

KINE 354 Nutrition in Health & Disease
Course Outline & Syllabus
COLL200 CSI Domain reaching out to NQR
TR 11:00 – 12:20PM Tucker 111

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Office Hours: T&R: 1:00-2:00pm

KINE 354 Nutrition in Health & Disease

This course is an introductory-level course for students who may be interested in learning more about how the use of nutrition therapy can decrease risk of chronic disease, treat incurrent disease conditions, and modify diets to reduce risk of the disease recurrence. Students will also earn COLL 200 credit (CSI Domain) upon successful completion of the course.

COLL200 Attribute Requirements:

Each COLL 200 course belongs to one or more of the domains. Each of these courses significantly enhances student knowledge of a specific topic and also calls upon students to think about how its discipline fits into the broader framework of the Liberal Arts. Thus, each course emphasizes ideas and methods central to its domain(s) while also looking outward to one or both of the other domains. To the extent possible, COLL 200 courses also give students the opportunity to put methodologies represented in the course into practice. Every student must take a total of twelve 200-level credits, with at least one course in each domain of no less than three credits. One COLL 200 must be taken in year 2; transfer students must take one during their first year at William and Mary. COLL 200 courses may or may not have prerequisites.

KINE354 Nutrition in Health & Disease belongs to the CSI (Cultural, Societies, and the Individual) Domain and reaches out to the NQR (The Natural World and Quantitative Reasoning) Domain for at least 10% of its content.

Cultures, Societies, and the Individual (CSI). Courses in this domain examine the realm of human cultures, societies, and individuals through their development, organization, and interaction. Some courses employ mathematical modeling, statistical analysis, and scientific experimentation; some, the analysis of artifacts and texts; and others, observation, inference, and extrapolation. Students learn to describe, theorize, and explain human cultures, societies, and individuals in their variety over time and space.

The Natural World and Quantitative Reasoning (NQR). This domain examines the natural world and physical universe and the means by which humans observe, measure, model, and interpret it. Reaching out to this domain allows KINE354 students to explore the process of scientific discovery, including the methods required to gather and assess empirical data, investigate the predictions of existing theories, and develop experimentally testable hypotheses. Therefore, students of Nutrition in Health & Disease will develop their understanding not only of the foundations, implications, and uses of scientific knowledge but also how scientific approaches can be used to create tangible results.

This introductory course will introduce many topics related to Nutrition in Health & Disease in a relatively short period of time, therefore, you will gain an overview of topics. This course will stimulate thoughtful inquiry into the effects of nutrition on health from cultural, societal, individual, and public health perspectives.

Numerous discoveries in nutrition science over the past few years have continued to benefit the field of health care. A major objective of this course is to present core nutrition information (Chapters 1 – 7) and guidelines about the prevention of, and care during, illness. In addition, the course aims to help nutrition students evaluate information and products available from the media, colleagues, and the marketplace. Hopefully, KINE354 Nutrition in Health & Disease will spark a lifetime interest in nutrition science and its effects on health.

Students are responsible for managing their own study of the out-of-class material assigned. The course proceeds rapidly as we are addressing a large number of health conditions in a relatively short time. There are strict deadlines for each assignment that must be met (see also "Assignments" area for additional assignment submission sites and deadlines), so please plan accordingly.

I will hold office hours on TR 1:00-2:00PM in Adair Hall 109. I can also be reached via E-mail (kwkamb@wm.edu) or Zoom.

The course is divided into five units of study. Blackboard (Bb) and MindTap access to subsequent units will be available on Friday of the preceding week. For example, on the last Friday of Unit 1, Unit 2 will become available in Blackboard. An online test covering the preceding Unit material will be administered IN CLASS (so bring laptops to class on test days) which will be the first Tuesday meeting after the end of a Unit. A study guide for each test will be posted in Blackboard on the Friday before test day.

Following is an outline of the material covered during the five units of study:

A Term Paper Topic selection from the list provided is due by class on Tuesday 9/13.

Each section chapter has an accompanying practice pre-test, which is ungraded and can be taken repeatedly. Subsequent unit assignments include a Discussion Forum post, due on Fridays, a reply to another student's post, due on Sunday evenings, and other assignments due at specified times during the unit week.

On designated days, students will record everything they eat and drink during **one** 24-hour period on the provided Food Record Form (see Information). Students will then enter the foods and beverages consumed and recorded on the diet diary food record form into a designated diet analysis software program (see Information). Each day for the diet diary will be a different day of the week. By the due date, students will follow Blackboard instructions to provide the instructor with a confidential Nutrients Report (to be graded) consisting of an analysis of the one-day food & beverage consumption. The Nutrients Report is not critiqued. It is to confirm that each student is familiar with an available dietary analysis program for future use and can utilize the free *eaTracker.ca* program for important nutrition information by following their eating patterns for an extended period of time.

