

## SEMESTER AT SEA COURSE SYLLABUS

### Colorado State University, Academic Partner

<b>Voyage:</b>	Fall 2019
<b>Discipline:</b>	Food Science + Human Nutrition
<b>Course Number and Title:</b>	FSHN 150 Survey of Human Nutrition
<b>Division:</b>	Lower Division
<b>Faculty Name:</b>	Mary Harris
<b>Semester Credit Hours:</b>	3

**Prerequisites:** None

### COURSE DESCRIPTION

This course will explore basic nutrition principles and concepts, their application to personal health and interaction with social and environmental issues. Students will learn how food is digested, how individual nutrients (protein carbohydrates, fats, vitamins and minerals) are absorbed and utilized to provide energy and promote body functions. Discussions will revolve around nutrient needs and how cultural food practices meet needs for physical and mental health throughout the lifecycle. We will also explore the nutrition related chronic diseases, heart disease, diabetes and cancer and the impact of malnutrition on growth and behavioral development. Students will learn to use the scientific evidence to evaluate nutrition information from popular websites and magazines. We will share our portside dining experiences and discuss the cultural origins of the foods we enjoyed on our journey through the Mediterranean, Africa, South and Central America.

### LEARNING OBJECTIVES

**Upon Completion of the Course, the students will be able to:**

1. Compare and contrast the scientific basis for major US health recommendations and guidelines, the Dietary Reference Intakes, Dietary Guidelines for Americans, and the Healthy American Plate to the Mediterranean and other worldwide eating patterns.
2. Demonstrate an understanding that health and wellness are influenced by physical and social (ethnicity, culture, family) environments in addition to personal psychosocial factors.
3. Discuss the scientific evidence linking dietary and physical activity practices and chronic diseases (cardiovascular, cancer, osteoporosis, diabetes, obesity) and various health related conditions such as sport performance, weight loss and dieting.
4. Describe the functions of the essential nutrients, including protein and amino acids, fat, carbohydrate, vitamins, minerals and water and compare sources of these

nutrients from traditional foods of the US and countries visited on the Semester at Sea voyage.

5. The student will be able to describe acquisition of essential nutrients from farm to ingestion, digestion and absorption
6. Apply qualitative and quantitative assessment approaches to evaluate the quality of their diet and sociological factors which influence dietary intake and make suggestions to modify their diet to improve health.

## REQUIRED TEXTBOOKS

AUTHOR: Smith AM, Collene AL and Spees CL.

TITLE: Wardlaw's Contemporary Nutrition

PUBLISHER: McGraw Hill

ISBN #:978-1-259-70996-8

DATE/EDITION:2016/11<sup>th</sup> ed

## TOPICAL OUTLINE OF COURSE

### Depart Amsterdam, The Netherlands – September 9

- A1–September 11:** Welcome to the Course
- Course Objectives
- Nutrition, Food Choices and Health
- What influences food choices?
- Reading: Chapter 1  
In Class Exercise: What Influences My diet?

Video: Foods of Poland <https://www.youtube.com/watch?v=MmMcFiBgPDc>

- A2–September 13:** Introduction to the Nutrients
- Vitamins, Minerals, Carbohydrates, Proteins, Fat and Water
- How do we obtain these nutrients from food?
- Farm to Fork – How Does Food Reach Our Table?
  - Ingestion, Digestion, Absorption, Utilization of Nutrients

### Gdansk, Poland – September 15-20

In Port – Start your food journey. Gather information for your independent port assignment. Take photos or video of some of your meals that you will experience in Gdansk and write a brief description of the cuisine you experienced. Talk to locals that you meet about traditional Polish foods, their culture and history and where their food comes from.

- A3–September 21:** Summary of Port Experiences with Food and Nutrition;  
What Did the Polish Diet Look Like?
- Traditional Polish Foods You Experienced

- Describe the Slavic and Central European influences
- Designing a Healthy Eating Pattern  
In Class Exercise: What Would You Choose? Nutrition Bingo Game  
Reading: Chapter 2

**A4—September 23:** Mediterranean Diet Pattern

- Beneficial components
- Comparison to the Healthy American Plate and DASH Diet

Video - The Big Fat Fix Movie

**A5—September 25:** Nutrient Standards and Estimated Nutrient Requirements

- Alphabet Soup: the RDAs, DVs, AIs and ULs

In Class Exercise: How to Use a Food Label

**Lisbon, Portugal — September 26-28**

**Cadiz, Spain — September 29 – October 1**

In Port –Gathering information for your independent port assignment. Take photos or video of some of your meals that you will experience in Gdansk and write a brief description of the cuisine you experienced. Talk to locals that you meet about traditional foods, their culture and history and where their food comes from.

