

FDSC 1410 - FOOD AND OUR WELL BEING
Spring 2010

1:10-2:00 pm MWF, room AB 103
3 credits

Instructor: Warrie J. Means; Rm. 121 AB; Office: 307-766-5283; Cellular: 307-760-5010; Home: 307-742-9018. If calling my home phone number, please limit your calls to the hours between 6:00 am and 9:00 pm. Also, please note that there is poor cellular phone reception at my home. I usually check my e-mail (means@uwyo.edu) daily, except weekends and holidays.

Office hours: 8:00 to 9:00 am MWF, usually available immediately after class 2:10 to 3:00 pm MWF, or by appointment.

Text: There is not a required text for this course. Students will be required to access the internet.

Lecture Notes and Additional Information: PowerPoint notes/outlines will be e-mailed to the class and/or placed on a web site. Additional information may be provided by similar means.

Course Objectives:

1. Relate the science of food; i.e. chemical, biological and physical parameters of food, to food technology, food applications, and every day eating.
2. Develop an understanding of food labels and food contributions to nutrition.
3. Understand food and some current issues related to food and agriculture.
4. Learn the basic concepts of food production and processing.
5. Learn to critically evaluate scientific and popular information on food and health.

Grading:	Points:
Quizzes (4 – low score = 3 @ 50 points each)	150
Unannounced quizzes (to total 50 points)	50
Mid-Term Exam 1	100
Final Exam - cumulative	150
Writing Assignments (2 @ 50 points each)	100
Current Event topics (4 @ 5 points each)	20
<u>Current Event Summaries (2 @ 15 points each)</u>	<u>30</u>
 TOTAL POINTS	 600

Grades: A ≥ 90.0%, B 80.0-89.9%, C 70.0-79.9%, D 60.0-69.9%, F < 60%.

NOTE: The instructor does not round grades up to the next highest percentage.

Class participation points: Your final grade (the percentage of total points earned) will be adjusted for class participation. Participation points will be as follows: -2 = unacceptable or minimal; -1 = below standard, 0 = adequate; +1 = good, regular; +2 = excellent participation.

Exams: Quizzes will include material covered in class and assigned resource materials since the last quiz. In addition, up to 25% of each quiz may be cumulative. Exam 1 will cover all preceding material. The final exam will be cumulative in nature. Quiz 4 will also be given at this time.

Spelling and Grammar: Spelling is important! I expect college students to spell words correctly. Therefore, 0.5 points will be deducted per spelling error on all graded items. Students are encouraged to use a dictionary when taking exams. Grammar is important! Grammar will be a significant portion of the grading criteria used for evaluation of written assignments (see information on written assignments).

Current Events: Current events are designed to relate food science and technology to every-day events happening in our world. Students will be required to turn in a current event article related to food science and food technology (5 points each) on the day Current Events are scheduled. One or more current event topics will be selected for class discussion. Students will be required to write a short (approximately one page) synopsis of the two current event discussions (15 points each).

Writing Assignments: Two writing assignments are mandatory. See separate handout for writing assignment instructions.

Extra Credit: Up to 25 extra credit points may be earned by participating in instructor approved activities related to food science. These include: 1) assisting with food activities which involve food processing/preparation, packaging, serving, cleaning/sanitizing, and food safety, 2) attending meetings of the Rocky Mountain Institute of Food Technologists, 3) active involvement in the UW Food Science Club, 4) other activities subject to approval of the instructor. The maximum points possible for each activity will vary. Some activities may require a pre-meeting and a post-meeting in addition to the event.

Final Exam: The final exam will be cumulative (150 points) and given at the official time (Monday, May 03, 2010; 1:15 to 3:15 pm in room AB 103). Quiz 4 will also be given at this time.

Attendance: Strongly recommended.

Tips for Success:

- Print off the notes and look them over *prior to* the correlated class period.
- Come to class.
- Bring your notes to class and fill in additional information.
- Ask questions if things are unclear.
- Study!

All material turned into the instructor must be typed with one-inch margins and 12 point font size.

