

COURSE GOALS AND/OR OBJECTIVES: By the end of this course, students will:

- Practice reading and evaluating, in an organized written format, the current literature concerning the nutritional aspects of lipids.
- Demonstrate their skills at leading and participating in oral discussions concerning nutritional aspects of lipids.
- Apply some nutritional aspect of lipids to a current research problem facing the nutritional community.
- Provide editorial assistance to another student's application of some nutritional aspects of lipids to a current research problem facing the nutritional community.
- Demonstrate ability to communicate via a graphical abstract and a video abstract that are being used by more and more journals.

INSTRUCTIONAL METHODS: This class is designed to increase our knowledge of the nutritional aspects of lipids, to facilitate our critical thinking and application of our knowledge to a real world nutrition issue, and to provide opportunities for us to communicate our ideas.

Class presentation and participation - You will be assigned 3 recent articles which will be read by all the class before your presentations. Each article was published or accepted for publication in 2016 and addresses a current question about the nutritional aspects of lipids. You will present the information in the article and any relevant information that you choose. You will be graded on your presentation of the information and your ability to lead a discussion among your classmates on the topic.

For the class periods that you are a reader, you will post to the assignment tool in Canvas your review of the article using the following outline:

I. Questions being addressed by authors

II. Why the authors did what they did

III. What the authors did

IV. What the authors found

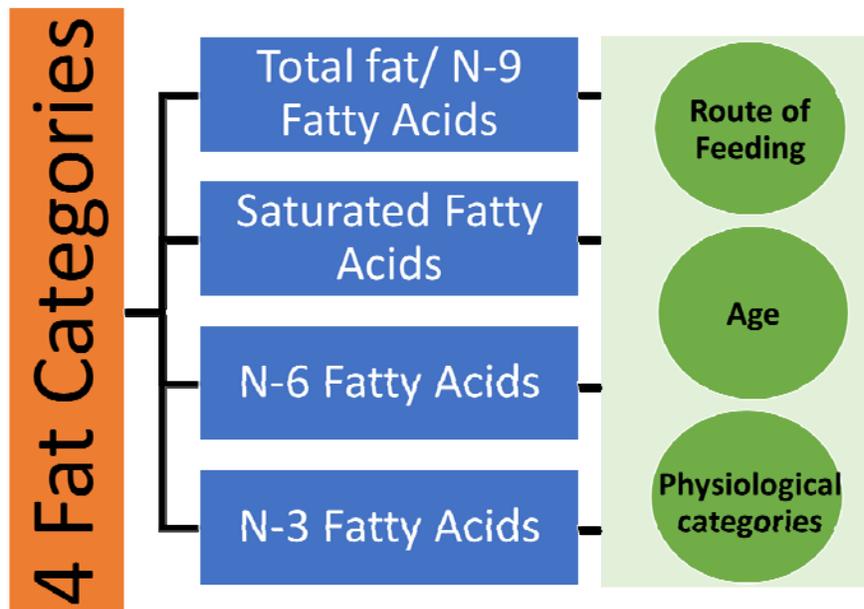
V. Authors' take home message

VI. My comments

VII. Contribution to our understanding of the nutritional aspects of lipids

You will also be graded on your verbal participation in the class discussion.

Fatty Acid Recommendations (FAR) class project –The purpose of this project is for us to address the issue that the fatty acid recommendations for individuals at different stages of the lifecycle and in different physiological states are not well documented and described. The focus of fat recommendations has largely been on total grams of fat and has generally ignored fatty acid profile. Organizations and researchers have recommendations for some individual fatty acids (e.g. DHA and EPA, percent of fat from saturated fatty acids) but it is rarely in the context of a fatty acid profile. The profile of fat, not just total grams of fat, may have significant effects on the health and well-being of people at different ages and physiological states. Considerations from a food science perspective about what products are available to make the fatty acid profile, stability of the product, and administration of the product are also necessary to provide an optimal fatty acid profile for each person. We will use the literature to compile information on 4 different categories of lipids: 1) total fat and n-9 fatty acids, 2) saturated fatty acids, 3) n-6 fatty acids, and 4) n-3 fatty acids. We will focus of the following areas as we compile information on the 4 different categories of fat: route of feeding, age, and physiological state. Considerations pertaining to route of feeding can include: Oral-full mixed diet, oral-soft texture diet, feeding tube in stomach, feeding tube in jejunum, parenteral feeding. Considerations pertaining to age can include: neonates and infants, pediatric, young adult, adult, seniors and elderly. Considerations pertaining to physiological state can include: healthy, brain disease, lung disease, heart disease, liver disease, gastrointestinal disease, kidney disease, muscle disease, diabetes type 1, diabetes type 2, obesity, and metabolic syndrome.



