Acknowledgements:

Many thanks to the Teaching Assistant Mr. Bennett Atta Dzandu who played a vital role in the development and editing of this study guide and the development of the course slides and presentation of the course module on the University of Ghana Sakai Learning Management System.
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COURSE DESCRIPTION

1. COURSE WEBSITE

http://sakai.ug.edu.gh

2. INSTRUCTOR(S)

PROF M. STEINER-ASIEDU

Dept. of Nutrition and Food Science
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Prof M. Steiner-Asiedu is the corresponding instructor.

3. SUPPORT CONTACT INFORMATION

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Email: scede14@gmail.com
4. OVERVIEW

Welcome to this exciting course on Food and Nutrition in Everyday Life, UGRC 145. You have been practicing the principles of food and nutrition in your everyday life. This course is designed to highlight the importance of food and nutrition in our daily lives. It is to help you increase your knowledge to enable you be an agent of change to help people eat better, be physically active and practice good hygiene for the improvement in the overall wellbeing of the nation. You will be exposed to both environmental and personal factors that impact on our food, nutrition and health, as well as ways to prevent illness and prolong life. You as a consumer have a very important role to play to ensure a healthy nation and it is very important to exercise this right. After going through this course, you will realize how important safe and healthy food is to you as an individual and to society at large. I trust you will enjoy reading this course.

The topics to be covered include:
- Introduction and Overview of Nutrition and Food Science & Technology
- Macronutrients
- Micronutrients
- Water as nutrient
- Food Resources
- Food Safety
- Energy Balance
- Breast Feeding
- Food Faddism
- Food Habits
- Food Processing

5. KNOWLEDGE AND APPLICATION-BASED LEARNING APPROACH

Knowledge and application-based learning (KABL) is a student-centered pedagogy in which students learn about a subject through the experience of problem solving. The goals of KABL are to help the students acquire requisite knowledge and effectively apply it to solve food and nutrition problems in society. This course will use a knowledge and application-based learning approach.

Working on individual assignments, students identify what they already know, what they need to know, and how and where to access new information that they can apply to help address a nutrition problem or issue they are likely to encounter in everyday life. The role of the instructor/lecturer/tutor is to facilitate learning by supporting, guiding, and monitoring the learning process. The tutor will encourage and help build students’ confidence to take on task/assignment while stretching their understanding.

6. COURSE FORMAT

The course content will be delivered online through the SAKAI Learning Management System (Sakai LMS). The Sakai LMS will be used to deliver
- Video Lecture Sessions
- Session Slides
- Session Reading Materials
- Assessments – Assignments
Announcements will be posted to the course website and/email accordingly. It is the responsibility of students to check on announcements made in class on the Course Website and through email.

7. LEARNING OUTCOMES

The learning outcomes for the course are:

- Describe how and why foods are grouped according to their nutrient content.
- Compare and contrast the nutrients in foods and their role in the body.
- Outline the health risks of too little and too much body fat and the associated health risks.
- Describe the importance of water to human health.
- Identify foods and describe processes that often cause food borne illnesses as well as ways to prevent them.
- Describe ways in which food borne microorganisms cause illness in the body.
- Discuss ways consumers can reduce their risks of food borne illnesses (from farm to table).
- Explain why a nutritionally adequate diet is important before, during and after pregnancy to the needs of the infant child.
- Discuss the differences between human breast milk and cow’s milk as well as attempts to ‘humanize’ cow’s milk.
- Discuss the importance of breast feeding over formula feeding and Breastfeeding policy of Ghana.
- Discuss how food choices and habits can help or harm the body’s health over time.
- Identify and discuss traditional food processing methods and how they prolong shelf-life of foods.
- Discuss the effect of processing on the nutritional quality of foods.
The assessment for this course has been designed to help all students maximize their individual and group/team learning opportunities. A summary of the course assessment is provided below:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>FORM OF ASSESSMENT</th>
<th>DELIVERED</th>
<th>MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Assignments</td>
<td>Multiple Choice Questions (MCQs)</td>
<td>Alongside</td>
<td>10%</td>
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<tr>
<td></td>
<td>Short essays/structured questions</td>
<td>Sessions</td>
<td></td>
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<tr>
<td>Individual Interim assessment</td>
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<td>Mid-semester</td>
<td>20%</td>
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<tr>
<td>Written Examination</td>
<td>Semester Examination</td>
<td>End of semester</td>
<td>70%</td>
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<tr>
<td>Total</td>
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<td>100%</td>
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7.1 Individual Assignments

Individual assignments will be provided at end of each session. Assignment(s) will be in the form of Multiple Choice Questions (MCQs) and/or short Essays/structured questions.