Academic dishonesty, in any form, WILL NOT BE TOLERATED. Likewise, you are not expected to tolerate academic dishonesty. The University of Wyoming is built upon a strong foundation of integrity, respect and trust. All members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated. Academic dishonesty cases will be subject to procedures outlined in the University of Wyoming Regulations. The following information is excerpted from the University of Wyoming Regulation 802, Revision 2.

“2. GENERAL INFORMATION. The University faculty regards honesty by students in representation of their involvement in academic tasks to be vital to the educational functions of the University. Whatever form academic dishonesty may take, the faculty considers it as establishing a student's failure to demonstrate the acquisition of knowledge and the failure to apply it to assigned academic tasks. It is the responsibility of both the student and the instructor in charge of an academic task, respectively, to make reasonable efforts to learn of or make known the standards of conduct for the performance of academic tasks. Failure on the part of the student to observe and maintain standards of academic honesty, as hereafter defined or made known by an instructor responsible for a course or other academic task, requires corrective action as hereafter authorized.

3. DEFINITION OF ACADEMIC DISHONESTY. An act is academically dishonest when it is an act attempted or performed which misrepresents one's involvement in an academic task in any way, or permits another student to misrepresent the latter's involvement in an academic task by assisting in the misrepresentation. Some examples of academic dishonesty include such acts as:

- a. Representing as one's own work material copied or borrowed from any source, written or otherwise, public or private, without proper citation of the source.
- b. Using a ghost writer, commercial or otherwise, for any type of assignment.
- c. Submitting substantially the same work for more than one class without the explicit permission of all concerned instructors.
- d. Doing a class assignment for someone else or allowing someone to copy one's assignment.
- e. Using notes or prepared information in an examination unless authorized by the instructor.
- f. Taking an examination for someone else or allowing someone to take an examination for oneself.
- g. Copying from, or assisting, another student during an examination.
- h. Stealing, or otherwise improperly obtaining, copies of an examination before or after its administration.
- i. Submitting substantially the same work as someone else unless authorized by the instructor.”

DEFINITIONS:

Plagiarism: n. 1. The act of plagiarizing. 2. That which is plagiarized. [From PLAGIARY.]

Plagiarize: v. 1. To steal and use (the ideas or writings of another) as one's own. 2. To appropriate passages or ideas from (another) and use them as one's own: *“I did hate to be accused of plagiarizing Bret Harte.”* (Mark Twain). To take and use as one's own the writings or ideas of another. [From PLAGIARY.]

Source: The American Heritage Dictionary of the English Language, New College Edition. 1981.

FDSC 1410 – Food and Our Well Being Current Events

Article Selection:

Find a current (i.e. published within the last month) article that is related to food science and technology. Articles may also be related to animal or plant agriculture as it pertains to production of food. The article you choose will likely be appropriate if it is published in a popular press venue; i.e. local/regional/national newspaper, local/regional/national radio or television (only if you can obtain a hard copy, for example from their web site), and consumer-oriented magazines or periodicals. I am interested in things that are “in the news” and would be read by every-day consumers who are not necessarily “looking” for information related to food science.

Instead of performing an internet search (using search engines such as: Google, Yahoo, Bing, Ask Jeeves, OnTheWeb.com, AOL, HotBot, Teoma, etc.) on a particular topic, read through some consumer-oriented publications and pick out a topic related to food science and technology that is of interest to you. A topic related search may be useful **after** finding your current events topic.

Written Summary:

Summarize the discussion we have in class related to the one, or the few, current event topic(s) that we choose for discussion. It is entirely appropriate, **and recommended**, that you spend some time looking up information related to the discussed current event topic. Be sure to cite and attach any references you use for your summary. You may find it useful to answer the following questions to guide your written summary.

1. What is the topic or point of the article(s) selected and discussed in class? You may want to find and read the article referred to – or a similar article on the same topic.
2. What issues were discussed in class that directly relate to the topic?
3. What scientific principles and/or regulatory aspects relate to the issue(s)?
4. What did you learn from the classroom discussion?
5. What is your opinion on this issue?

Remember, your written current events summary must be typed with one-inch margins, double spacing, and 12 point font size. Summaries should be approximately 1 page in length.