Graphical Abstracts - Even before wide use of written language by the general population, concepts and stories were communicated by drawings and oral communication. Scientific papers published before the widespread use of computers to prepare manuscripts had hand drawn figures and diagrams. Today every graduate student uses computers to generate graphs, tables, and diagrams. For quite a while many of us have looked at the inviting illustrations in textbooks and mechanistic cartoons in papers before actually reading the text. In recent years several scientific publishing companies have required or suggested a "graphical abstract" (http://www.cell.com/pb/assets/raw/shared/figureguidelines/GA_guide.pdf) and a "video abstract" (<http://www.cell.com/video-abstract-guidelines>) for each manuscript. As readers we can quickly look at the graphical abstract and video abstract to decide if we want to read the paper and then look at it again after reading the paper as a quick review of what we have just read. It is not easy to prepare a graphical abstract and video abstract. One has to have a very clear idea before preparing a very clear picture that communicates the idea to others. The process of preparing the graphical abstract and video abstract can assist in clarifying the idea in the author's mind.

It is a skill that is important to develop for many reasons including that it is likely to be required by more and more journals. For this class we will prepare graphical abstracts and video abstracts for the portion of the Fatty Acid Requirements (FAR) class project. For the first "exam", you will be assigned as an editor for another student's documents and you will be graded on the quality of the editorial advice you provide. For the second "exam" you will post your graphical abstract and video abstract that has benefitted from your editor's input and your continued development of your thoughts. You will be graded on the scientific quality of the information.

Some publisher websites with their specific information about graphical abstracts are:

<http://www.elsevier.com/authors/journal-authors/graphical-abstract>

http://www.cell.com/pb/assets/raw/shared/figureguidelines/GA_guide.pdf

https://www.thieme.de/statics/dokumente/thieme/final/de/dokumente/zw_synthesis/CFZ-Sample-Graphical-Abstracts.pdf

http://www.scilogs.com/on_the_road/software-for-drawing-graphical-abstracts/

<http://cmsw.mit.edu/glance-at-graphical-abstracts/>

<http://www.fems-microbiology.org/journals/graphical-abstract.html>

Samuel P. Harn Museum of Art at the University of Florida

Since graphical abstracts include communication via visual means that may be somewhat new to some students, we will plan to visit the Samuel P. Harn Museum of Art at the University of Florida. Eric Segal, Director of Education and Curator of Academic Programs, will review our graphical abstract drafts and provide us with suggestions that may inspire some edits to our drafts. The Harn Museum has provided us with the following information concerning our visit.

INFORMATION FOR STUDENTS: We welcome university students to the museum. The following information will be helpful in preparing for your visit.

GETTING TO THE HARN

The Harn is located on Hull Road, near SW 34th Street, and across the street from the Southwest Recreation Center.

For a **map** of the location of the Harn at UF, [click here](#).

Parking requires a UF parking decal (green or better), or is \$4.00 (limited space). Parking is free after 3:30pm on weekdays and all day on weekends. Bike parking is always free.

Biking

From central campus, bike westward past Lake Alice until Museum Road terminates at Hull Road, turn right, pass the SW Recreation Center, take the next left and you are there—should take about 10 minutes from the Century Tower

Fall 2015 RTS BUSES TO THE HARN & NEARBY:

Campus Routes (<http://go-rt.com/schedule-fall/pdf/entire-schedule-fall.pdf>):

#117 From Rawlings Hall to the Cultural Plaza/Southwest Rec

-arrives every 12-18 minutes, Mon – Fri business hours.