Try to visit a grocery or market and describe the fresh foods available. Purchase a food with a food label (in English, Spanish or Portuguese) and save it so that we can compare to the US FDA Food Label upon return to ship.

**A6—October 3:** Summary of Port Experiences with Food and Nutrition;

Is there more than one “Mediterranean Diet?”

- Describe differences between Portugal and Spain
- How does this compare to the traditional diet of Poland? US?

Share a Food label you found in Portugal or Spain and compare to US  
Nutrients Which Provide Energy: Carbohydrates

- Simple sugars, complex CHO and fiber

Reading: Chapter 4 pages 123-149

**A7—October 5:** Nutrients Which Promote Growth and Regulate Metabolism: Proteins

- Protein, Paleo Diet vs Vegetarian Diet and Plant-Based Diet Patterns
- The “New” American Plate? How does it compare to your plate?

Reading: Chapters 6

**Dubrovnik, Croatia — October 6-10**

In Port- Don't forget your food journey. Gather information for your independent port assignment. Take photos or video of some of your meals that you will experience in Dubrovnik and write a brief description of the cuisine you experienced. Talk to locals that you meet

about traditional South Dalmatian cultural history and foods. Compare some of the foods you see eaten in Croatia to other Mediterranean cuisines.

**A8—October 12:** Summary of Port Experiences with Food and Nutrition

- How did the South Dalmatian cuisine differ from what you have experienced so far?

Nutrients which Supply Energy: Lipids

- Exploring myths about fat
- What types of dietary fats are more healthy?

Reading Chapter 5 pages 161-190

Video – Big Fat Lies <https://www.youtube.com/watch?v=v8WA5wcaHp4>

**A9—October 14:** Energy Balance, Obesity , Under Nutrition and Malnutrition

Reading Chapter 7 pages 237 - 272

Video UNICEF Malnutrition – Hungry Kids in Africa

[https://www.youtube.com/watch?v=U\\_Zt\\_JOUeb4](https://www.youtube.com/watch?v=U_Zt_JOUeb4)

Diet Evaluation Assignment Due: Record your intake for a 24-hour period. How does this intake differ from the Dietary Guidelines Healthy Plate? From home? How would you improve your diet on ship? At home?

**Casablanca, Morocco – October 15-20**

In Port- Don't forget your food journey. Gather information for your independent port assignment. Take photos or video of some of your meals that you will experience in Casablanca and write a brief description of the cuisine you experienced. Talk to locals that you meet about traditional South Dalmatian culture and history and foods.

A big shift in socio-demographics for the next several ports is going to be the prevalence of malnutrition in the population. If you possibly can, take advantage of opportunities to observe malnutrition (visit to local hospital, child care center, playground) and share experiences in discussion upon return.

**A10—October 22:** Global Nutrition: Undernutrition in Vulnerable Groups- Pregnant and Breastfeeding Women

Reading: Chapter 12

**A 11 - October 25:** Global Nutrition: Undernutrition in Vulnerable groups- Children

Reading: Chapter 13

Video Impact of Undernutrition in Children

[https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=undernutrition+video#id=7&vid=4d85d60aec705d05c20263eab7aa93d2&action=view](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=undernutrition+video#id=7&vid=4d85d60aec705d05c20263eab7aa93d2&action=view)

- A12—October 27:**    Undernutrition
- Anemia – Vitamins and Minerals which Play a Role in Blood Cell Formation
- Reading: Chapter 8 B12 and Folic Acid pages 317-323  
Chapter 9 Iron pages 384-387
- Goiter - Iodine Deficiency
- Reading: Chapter 9 pages 393-394

**Tema, Ghana – October 28-30**  
**Takoradi, Ghana – October 31 – November 1**

In Port- Hoping that many of you choose to do home stays to share. Gather information for your independent port assignment. Take photos or video of some of your meals that you will experience in Tema or Takradi and write a brief description of the cuisine you experienced. If you possible can, take advantage of opportunities to observe malnutrition (visit to local hospital, child care center) and share experiences in discussion upon return.