FDSC 1410 Writing Assignment Instructions:

1. Choose a topic.
2. Have your instructor sign off on the topic.
3. Find (and read) a minimum of eight (8) references on your chosen topic. Select two from a refereed journal, two from science based books or book chapters, two from popular press or magazine, two from reliable internet sources.
4. Summarize your topic.
5. Your summary should be a minimum length of 1-2 pages, double spaced, **font = Times New Roman, 12 point**, 1 inch margins, not including references.
6. Cite references in the text using the format found in the current Journal of Animal Science (JAS) Style Guide: INSTRUCTIONS FOR CONTRIBUTORS to *Journal of Animal Science* 2010, (REVISED 2010). http://jas.fass.org/misc/JAS_Instruct_to_Authors_10.pdf

LITERATURE CITED GUIDELINES FOR JOURNAL OF ANIMAL SCIENCE

(return to **Literature Cited in Style and Form**)

Citations in the Text. In the body of the manuscript, refer to authors as follows: Smith and Jones (1992) or Smith and Jones (1990, 1992). If the sentence structure requires that the authors' names be included in parentheses, the proper format is (Smith and Jones, 1982; Jones, 1988a,b; Jones et al., 1993). When there are more than 2 authors of an article, the first author's name is followed by the abbreviation et al. More than 1 article listed in the same sentence or parentheses must be in chronological order first and alphabetical order for 2 publications in the same year. Published articles, and not abstracts, should be cited whenever possible; if the work was originally described in an abstract, the author(s) should use a literature search to determine if the work has been published as a peer-reviewed article. Work that has not been accepted for publication shall be listed in the text as "J. E. Jones (institution, city, and state or country, personal communication)." The author's own unpublished work should be listed in the text as "(J. Smith, unpublished data)." Personal communications and unpublished data must not be included in the Literature Cited section.

Literature Cited Section. To be listed in the Literature Cited section, papers must be published or accepted for publication ("in press"). In the Literature Cited section, references are listed alphabetically by the author(s)' last name(s), and then chronologically. The year of publication follows the authors' names. As with text citations, 2 or more publications by the same author or set of authors in the same year shall be differentiated by adding lowercase letters after the date. All authors' names must appear in the Literature Cited section. Journals shall be abbreviated according to the conventional ISO abbreviations used by PubMed (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>). A list of standard abbreviations for frequently cited journals and abbreviations used in citations is available at http://www.asas.org/jas/journal_abbrevs.pdf One-word titles must be spelled out. Inclusive page numbers must be provided. Sample references are as follows:

1. Books and articles within edited books:

- AOAC. 1990. Official Methods of Analysis. 15th ed. Assoc. Off. Anal. Chem., Arlington, VA.
NRC. 1989. Nutrient Requirements of Dairy Cattle. 6th rev. ed. Natl. Acad. Press, Washington, DC.
Robinson, P. H., E. K. Okine, and J. J. Kennelly. 1992. Measurement of protein digestion in ruminants. Page 121 in Modern Methods in Protein Nutrition and Metabolism. S. Nissen, ed. Academic Press, San Diego, CA.

2. Handbooks, technical bulletins, theses, and dissertations:

- Goering, H. K., and P. J. Van Soest. 1970. Forage Fiber Analyses (Apparatus, Reagents, Procedures, and Some Applications). Agric. Handbook No. 379. ARS-USDA, Washington, DC.
Sigma. 1984. Total hemoglobin: Quantitative, colorimetric determination in whole blood at 530–550 nm. Tech. Bull. No. 525. rev. ed. Sigma Chemical, St. Louis, MO.
Ward, J. D. 1995. Effects of copper deficiency on performance and immune function of cattle. PhD Diss. North Carolina State Univ., Raleigh.

3. Journal articles and abstracts:

- Cleale, R. M., IV, R. A. Britton, T. J. Klopfenstein, M. L. Bauer, D. L. Harmon, and L. D. Satterlee. 1987a. Induced non-enzymatic browning of soybean meal. II. Ruminant escape and net portal absorption of soybean protein treated with xylose. *J. Anim. Sci.* 65:1319–1326.
Hall, J. B., R. B. Staigmiller, R. E. Short, R. A. Bellows, S. E. Bartlett, and D. A. Phelps. 1993. Body composition at puberty in beef heifers as influenced by nutrition and breed. *J. Anim. Sci.* 71(Suppl. 1):205. (Abstr.)

