

COLLEGE OF HEALTH SCIENCES
DEPARTMENT OF FAMILY AND CONSUMER SCIENCES
FACS 3370-01: NUTRITIONAL PATHWAYS
FALL SEMESTER 2017

CLASS TIME: Tuesday and Thursday, 12:30-1:50 PM

CLASS LOCATION: MLHB Room: 201

CLASS CREDIT: 3 Hours

INSTRUCTOR: Crystal Clark Douglas, PhD, RD

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Office Hours: Monday 9 AM-12 PM; Tuesday and Thursday 9:30-10:30 AM

Course Description: This advanced course establishes knowledge and understanding of nutritional concepts in the biochemical context. Biochemical, physical, and metabolic functions of the nutrients; pathways of each nutrient in the diet from ingestion through digestion, assimilation and metabolism; digestive and metabolic interactions between drugs and nutrients are discussed. This course cannot be used for credit toward biology or chemistry majors.

Prerequisites: CHEM 2423, FACS 2362, Junior Standing.

Course Objectives: This course is in compliance with the Academy of Nutrition and Dietetics Knowledge Requirements. The KRD's listed below support the content in this class:

KRD 1.1 The curriculum must reflect the scientific basis of the dietetics profession and must include research methodology, interpretation of research literature and integration of research principles into evidence based practice.

KRD 2.1 The curriculum must include opportunities to develop a variety of communication skills sufficient for entry into pre-professional practice. (Note: *Students must be able to demonstrate effective and professional oral and written communication and documentation.*)

KRD 5.2 The physical and biological science foundation of the dietetics profession must be evident in the curriculum. Course content must include organic chemistry, biochemistry, physiology, genetics, microbiology, pharmacology, statistics, nutrient metabolism and nutrition across the lifespan.

Required Text:

Gropper, Sareen S., Smith, Jack L. Advanced Nutrition and Human Metabolism, 6th Edition, Wadsworth Cengage Learning, 2013.

Upon completion of the course, the students will be able to:

- Recall concepts in chemistry and biology as applied in nutritional sciences.
- Discriminate the structure and function of the six nutrients discussed in class lecture.
- Give examples of nutrient digestion and absorption according to the information given.
- Outline photosynthesis and point out its relationships to energy transfer and plant respiration.
- Summarize catabolic and anabolic pathways in metabolism of carbohydrates, lipids and proteins after studying information in the text.
- Analyze nucleic acid and protein synthesis according to the information provided in the lecture.
- Evaluate dietary fiber for its nutritional significance.
- Describe the antioxidant mechanisms of enzyme and chemical antioxidants by giving examples.
- Identify differences in macronutrient metabolism in the fasted vs fed state according to the information in the text and provided in the lecture.
- Communicate the knowledge of digestive and metabolic interactions through oral presentation of research. (KRD 1.1, 2.1)

IDEA Objectives

- Gained factual knowledge (terminology, classification, methods, trends)
- Learned to apply course material (to improve thinking, problem solving, and decisions)
- Developed specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

Student Syllabus Guidelines: You may find online a more detailed description of the following policies. These guidelines will also provide you with a link to the specific university policy or procedure: <http://www.shsu.edu/syllabus/>.

Classroom Rules of Conduct: Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students are to treat faculty and students with respect:

- Sidebar conversations will not be tolerated, and students engaging in such activity will be asked to leave.
- Students are to turn off cell phones while in the classroom. Under no circumstances are cell phones or any electronic devices (including calculators) to be used or seen during times of examination.
- Texting will not be tolerated and if observed will result in an automatic **5% reduction** in the student's overall grade (per event).

- All tobacco products, including chewing tobacco, are prohibited in all academic buildings and classrooms. Students found using these products will be asked to leave.
- During lab activities and exams/quizzes, students will be required to store their belongings in open bins and/or shelving. These dates are clearly spelled out on the class schedule. Please plan accordingly in order to properly store your valuables.

