email. Office Location: Centeq Suite A120.

Course Description: HORT 641. Science of Foods for Health (3-0). Credit 3. Provides recent scientific advances on knowledge of foods for health using evidence based research justification; includes interdisciplinary topics emphasizing horticultural science, nutrition and biochemistry. A unique integrated blend of conventional, worldwide web and distance education through TTVN will be used to stimulate and develop thought provoking and critical thinking abilities among students. Prerequisite: Approval of Instructor

Course Outline:

1. Introduction: Consumers' changing perceptions of quality in the era of food & nutritional insecurity (1.5 hr)
2. Current functional foods trends (1.5 hr)
3. Framing the problem (1.5 hr)
4. Impact of non-thermal processing methods on bioactive compounds (1.5 hr)
5. Biosynthesis and Engineering of Plant Natural Products (1.5 hr)
6. Breeding and Plant Genetics (1.5 hr)
7. Crop management strategies to improve bioactives (cultural, environmental) 3.0 hr
8. Evidence based justification- cardiovascular diseases (1.5 hr)
9. Nutrition in sports (1.5 hr)
10. From Crops to the Clinic: Black Raspberries and Oral Health (1.5 hr)
11. Anthocyanin pigments: Stability, availability, and biotransformation in the gastrointestinal Tract (1.5 hr)
12. Carotenoids: Epidemiology, Bioavailability and Metabolism (1.5 hr)
13. Structural and functional relationships (4.5 hr)
14. Characterization of bioactive compounds (1.5 hr)

15. Learning and educational strategies (1.5 hr)
16. Dietary Supplements (1.5 hr)
17. Evolution of science to policy (1.5 hr)
18. Student presentations (7.5 hr)
19. Mid Term Exam Review (1.5 hr)
20. News articles about the health benefits and impact on society: Lessons learned and recommendations (1.5 hr)
21. Final exam Review (1.5 hr)

Guest Lectures: Many topics are presented by the recognized authorities in the field.

Text: No specific text book; however, the instructor will provide information in web page.

Exams and Grading

Mid Term Exam- Oct 13, 2016	25 %	25 points
Final Exam- Dec 9 th , 2016	30 %	30 points
Term paper and presentation <i>(Final term paper due by December 1st 2016)</i>	30 %	30 points
Lessons learned from news articles	10%	10 points
Web and class discussion	5 %	5 points
		Total Points = 100 points

Grading Scale: 100 point scale, A=91-100. B=81-90. C=71-80. D=61-70. Your grade will be based on your mathematical average rounded to the next whole number.

Attendance and Make-Up Exams (<http://student-rules.tamu.edu/rule07>).

Students who miss an exam may be allowed to take a make-up exam, Makeup exams may differ in both form and content from the regularly scheduled exam. If you miss the exam, you must satisfy all of the following requirements in order to take a makeup exam.

If you missed the exam due to illness or university-excused absence, you must provide a satisfactory documentation explaining the reason for missing the test (for example, if you were ill, you must have a written excuse from your physician or from the University Health Center).

You must notify the instructor before the exam or within the next 48 hours after the exam.

Students who miss the exam and do not meet each of these requirements above will receive a score of zero for the exam.

Online lecture: During Fall 2016, we are testing certain lectures through E-campus. Please be aware that you are responsible for reading those lecture material and since question papers include from online lectures.

Late Assignments:

Late assignments/term papers are penalized at a rate of 10% loss in points per day late including weekends.

Academic Integrity Statement and Policy.

Aggie Code of Honor <http://aggiehonor.tamu.edu/> : "Aggies do not lie, cheat, or steal nor do they tolerate those who do." Students are expected to attend all classes, complete assignments on time, and participate fully in class discussions and group projects. Violations will be handled in accordance with the Texas A&M University Regulations governing academic integrity.

Suggested Inclusions from Speaker of the TAMU Faculty Senate:*Copyright / plagiarism statement:*

“The handouts (all materials generated during this course) used in this course are copyrighted. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.

As commonly defined, plagiarism consists of passing off as one’s own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without research cannot safely be communicated.

If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, under the section “Scholastic Dishonesty”.

Americans with Disabilities Act (ADA) Policy Statement:

“The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit <http://disability.tamu.edu>.”

Calendar of Activities

Introduction: Consumers’ changing perceptions of quality in the era of food & nutritional insecurity - August 30, 2016

Current functional foods trends- September 1, 2016

Framing the problem - September 6, 2016

Impact of non-thermal processing methods on bioactive compounds - September 8, 2016

Biosynthesis and Engineering of Plant Natural Products- September 13, 2016

Breeding and Plant Genetics - September 15, 2016

Crop management strategies to improve bioactives (cultural, environmental)- September 20 and 22, 2016

Evidence based justification- cardiovascular diseases - September 22, 2016

Nutrition in sports-September 27, 2016

From Crops to the Clinic: Black Raspberries and Oral Health-September 29, 2016

Anthocyanin pigments: Stability, availability, and biotransformation in the gastrointestinal Tract –October 4, 2016

Carotenoids: Epidemiology, Bioavailability and Metabolism - October 6, 2016

Mid Term Exam Review- October 11, 2016

Mid Term Exam-October 13, 2016

Structural and functional relationships

 Limonoids-October 18

 Carotenoids & Phenolics-October 20

 Phytosterols- October 25

Characterization of bioactive compounds-October 27, 2016

Learning and educational strategies –November 1, 2016

Dietary Supplements –November 3, 2016

Evolution of science to policy-November 8, 2016

Student presentations- November 10, 15, 17, 22, 24, 2016

News articles about the health benefits and impact on society: Lessons learned and recommendations-December 1, 2016

Final exam Review-December 6, 2016

Final Exam-December 9, 2016