4. Conference proceedings:

NMC. 1995. Summary of peer-reviewed publications on efficacy of premilking and postmilking teat disinfections published since 1980. Pages 82–92 in Natl. Mastitis Counc. Reg. Meet. Proc., Harrisburg, PA. Natl. Mastitis Counc., Arlington, VA.

Talmant, A., X. Fernandez, P. Sellier, and G. Monin. 1989. Glycolytic potential in longissimus dorsi muscle of Large White pigs as measured after in vivo sampling. Page 1129 in Proc. 35th Int. Congr. Meat Sci. Technol., Copenhagen, Denmark.

Van der Werf, J. H. J. 1990. A note on the use of conditional models to estimate additive genetic variance in selected populations. Proc. 4th World Congr. Genet. Appl. Livest. Prod., Edinburgh, Scotland XIII:476–479.

5. Electronic Publications:

FDA. 2001. Effect of the use of antimicrobials in food-producing animals on pathogen load: Systematic review of the published literature. <http://www.fda.gov/cvm/antimicrobial/PathRpt.PDF> Accessed Dec. 14, 2001.

Huntington, G. B., D. L. Harmon, N. B. Kristensen, K. C. Hanson, and J. W. Spears. 2006. Effects of a slow-release urea source on absorption of ammonia and endogenous production of urea by cattle. Anim. Feed Sci. Technol. doi:10.1016/j.anifeedsci. 2006.01.012

Le Neindre, P., C. Terlouw, X. Boivin, A. Boissy, and J. Lensink. 2001. Behavioral research and its application to livestock transport and policy: A European perspective. J. Anim. Sci. 79(E-Suppl.) <http://www.asas.org/jas/jas0905.pdf> Accessed Oct. 7, 2001.

FDSC 1410 – Writing Assignment Example Topics:

*Please note that these are only partial lists of possible topics. There are many others. I suggest conducting a preliminary literature search on possible topics **before** choosing one to turn in. Another method is to review the table of contents, indexes, and glossaries of food science text books, journals, and trade publications. This will ensure that there are current and relevant references on your topic.*

Written assignments must be based on accurate information which necessitates use of good, peer-reviewed science-based sources.

W1; Food processing technology:

Freezing, dehydration, concentration, cooking, pasteurization, lactose reduced dairy products, freeze-drying, super critical fluid extraction, homogenization, packaging (edible films, vacuum, modified atmosphere, etc.), encapsulation, fermentation, smoking, pressurization, irradiation, microwave cooking. Other topics may be used, check with your instructor.

W2; Food ingredient or additive:

High fructose corn syrup, annatto, non-fat dried milk, antimicrobials, antioxidants, ascorbic acid, phosphoric acid, cocoa, whey protein concentrate, olestra, simplese, FD&C yellow, alginate, carrageenan, other hydrocolloids, surimi, monosodium glutamate, other flavor enhancers, dextrose, bacteriocins, nitrite, caffeine, salt, aspartame, etc. Other topics may be used, check with your instructor.

FDSC 1410 Writing Assignment notes

Things to do:

- Have a title
- Type your name immediately before or after the title
- Indicate the type of writing assignment, i.e. W1, W2
- Type the paper in 12 font, preferably “Times New Roman”
- Set line spacing at “double”, i.e. type every other line or double space
- Staple multiple pages together
- Use the appropriate style guide for references
- Write in scientific style: no first person, i.e. I, we you.
- Write concisely and to the point
- Appropriately reference important ideas/concepts/sentences with a credible scientific source
- Proof read your paper
- Have a friend proof read your paper
- Proof read your paper again

Things not to do:

- **Do not** make a title page
- **Do not** use plastic or other covers/binders
- **Do not** put references on a separate page if there is enough space on the last page of text
- **DO NOT PLAGIARIZE**

FDSC 1410 Writing Assignment Scoring Sheet

Student Name _____

The features of your writing have been rated using these five scoring categories:

1 = unacceptable, 2 = below standard, 3 = adequate, 4 = clearly competent, 5 = excellent