Student Absences on Religious Holy Days: Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. “Religious Holy Day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20 Tax Code.

STUDENTS WITH DISABILITIES POLICY:

It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities from their instructors, school/department chair, or by contacting the Director of the Office of Services for Students with Disabilities, Lee Drain North Annex, or by calling 936.294.3512, TDD 936.294.3786. **NOTE: No accommodation can be made until the student registers with the Office of Services for Students with Disabilities (SSD).** See the link at <https://www.shsu.edu/syllabus/>

Academic Grievance Procedures for Students (AP 900823):

Academic grievances include disputes over course grades, unauthorized class absences/tardiness, suspension for academic deficiency, instructor’s alleged unprofessional conduct related to academic matters, graduate comprehensive and oral exams, theses and dissertations, and withdrawal or suspension of privileges related to degree-required clinical rotation, internships, or other clinical service delivery in professional degree programs.

If the dispute is determined to be based upon professional judgment, the aggrieved student is entitled to have, as appropriate and in turn, the department/school chair, College Academic Review Panel, academic dean, Dean of Graduate Studies (for graduate student issues), and Provost and Vice President for Academic Affairs form an opinion about the dispute and so advise the individual(s) involved.

<http://www.shsu.edu/dotAsset/0bb1346f-b8d6-4486-9290-dba24123d0d8.pdf>

Visitors in the Classroom: Only registered students may attend class. Unannounced visitors to class must present a current, **official SHSU** identification card to be permitted into the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor’s discretion whether or not the visitor will be allowed to remain in the classroom. Students wishing to audit a class must apply to do so through the Registrar’s Office.

Academic Dishonesty: All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in their academic experiences. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action as described in the student handbook. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials. Plagiarism includes, but is not limited to, copying the work of another student, copying published work without appropriate citations, and allowing someone else to complete an assignment or work for the student.

****Note: If a student submits a paper that exhibits plagiarism the paper will be given a grade of “0”. No makeup of the grade will be accepted. The second occurrence of plagiarism will result in a failing grade for the course.**

Rules of Conduct: Students are expected to comply with the university’s Code of Conduct, found on the Dean of Students website at http://www.shsu.edu/~slo_www/. All students are expected to assist in maintaining an environment that is conducive to learning. Students are to treat faculty and other students with respect.

Cell Phone/Electronic Devices: The use by students of electronic devices that perform the function of a telephone or text messenger during class-time may be prohibited if deemed disruptive by the instructor to the conduct of the class. Arrangements for handling potential emergency situations may be granted at the discretion of the instructor. Failure to comply with the instructor’s policy could result in expulsion from the classroom or with multiple offenses, failure of the course. Cell phones may not be used for taping or photography without the consent of the professor and for class related projects that may arise.

Any use of a telephone or text messenger or any device that performs these functions during a test period is prohibited. Even the visible presence of such a device during the test period will result in a zero for that test. Use of these devices during a test is considered de facto evidence of cheating and could result in a charge of academic dishonesty (see student code of conduct <http://www.shsu.edu/students/guide/StudentGuidelines2010-2012.pdf#page=29>).

Expectations for Succeeding

To perform successfully in the course, here are a few "tips for success”:

- Dedicate time each week to include reading and completing assignments.
- Participate fully in the course. Your ideas and comments, shared with the professor and classmates, are important and valued. Comments should be relevant to the topic and not derogatory.
- Manage your time wisely in order to complete your assignments on or before deadlines.
- Seek assistance immediately if you are experiencing any difficulties.

Attendance Policy:

Regular and punctual class attendance is expected of all SHSU students. Those who miss a substantial number of classes will penalize themselves by missing material that will be discussed in class, that may not appear in the texts, and over which the class will be tested. It is up each

student, not the instructor, to obtain missed material. Only University-recognized excuses will be accepted.