#118 From Buckman Drive and University Avenue to the Cultural Plaza/Southwest Rec

-arrives every 7-14 minutes, Mon – Fri business hours.

#119 From Buckman Drive and University Avenue to the Cultural Plaza/Southwest Rec

-arrives every 28 minutes, Mon – Fri business hours.

#125 From the Hub and Reitz Union to the Cultural Plaza/Southwest Rec

-arrives every 10 minutes, Mon – Fri business hours.

City Routes (<http://go-rt.com/schedule-fall/pdf/entire-schedule-fall.pdf>):

#20 Runs between the Oaks Mall and Reitz Union, stops at the Cultural Plaza/Southwest Rec

-Monday-Friday arrives every 7 minutes

-Saturday every 20-60 minutes

-Sunday every 30 minutes

#28 Runs between the Hub and Forest Park, stops near the Cultural Plaza on 34th Street.

The Harn is located a short walk down Hull Road.

-Monday-Friday arrives every 11-16 minutes

-No weekend service

#34 Runs between the Hub and Lexington Crossing Apartments, stops at the corner of Hull Road and SW 34th street.

The Harn is located a short walk down Hull Road.

-Monday-Friday arrives every 19-21 minutes

-No weekend service

- #36** Runs between the Reitz Union and SW 34th Street Post Office.
Stops along Hull road in front of the Cultural Plaza.
-Monday-Friday arrives every 30-60 minutes.
-No weekend service

Look for this building:



In The Galleries:

No gum, food or beverages in the galleries. You must check backpacks and larger bags (and food and bottled drinks) at the front desk.
Please bring **pencils** for note taking (no ink; the Harn has loaner pencils)!!!!

One Button Studio in Library West

You are welcome to use the One Button Studio in Library West to finalize your video abstract. Their website provides the following information:

The new [One Button Studio](#) at Smathers Library West enables professional quality video production for undergrad and grad students at UF—no previous video production experience needed! UFIT built the One Button Studio (OBS), which has state-of-the-art camera, lighting, audio, and green screen equipment. All students need to bring is an FAT32-formatted USB drive (recommended to be eight GB or larger, to accommodate video files). After checking in at the circulation desk, students log in to the studio computer, insert a USB drive, and press the big red button to start and stop recording. The outcome is high quality video for class presentations and assignments, as well as organizational and personal projects. Although the studio does not have editing software, students using OBS can log into [UFApps](#) to utilize Premiere Pro, Audition, and other editing applications for free. “We’re very excited to offer this unique resource to our students,” said Associate University Librarian [Stacey Ewing](#). “It’s currently the only video recording studio on main campus with a green screen option, serving as a video makerspace for undergraduate and graduate student use.” OBS is located in Library West, room 142. Two-hour studio sessions can be reserved through DIBS. For more information, visit <http://guides.uflib.ufl.edu/InfoCommons/onebutton>.

COURSE POLICIES:

ATTENDANCE POLICY: You have to be present in class in order to participate in class discussion

COURSE TECHNOLOGY: HUN 6301 is a blended course utilizing both Canvas and face to face lectures.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

****NETIQUETTE: COMMUNICATION COURTESY:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. [Describe what is expected and what will occur as a result of improper behavior] <http://teach.ufl.edu/docs/NetiquetteGuideforOnlineCourses.pdf>

GETTING HELP:

For issues with technical difficulties for E-learning in Sakai, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

**** Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket**

number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

GRADING POLICIES:

Grades will be determined by adding the points obtained for each activity listed in the following table.

| Assignment | Points |
|--|--------|
| 3 Class Presentations | 30 |
| Class participations | 16 |
| 9 journal article notes | 9 |
| Editorial comments on research partners graphical abstracts (Exam 1) | 15 |
| Fatty Acid Recommendations graphical and video abstracts (Exam 2) | 30 |
| Total | 100 |

GRADING SCALE:

| Final Grade | Total Points |
|-------------|--------------|
| A | 93-100 |
| A- | 90-92 |
| B+ | 87-89 |
| B | 83-86 |
| B- | 80-82 |
| C+ | 77-79 |
| C | 73-76 |
| C- | 70-72 |
| D+ | 67-69 |
| D | 63-66 |
| D- | 60-62 |

There will be no curve in this course. Final grades will be simply calculated from the total accumulated points.