A. Depth and Range of Ideas _____

- Response relevant to question/topic
- Purpose statement clear
- Main points clearly stated, comprehensive
- Focus maintained
- Main points supported and developed through evidence, example, logical reasoning
- Information accurate

B. Organization _____

- Overall organization logical (distinct introduction, discussion, conclusion)
- Paragraphs cohesive, logically developed
- Transitions adequate

C. Style and Tone _____

- Sentences clear, to the point, well-structured
- Evidence of stylistic variety
- Word choice appropriate, precise

D. Mechanics/Surface Features _____

- Grammar, punctuation, spelling and capitalization correct
- Document neat, legible

E. Proper Use of References/Citations _____

- Citations are relevant to the question/topic
- References are from peer reviewed sources
- References cited in body of text according to current JFS Style Guide
- References listed at end of text according to current JFS Style Guide
- Citations match reference list

F. Overall Response _____

DESCRIPTION OF SCORING CATEGORIES

Depth and Range of Ideas

- 5 – Central idea or intention is explicitly stated or clearly implied; attention to central thesis is firm and consistent from beginning to end; document gives an excellent impression of author’s accuracy, logic, and depth of thought; generalizations are consistently developed by supporting details.
- 4 – Central idea or intention is evident, although perhaps not clearly stated; attention to thesis is usually maintained; document gives good impression of authors accuracy, logic and depth of thought; generalizations are usually developed by supporting details.
- 3 – Attention to central idea is satisfactory, but inconsistencies may create misunderstanding; reasoning is not always fully or logically developed; occasional questions may arise as to accuracy and depth of information.
- 2 – Central idea or intention may not be clearly evident; if thesis is stated, attention to it is only sporadically maintained; document seldom gives a good impression of author’s accuracy, logic and depth of thought; generalizations are seldom developed by supporting details.
- 1 – There seems to be no controlling idea or intention; attention is not directed or maintained toward any discernible thesis; document consistently gives poor impression of the author’s accuracy, logic, and depth of thought; generalizations are not developed by supporting details.

Organization

- 5 – An appropriate structural plan for developing the overall document is carried through completely, consistently, and effectively; paragraphs are logically developed and transitions are clear and coherent.
- 4 – Structural plan is evident, but is not carried through consistently or as effectively as it could have been; some paragraphs may be illogical or off-topic; transitions may occasionally be confusing or abrupt.
- 3 – Structural plan is marginally satisfactory, despite obvious lapses of logic and muddled or incomplete transitions.
- 2 – Despite some evidence of a structural plan, organization may be loose or inconsistent; paragraphs are poorly organized; transitions are weak.
- 1 – Structural plan is either indiscernible or inappropriate; paragraphs are incoherent; transitions are illogical or non-existent.

Style and Tone

- 5 – Sentences are uniformly well structured, precise and coherent; word use is always economical and appropriate for audience.
- 4 – Sentences are usually well structured and coherent; word use is usually economical and appropriate.
- 3 – Sentences are satisfactory, reasonable well controlled; word choice is sufficiently precise, although not as effective as that of a draft rated 4 or 5.
- 2 – Sentences are often technically flawed or characterized by immature constructions; word use is only sporadically effective, often uneconomical and inappropriate.
- 1 – Sentences are almost uniformly ineffective, incorrect, or incoherent; word use is usually ineffective, uneconomical, inappropriate, and inaccurate.

Mechanics/Surface Features

- 5 – Grammar, usage, spelling and punctuation are uniformly accurate and correct; tone is appropriate, reader-centered; document is clearly legible.
- 4 – Grammar, usage, spelling and punctuation are usually conventional; a few noticeable errors may occur, but they do not seriously affect sense of clarity; occasional lapses in tone may occur; document is legible.
- 3 – Despite some obvious errors of mechanics, there is evidence the writer understands and can marginally observe the conventions of written English; document is sometimes not legible.
- 2 – Grammar, usage, spelling and punctuation frequently violate conventions; some errors may be serious enough to require the reader to re-read; tone may frequently be inappropriate; legibility is poor.
- 1 – Errors in mechanics are so numerous as to obscure meaning; tone is clearly inappropriate; document may be illegible.