Course Activities: Students will demonstrate their learning of nutrition through the following:

Exams (100 points each)

Attendance for scheduled exams is required. Students are expected to be on time for exams, and may not leave the room once the exam has begun. If you arrive to class after a student has completed and turned in an exam you will not be allowed to take the exam. **There will be one make-up exam during the semester (at a time to be announced later in the semester).** **Students must produce proper documentation (ex. A doctor's signed note for illness) before a make-up exam may be given.** Tentative dates are provided on the course schedule with examination dates. The examinations will encompass any lecture material, reading assignments, and material from the assessments.

- If you have a university-recognized excuse for missing an examination and notify the instructor prior to the examination, missed examinations may be made up at the convenience of the instructor and on a case-by-case basis.
- The final exam is cumulative and may not be taken at an alternative time except for circumstances allowed for under the University's final examination policy.

Review Assignments (20 points each)

The review assignment is intended to help students prepare for the upcoming exam and determine their understanding of the material. The assignment must be turned in prior to the exam for credit. No late assignments will be accepted.

Oral Presentation (32 points each)

Students are responsible for developing content information to deliver to the class using PowerPoint. Students are expected to provide a comprehensive overview of the topic as it will serve as exam material. More details will be announced in class.

Evaluation: Student overall performance will be measured on the basis of tests, and assignments listed below and the percentage of the final grade for each assignment will differ based on the status of the student.

Grades will be assigned using the following scale:

A = 90-100%

D = 60-69%

B = 80-89%

F = below 60

C = 70-79%

Grades of xx.5 and above will be rounded up; grades of less than xx.5 will be rounded down.

GRADING POLICY AND ASSIGNMENTS:

Exams (3 x 100 pts)

300 pts

Review Assignments

60 pts

Oral Presentation 32 pts

Final Exam 100 pts

Total points available 492 pts

- ❖ The instructor reserves the right to implement pop tests and other additional assignments. The total point value will be adjusted accordingly.
- ❖ Late assignments will **NOT** be accepted under most circumstances.
- ❖ The professor may take up to 2 weeks to return grades from exams and assignments.

Computer Problems: Computers are known to stop working and do other unpredictable things. Faulty transmission, being on a different computer and other similar reasons for missing deadlines will not be considered for extending your submission deadline. You are responsible to take all precautions and have contingency plans in place in case of computer problems. It is recommended that you create and save back up files to either a jump drive or another electronic storage device for every piece of work you complete for this class.

Evaluation: Students will have the opportunity to complete a course/instructor evaluation form online at the end of the semester.

FACS 3370 Nutritional Pathways Tentative Schedule and Chapter Assignments

****Please Note:** Syllabus subject to change at Instructor's discretion******

Dates	Topics
Aug 24	Introduction to Course
Aug 29, 31	The Digestive System –Chapter 2
Sep 5, 7	Carbohydrates – Chapter 3 **Discuss Oral Presentations**
Sep 12, 14	Carbohydrates – Chapter 3
Sep 19, 21	Carbohydrates – Chapter 3/ Review Assignment **EXAM 1**
Sep 26, 28	Lipids – Chapter 5
Oct 3, 5	Lipids – Chapter 5
Oct 10, 12	Protein – Chapter 6
Oct 17, 19	Protein – Chapter 6
Oct 24, 26	Water and Electrolytes – Chapter 12 (on-line; Exam 3 material) and Review Assignment **EXAM 2**
Oct 31, Nov 2	Water-Soluble Vitamins – Chapter 9- Oral Presentations
Nov 7, 9	Fat Soluble Vitamins- Chapter 10
Nov 14, 16	Major Minerals – Chapter 11 Review Assignment
Nov 21, 23	**EXAM 3** Thanksgiving Holiday
Nov 28, 30	Trace Minerals-Chapter 13
Tuesday, December 5	<i>Final Exam 1:00 pm – 3:00 pm</i>