COURSE SCHEDULE:

Fall 2016 Course Schedule

| <u>Week 1</u> | |
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| Tuesday – August 23, 2016 | Introduction to course and class project |
| Friday –, August 26, 2016 | Fatty Acids Recommendations Class Project (FAR) |
| <u>Week 2</u> | |
| Tuesday – August 30, 2016 | Fatty Acids Recommendations Class Project (FAR) - Age |
| Friday –, September 02, 2016 | <p>Module 0</p> <p>Instructors - Raubenheimer, D. and S. J. Simpson (2016). "Nutritional Ecology and Human Health." <i>Annu Rev Nutr</i> 36: 603-626.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <u>Week 3</u> | |
| Tuesday September 06, 2016 | Fatty Acids Recommendations Class Project (FAR) – Physiological State |
| Friday –, September 09, 2016 | <p>Module 1</p> <p>Xxx - Pimpin, L., et al. (2016). "Is Butter Back? A Systematic Review and Meta-Analysis of Butter Consumption and Risk of Cardiovascular Disease, Diabetes, and Total Mortality." <i>Plos One</i> 11(6): e0158118.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <u>Week 4</u> | |
| Tuesday – September 13, 2016 | Fatty Acids Recommendations Class Project (FAR) – Route of Feeding |
| Friday –, | Module 2 |

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| <p>September 16, 2016</p> | <p>Xxx - Viggiano, E., et al. (2016). "Effects of an High-Fat Diet Enriched in Lard or in Fish Oil on the Hypothalamic Amp-Activated Protein Kinase and Inflammatory Mediators." <u>Front Cell Neurosci</u> 10: 150.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p><u>Week 5</u></p> | |
| <p>Tuesday – September 20, 2016</p> | <p>Fatty Acids Recommendations Class Project (FAR) – First draft of text supporting graphical abstract</p> |
| <p>Friday –, September 23, 2016</p> | <p>Module 3</p> <p>Xxx - Chen, G. C., et al. (2016). "N-3 long-chain polyunsaturated fatty acids and risk of all-cause mortality among general populations: a meta-analysis." <u>Sci Rep</u> 6: 28165.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p><u>Week 6</u></p> | |
| <p>Tuesday – September 27, 2016</p> | <p>Fatty Acids Recommendations Class Project (FAR) - Second draft of text supporting graphical abstract</p> |
| <p>Friday –, September 30, 2016</p> | <p>Modules 4</p> <p>Xxx - Allaire, J., et al. (2016). "A randomized, crossover, head-to-head comparison of eicosapentaenoic acid and docosahexaenoic acid supplementation to reduce inflammation markers in men and women: the Comparing EPA to DHA (ComparED) Study." <u>The American Journal of Clinical Nutrition</u> 104(2): 280-287.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p><u>Week 7</u></p> | |
| <p>Monday – October 03, 2016</p> | <p>Draft of Graphical Abstract must be posted by noon to the discussion board so that editors can begin their reviews</p> |
| <p>Tuesday – October 04, 2016</p> | <p>Fatty Acids Recommendations Class Project (FAR) – Class discussion of graphical abstracts</p> |