- A13—November 3:**    Summary of Port Experiences with Food and Nutrition
- Traditional Foods and sources of nutrients
  - Water quality Issues, Food-borne illness
  - How does infection (HIV) impact malnutrition?

Video – UNICEF Undernutrition [https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=undernutrition+video#id](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=undernutrition+video#id)

- A14—November 6:**    Minerals and Vitamins Which Influence Growth (Zinc, Vitamin A) and Bone Development (Calcium, Phosphorous, Magnesium, Vitamin D, Vitamin K)
- Reading:  
Chapter 9 pages 367-383  
Chapter 8 pages 294-299, 300-302

- A15—November 8:**    Exam 1 covers material, readings and discussions from classes A1 - A13)

The Importance of Water

- How much water do you drink?

Reading: Chapter 9 pages 349-357

**Salvador, Brazil – November 10-15**

- A16—November 16:** Summery of Port Experiences
- How does the Brazilian diet compare to what you experienced in the Mediterranean?
- Assessing Nutritional Adequacy in Special Groups

Reading:

Chapter 2 pages 57-61 Nutrition Assessment

Chapter 14 pages 570-573 Special Groups: Pregnancy

Chapter 15 pages 600-605 Special Groups: Infancy

In Class Case Study Hispanic Pregnant Mother

**A17–November 18:** Assessing Nutritional Adequacy in Infants and Children

Video – What is Malnutrition? Assessment of Nutritional Status in Children

[https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=what+is+malnutrition+videos#id=5&vid=01b9d64b7553a7deefb68b75d9f9b006&action=click](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=what+is+malnutrition+videos#id=5&vid=01b9d64b7553a7deefb68b75d9f9b006&action=click)

In Class Case Study Child with Failure to Thrive

**A18–November 20:** Nutrition and Chronic Disease

Inflammation – the root cause of chronic disease throughout the world

Antioxidant Nutrients

Reading:

Chapter 8 pages 289-295,300-301,323-324 Antioxidant Vitamins (Vit E, Vit C, Carotene)

Chapter 9 pages 388-392,395-396 Role of Selenium, Copper, Zinc in anti-oxidant defense systems

**A19–November 23:** Nutrition and Chronic Disease

Impact of Sodium and Potassium on Blood Pressure and Hypertension

Reading: Chapter 9 pages 360-366

**Port of Spain, Trinidad and Tobago – November 24**

**A20–November 26:** Summary of Port Experiences

What characterizes the Caribbean Island eating pattern?

Nutrient Contributions of Tropical Fruits

Nutrition and Chronic Disease- Cancer Prevention

Reading: Chapter 8 pages 335-340

**A21–November 28:** Nutrition and Chronic Disease – Diabetes

Reading: Chapter 4 pages 150-154

Type 2 Diabetes

Video: [https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=video+diabetes#id=3&vid=67195dc03f9302b4322bc9348c68697a&action=click](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=video+diabetes#id=3&vid=67195dc03f9302b4322bc9348c68697a&action=click)

Type 1 Diabetes

Video: [https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=video+diabetes#action=view&id=16&vid=dc70588400d9668b6a1f3a4794db85be](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=video+diabetes#action=view&id=16&vid=dc70588400d9668b6a1f3a4794db85be)

Dealing with Diabetes – Inspiration from Ashlee -a student with type 1 diabetes

Video: [https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=video+diabetes#action=view&id=20&vid=4ae9505e93e089f9203636e5d798e39b](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=video+diabetes#action=view&id=20&vid=4ae9505e93e089f9203636e5d798e39b)

**A22–December 1:** Nutrition and Chronic Disease – Cardiovascular Diseases (CVD)  
Reading Chapter 5 pages 191-196  
Discussion – How can nations like Ecuador and Ghana be facing challenges of both malnutrition and diseases of abundance like CVD?