Unit 1:

- Overview
- Carbohydrates
- Lipids
- Unit 1 Test

Unit 2:

- Proteins
- Digestion & Absorption
- Metabolism, Energy Balance, & Body Composition
- Unit 2 Test

Unit 3:

- Vitamins
- Water & Minerals
- Illness & Nutrition Care
- Diet-Drug Interactions & Herbal Supplementation
- Enteral & Parenteral Nutrition
- Unit 3 Test

Unit 4:

- Upper GI Disorders
- Lower GI Disorders
- Malabsorption Disorders
- Liver & Gallbladder Diseases
- Carbohydrate-controlled Diets for Diabetes Mellitus
- Unit 4 Test

Unit 5:

- Controlled Diets for Cardiovascular Diseases
- Modified Diets for Kidney Diseases
- Modified Diets for Metabolic & Respiratory Stress
- Modified Diets for Cancer & HIV
- Final Summary Discussion Paper for the course. Course Evaluations.
- Unit 5 Test – December 13, 2018 2-5pm (on material covered since Unit 4 test)

Course Learning Outcomes

Upon completion of this course, the student should be able to: (1) demonstrate an understanding of core nutrition information; (2) clearly define and apply information regarding the six classes of nutrients; (3) recognize nutrition misinformation and describe how to identify reliable nutrition information; (4) understand the early history of nutrition science; (5) identify nutrition therapy for numerous disease conditions; and (6) apply the acquired knowledge in practice clinical settings.

More specific student learning objectives will be listed within each individual unit.

Course Structure

Students can work on various readings, assignments, and writings at their own pace with adherence to deadlines for submission of completed assignments. Obviously, it is advantageous for students to apply their study time throughout the week and not delay work on assignments until just prior to submission deadlines.

Students will have weekly assignments, some of which will be discussion forum comments and:

- a reaction to one (1) other peer discussion forum comment
- weekly 1-day diet diary analyses Nutrients Report (to be graded) submitted confidentially to the instructor
- tests administered after each unit that will be graded
- chapter practice tests that are not graded
- multiple reading/viewing assignments that require locating and reading peer-reviewed articles and specific text chapters in addition to viewing relevant videos
- a 10-minute presentation (20% of the final course grade)

Course Schedule

Unit 1 begins on Tuesday, August 30, 2016. The next unit will become available on Friday of the last week of the preceding Unit. Therefore, students cannot "jump ahead" to work on future assignments. Unit work can be done only during the given Unit time period. Assignments will be due at specified times unless otherwise noted.

-A "First Version" (**NOT a draft**) of your term paper will be due to the course instructor no later than midnight on Friday of the end of Unit 3

-The Final Version of your term paper in APA Style (graded) is due to the course instructor no later than 11:59PM, Monday, November 26, 2018.

Resources

There is one required text for this course (either of the following 2 options):

You can purchase a 6-month rental of the e-book version of *Nutrition & Diet Therapy*, DeBruyne, 9th Edition that includes MindTap directly from Cengage via the link in your Blackboard "resources" page or you can purchase the loose-leaf version of the custom *Nutrition & Diet Therapy*, DeBruyne, 9th Edition bundled with MindTap via the "resources" link. Both options include a MindTap access code. Either option can also be purchased from the W&M Bookstore.

Custom Bundle: ISBN: 9781337595230; MindTap PAC: ISBN: 9781337275309

Cengage MindTap is included with the purchase of either the E-book rental or bundled with the loose leaf (3-hole punched) book but not with used books. MindTap is a resource that is embedded in this Blackboard course.

You can register for your MindTap access (code included with your purchase) as soon as the course becomes available and begin working through Unit 1 assignments that are available only in MindTap. Other assignments will be posted in Blackboard in the specific unit under study.

Important: Our systems work with either Firefox or Google Chrome (Google Chrome seems to

work better) as your browser. Please make the necessary adjustments as other browsers may substantially impede your progress through Nutrition in Health & Disease. Access MindTap under as soon as possible to work through a tutorial.

Prerequisites and/or Course Requirements

Although this course is designed for nutrition in a clinical setting, there are no prerequisites. A background in Biology would be helpful but is not essential as this is an introductory-level course. Enrolled students must be able to access Cengage MindTap, to be purchased along with the required text *Nutrition & Diet Therapy*. A reliable internet connection is also required.

Course Grading Policy: Total of 500 points possible

Final grades for this course will be the composite of a 6-page term paper (20%) and graded unit assignments (80%).