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| <p>Friday –, October 07, 2016</p> | <p>Module 5</p> <p>Xxx - Cajka, T., et al. (2016). "Using a lipidomics approach for nutritional phenotyping in response to a test meal containing gamma-linolenic acid." <u>Metabolomics</u> 12(8): 1-16.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p><u>Week 8</u></p> | |
| <p>Tuesday – October 10, 2016</p> | <p>Module 6</p> <p>Xxx - Guthrie, G., et al. (2016). "Multi-Omic Profiles of Hepatic Metabolism in TPN-fed Preterm Pigs Administered New Generation Lipid Emulsions." <u>Journal of Lipid Research</u>; jlr. M069526.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p>Friday –, October 14, 2016</p> | <p>Homecoming Holiday</p> |
| <p><u>Week 9</u></p> | |
| <p>Tuesday – October 18, 2016</p> | <p>Fatty Acids Recommendations Class Project (FAR) – Visit Harn Museum ???</p> |
| <p>Friday –, October 21, 2016</p> | <p>Module 7</p> <p>Xxx - Lavallee, C. M., et al. (2016). "Lipid Emulsion Formulation of Parenteral Nutrition Affects Intestinal Microbiota and Host Responses in Neonatal Piglets." <u>JPEN J Parenter Enteral Nutr</u>.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p><u>Week 10</u></p> | |
| <p>Monday – October 24, 2016</p> | <p>Editorial comments and suggestions for improvement of your assigned graphical abstract must be posted to the discussion board and to the assignment tool by noon</p> |
| <p>Tuesday – October 25, 2016</p> | <p>Fatty Acids Recommendations Class Project (FAR) – Video discussion</p> |
| <p>Friday –</p> | <p>Module 8</p> |

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| <p>October 28, 2016</p> | <p>Xxx - Bloomfield, H. E., et al. (2016). "Effects on Health Outcomes of a Mediterranean Diet With No Restriction on Fat Intake: A Systematic Review and Meta-analysis." <u>Ann Intern Med</u>.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p><u>Week 11</u></p> | |
| <p>Tuesday – November 01, 2016</p> | <p>Fatty Acids Recommendations Class Project (FAR) – video practice</p> |
| <p>Friday –, November 06, 2016</p> | <p>Module 9</p> <p>Xxx - Al-Jada, D. N. and M. N. Ahmad (2016). "Dietary fat and insulin resistance: a connection through leptin and PPARy activation." <u>Functional Foods in Health and Disease</u> 6(6): 306-328.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p><u>Week 12</u></p> | |
| <p>Tuesday – November 08, 2016</p> | <p>Module 10</p> <p>Xxx - Guasch-Ferre, M., et al. (2016). "Plasma acylcarnitines and risk of cardiovascular disease: effect of Mediterranean diet interventions." <u>Am J Clin Nutr</u> 103(6): 1408-1416.</p> <p>PowerPoint of discussion leader and outlines of the discussants must be posted by noon</p> |
| <p>Friday –, November 11, 2016</p> | <p>Veterans Day Holiday</p> |
| <p><u>Week 13</u></p> | |
| <p>Monday – November 14, 2016</p> | <p>Graphical abstracts and video abstracts must be posted to the discussion board and to the assignment tool by noon</p> |
| <p>Tuesday – November 15, 2016</p> | <p>Celebration of FAR graphical abstracts and video abstracts</p> |
| <p>Friday –, November</p> | <p>Module 11</p> <p>Xxx - Weiss, N., et al. (2016). "Cerebrospinal fluid metabolomics highlights</p> |

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| 18, 2016 | dysregulation of energy metabolism in overt hepatic encephalopathy. " <u>J Hepatol.</u> PowerPoint of discussion leader and outlines of the discussants must be posted by noon |
| <u>Week 14</u> | |
| Tuesday – November 22, 2016 | Module 12 Xxx - Jeffery, E., et al. (2016). "The Adipose Tissue Microenvironment Regulates Depot-Specific Adipogenesis in Obesity." <u>Cell Metab</u> 24 (1): 142-150. PowerPoint of discussion leader and outlines of the discussants must be posted by noon |
| Wednesday November 25, 2016 | Thanksgiving Holiday |
| Friday –, November 27, 2016 | Thanksgiving Holiday |
| <u>Week 15</u> | |
| No Final Exam – Have a great winter break! | |

Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.