Video: Cardiovascular Disease: A Worldwide Health Problem  
[https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=video+heart+disease+worldwide#id=1&vid=7dfe92126c3514919fa0538518918e65&action=click](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=video+heart+disease+worldwide#id=1&vid=7dfe92126c3514919fa0538518918e65&action=click)

### **Guayaquil, Ecuador – November 24**

In Port- Don't forget your food journey. Gather information for your independent port assignment. Take photos or video of some of your meals that you will experience in Casablanca and write a brief description of the cuisine you experienced. Talk to locals that you meet about traditional Ecuadorian culture and history and foods.

**A23–December 9:** Summary of Port Experiences  
Nutrient Needs in Fitness and Sport  
Reading: Chapter 10

### **Puntarenas, Costa Rica – December 11-15**

In Port- Don't forget your food journey. Gather information for your independent port assignment. Take photos or video of some of your meals that you will experience in Casablanca and write a brief description of the cuisine you experienced. Talk to locals that you meet about traditional South Dalmatian culture and history and foods.

**A24–December 16** Summary of Port Experiences  
Summing Up – Food and Nutrition Throughout the World

**A25–December 19:** Final Exam covers materials, reading and discussions from classes A14 - A23

### **Arrive San Diego, California – December 23**

## **FIELD WORK**

Semester at Sea field experiences allow for an unparalleled opportunity to compare, contrast, and synthesize the different cultures and countries encountered over the course of the

voyage. In addition to the one field class, students will complete independent field assignments that span multiple countries.

### **Field Class & Assignment**

The field class for this course will take place on **September 26<sup>th</sup>** in **Lisbon, Portugal**.

**Field Class attendance is mandatory for all students enrolled in this course. Do not book individual travel plans or a Semester at Sea sponsored trip on the day of your field class.** Field Classes constitute at least 20% of the contact hours for each course, and are developed and led by the instructor.

Field Experience #1. **From Farm to Fork** Tour and urban farm in Lisbon, Portugal followed by a small group Segway (or walking) tour tasting Portuguese tapas at local eateries. Experience the sights, sounds and smells of traditional food markets while discussing food products and agriculture of the area. Outcomes: Student will gain insight into the food and agriculture of the Mediterranean.

Date and Time: Thursday September 26 0900 hours

Outcomes: Student will gain insight into cultural aspects of Mediterranean diet pattern, food sources, and preparation with hands-on activities.

Evaluation: Students will prepare by participating in class discussion and viewing course materials related to Portugal and Spain. They will then be graded on two outcomes. 1) Participation and engagement with local guides and 2) A 2-3 page essay on how culture and society influence food sources, selection, preparation practices, and traditions. Include up to 5 photos.

### **Independent Field Assignments**

Experiences in port will enhance course material by allowing you to experience local food and food customs. As you are eating and drinking in country, be sure to sample local cuisine, observe local food habits, and talk to locals about food sources, choices, and customs.

Food Journey Field Assignment. At 5 different ports (not including the port of the Field Class), you will keep a diary along with photos or short videos of your food. We will share experiences in post-post discussions and your final report will be compiled for grading. Reports must be typed, 1.5 spacing, 12 point font and include a 1-2 page discussion of your eating experience (what, where, how) and reflection on how it relates to the food and culture of the country you have visited.

### **METHODS OF EVALUATION**

20% Field Class	20 points
20% Independent Field Assignment	20 points



20% Exam 1	20points
20% Final Exam	20 points
10% Class Participation	10 points
<u>10% Personal Diet Evaluation</u>	<u>10 points</u>
	100 points

## GRADING SCALE

The following Grading Scale is utilized for student evaluation. Pass/Fail is not an option for Semester at Sea coursework. Note that C-, D+ and D- grades are also not assigned on Semester at Sea in accordance with the grading system at Colorado State University (the SAS partner institution).

Pluses and minuses are awarded as follows on a 100% scale:

<u>Excellent</u>	<u>Good</u>	<u>Satisfactory/Poor</u>	<u>Failing</u>
97-100%: A+	87-89%: B+	77-79%: C+	Less than 60%: F
93-96%: A	83-86%: B	70-76%: C	
90-92%: A-	80-82%: B-	60-69%: D	

## ATTENDANCE/ENGAGEMENT IN THE ACADEMIC PROGRAM

Attendance in all Semester at Sea classes, including the Field Class, is mandatory. Students must inform their instructors prior to any unanticipated absence and take the initiative to make up missed work in a timely fashion. Instructors must make reasonable efforts to enable students to make up work which must be accomplished under the instructor's supervision (e.g., examinations, laboratories). In the event of a conflict in regard to this policy, individuals may appeal using established CSU procedures.