Term Paper = 20% of final grade (100 points possible)

Each section of your term paper (First Version/Final Version of a 6-page term paper (NOT counting title page or reference page - see *term paper guidelines*) will be graded in the following manner:

- First Version = 40 points possible
- Final Version = 60 points possible

Graded Chapter Tests/Assignments = 80% of final grade (400 points maximum possible)

- Unit tests (5, 40-point unit tests that will be graded) = **200 test points possible**
- Practice Tests are not graded
- Four graded assignments per unit, each 10 points maximum (40 points per unit X 5 Units) = **200 assignment points possible**

For example, if you earn a unit test total of 180 points, 20 graded assignments total of 160 points, and a 90 on your term paper, then your final grade would be $460/500 = 86$, or a solid "B." Final grades are based on a standard 10-point scale with the upper two points being +'s and the lower two points being -'s.

Feedback of Unit assignments will generally be within 2 days of their required submission.

- *Grades will be lowered for any assignment submitted after its deadline*

Students may contact me via e-mail at kwkamb@wm.edu. I try to reply to all e-mails within 24 hours of receipt. I can also be reached in an emergency via office phone, 757-221-2779, or cell phone, 757-990-9605. If you are not available during my scheduled office hours, you may make an appointment with me at another time that is convenient to us both.

Important Dates

August 30: 11:00AM - First KINE 354 Class Meeting in Tucker 111
August 28 – September 7: Drop/Add
September 8 – October 28: Withdrawal Period
Monday, September 10: Record All Food & Beverage Consumption
Friday, September 14: Submit “9/10 Nutrients Report” by 11:59PM
Wednesday, September 26: Record All Food & Beverage Consumption
Saturday, September 29: Submit “9/26 Nutrients Report” by 11:59PM
October 13-16: Fall Break
Friday, October 19: Record All Food & Beverage Consumption
Sunday, October 21: Submit “10/19 Nutrients Report” by 11:59PM
Saturday, November 10: Record All Food & Beverage Consumption.
Wednesday, November 14: Submit “11/10 Nutrients Report” by 11:59PM
November 21-25: Thanksgiving Break
Sunday, December 2: Record All Food & Beverage Consumption
Wednesday, December 5: Submit “12/2 Nutrients Report” by 11:59PM
Friday, December 7: Semester Summary Assignment due by 11:59PM.
December 7: Last Day of Classes
December 13: KINE 354 Final Exam 2-5pm

About the Professor

As Professor of Kinesiology & Health Sciences, I teach KINE350 *Science of Nutrition*, KINE352 *Nutrition and the Brain*, and KINE354 *Nutrition in Health & Disease*.

After receiving my PhD from UNC-Chapel Hill, I remained at UNC where I conducted research with Dr. Lloyd Yonce and Dr. Carl Blyth and taught various undergraduate and graduate courses in the Department of Exercise Science. Following UNC, I relocated to UC Santa Barbara to teach and develop the Wellness Institute in conjunction with Jon Spaventa and Art Gilbert. Thereafter I moved to Williamsburg to take a position with W&M where I have taught and conducted research for almost 30 years.

As Director of the Jack Borgenicht Altitude Physiology Research Facility in the Department of Kinesiology & Health Sciences, we study research high altitude physiology. For years my research has focused on nutritional interventions to reduce risk of Acute Mountain Sickness (AMS), collaborating with the U.S. Army Research Institute of Environmental Medicine, Natick, MA.

Having always been fascinated with the relationship between nutrition and health, I developed the first W&M nutrition course (KINE350) more than 20 years ago. As we all know now, two of the most important keys to optimum health are nutrition and exercise, with more convincing good science being published daily. Since neither of these factors can guarantee good health because so many other factors out of our control play roles (heredity, race, age, gender, etc.), it is important to realize that we can control how much of what kind of exercise we do and we determine how much and what kinds of foods we consume. These two very important aspects of public health are almost totally within our control. For those who are at increased risk of disease conditions because of factors out of their control, it is even more important to focus on the things that can be controlled, **nutrition** and **exercise**.

Accommodations

It is the policy of William & Mary to accommodate students with disabilities and qualifying diagnosed conditions in accordance with federal and state laws. Any student who feels s/he may need an accommodation based on the impact of a learning, psychiatric, physical, or chronic health diagnosis should contact the [Student Accessibility Services](#) staff at 757-221-2509 or at sas@wm.edu. SAS staff will work with you to determine if accommodations are warranted and, if so, to help you obtain an official letter of accommodation.

The College Honor System

"The College of William & Mary has had an honor code since at least 1779. Academic integrity is at the heart of the College, and we all are responsible for upholding the ideals of honor and integrity. The student-led honor system is responsible for resolving any suspected violations of the Honor Code, and I will report all suspected instances of academic dishonesty to the honor system. The Student Handbook (www.wm.edu/studenthandbook) includes your responsibilities as a student and the full Code. Your full participation and observance of the Honor Code is expected. To read the Honor Code, see www.wm.edu/honor"