## LEARNING ACCOMMODATIONS

Semester at Sea provides academic accommodations for students with diagnosed learning disabilities, in accordance with ADA guidelines. Students who will need accommodations in a class, should contact ISE to discuss their individual needs. Any accommodation must be discussed in a timely manner prior to implementation.

A letter from the student's home institution verifying the accommodations received on their home campus (dated within the last three years) is required before any accommodation is provided on the ship. Students must submit this verification of accommodations to [academic@isevoyages.org](mailto:academic@isevoyages.org) as soon as possible, but no later than two months prior to the voyage. More details can be found within the Course Registration Packet, as posted to the [Courses and Field Classes page](#) no later than one month prior to registration.

## STUDENT CONDUCT CODE

The foundation of a university is truth and knowledge, each of which relies in a fundamental manner upon academic integrity and is diminished significantly by academic misconduct. Academic integrity is conceptualized as doing and taking credit for one's own work. A pervasive attitude promoting academic integrity enhances the sense of community and adds value to the educational process. All within the University are affected by the cooperative commitment to academic integrity. All Semester at Sea courses adhere to this Academic Integrity Policy and Student Conduct Code.

Depending on the nature of the assignment or exam, the faculty member may require a written declaration of the following honor pledge: "I have not given, received, or used any unauthorized assistance on this exam/assignment."

## RESERVE BOOKS FOR THE LIBRARY

AUTHOR: Smith AM, Collene AL and Spees CL.  
TITLE: Wardlaw's Contemporary Nutrition  
PUBLISHER: McGraw Hill  
ISBN #:978-1-259-70996-8  
DATE/EDITION:2016/11<sup>th</sup> ed

## FILM REQUEST

Title of Film: The Big Fat Fix Movie  
Distributor: Donal O'Neill (\$19.99) [www.thebigfatfix.com](http://www.thebigfatfix.com)

Title of Film: Supersize Me  
Distributor: Amazon

## ELECTRONIC COURSE MATERIALS

Video: Foods of Poland <https://www.youtube.com/watch?v=MmMcFjBgPDc>

Video - Big Fat Lies <https://www.youtube.com/watch?v=v8WA5wcaHp4>

Video Unicef Malnutrition - Hungry Kids in Africa  
[https://www.youtube.com/watch?v=U\\_Zt\\_JOUeb4](https://www.youtube.com/watch?v=U_Zt_JOUeb4)

Video Impact of Undernutrition in Children  
[https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=undernutrition+video#id=7&vid=4d85d60aec705d05c20263eab7aa93d2&action=view](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=undernutrition+video#id=7&vid=4d85d60aec705d05c20263eab7aa93d2&action=view)

Video – UNICEF Undernutrition [https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=undernutrition+video#id](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=undernutrition+video#id)

Video –Assessment of Nutritional Status in Children

[https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=what+is+malnutrition+videos#id=5&vid=01b9d64b7553a7deefb68b75d9f9b006&action=click](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=what+is+malnutrition+videos#id=5&vid=01b9d64b7553a7deefb68b75d9f9b006&action=click)

Video Type 1 Diabetes

[https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=video+diabetes#action=view&id=16&vid=dc70588400d9668b6a1f3a4794db85be](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=video+diabetes#action=view&id=16&vid=dc70588400d9668b6a1f3a4794db85be)

Video Dealing with Diabetes – Inspiration from Ashlee -a student with type 1 diabetes

[https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty\\_forms&hsimp=yhs-pty\\_forms&hspart=pty&p=video+diabetes#action=view&id=20&vid=4ae9505e93e089f9203636e5d798e39b](https://video.search.yahoo.com/yhs/search?fr=yhs-pty-pty_forms&hsimp=yhs-pty_forms&hspart=pty&p=video+diabetes#action=view&id=20&vid=4ae9505e93e089f9203636e5d798e39b)

## **ADDITIONAL RESOURCES**

Sifferlin, Alexandra The Weight Loss Trap Time Magazine June 5, 2017.