Visit the site provided in the appendix A and engage in multiple choice questions, upload your score to the Sakai forum on the site provided. Attempt all the questions.

Submission Guidelines:
Assignment: Answer the question(s) given by the course instructor at the end of each session

8. RECOMMENDED TEXT

- Handouts and other appropriate reading materials will also be made available for session/each topic
- Any other nutrition text book
The course is organized into 13 SESSIONS along the following lines: (1) Learning Objectives and (2) Activities/Assignments.

### 9. SCHEDULE OF SESSIONS

<table>
<thead>
<tr>
<th>Week</th>
<th>Session</th>
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<tbody>
<tr>
<td>1</td>
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<td>Session 12</td>
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<td>13</td>
<td>Session 13</td>
</tr>
</tbody>
</table>

### 10. SESSION 1 – Overview/Introduction

#### 10.1 Learning Objectives

At the end of the session, the student should be able to explain the following:

1. What is food?
2. What is food science?
3. What is nutrition?
4. What are nutrients?
5. What is nutrition transition - globalization & nutrition transition in Ghana
6. Food sources and reasons for the expansion of the food industry
7. What is food processing and its effect on the world

#### 10.2 Activities and Assignments

This week, complete the following tasks:

1. Log onto the UG Sakai LMS course site:
2. Review Lecture Slides: Session 1
3. Complete the Individual Assignment for Session 1

### 11. SESSION 2-MACRONUTRIENTS

#### 11.1 Learning Objectives

At the end of the session, the student will be able to:

- List the macronutrients
- List the food sources of macronutrients
- Describe the functions of the macronutrients
11.2 Activities and Assignments
This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 2
4. Complete the Individual Assignment for Session 2

12. SESSION 3 – MICRONUTRIENTS 1
12.1 Learning Objectives
At the end of the session, the student will be able to:
1. Classify the micronutrients and give examples
2. Discuss the micronutrients of global health concern
3. Identify micronutrient related problems that affect people and how to overcome them
4. List food sources and food combinations that will maximize intake of micronutrients

12.2 Activities and Assignments
This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 3
4. Complete the Individual Assignment for Session 3

13. SESSION 4 – MICRONUTRIENTS 2
13.1 Learning Objectives
At the end of the session, the student will be able to:
1. Classify the micronutrients and give examples
2. Discuss the micronutrients of global health concern
3. Identify micronutrient related problems that affect people and how to overcome them
4. List food sources and food combinations that will maximize intake of micronutrients

13.2 Activities and Assignments
This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 4
4. Complete the Individual Assignment for Session 4

14. SESSION 5 - WATER AS A NUTRIENT
14.1 Learning Objectives
At the end of the session, the student will be able to describe/explain
1. Water distribution in the body
2. Sources of water to the body
3. Specific foods and hydration
4. Importance of water/hydration and implications of dehydration
5. Water balance

14.2 Activities and Assignments

This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 5
4. Complete the Individual Assignment for Session 5

15. SESSION 6 – FOOD RESOURCES

15.1 Learning Objectives

At the end of the session, the student will be able to
1. List the food sources of Ghana
2. List the Ghanaian six (6) food groups
3. Describe the food groups and their major nutrients
4. Explain why one must eat from all the food groups
5. Clarify the implications of food diversity and nutritional status

15.2 Activities and Assignments

This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 6
4. Complete the Individual Assignment for Session 6

16. SESSION 7 – FOOD SAFETY 1

16.1 Learning Objectives

At the end of the session, the student will be able to
1. List the agents that cause food borne illness
2. Describe ways in which food borne microorganisms can cause illness in the body
3. Describe ways to prevent foodborne diseases

16.2 Activities and Assignments

This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 7
4. Complete the Individual Assignment for Session 7
17. SESSION 8 – FOOD SAFETY

17.1 Learning Objectives
At the end of the session, the student will be able to
1. Describe ways to prevent food borne diseases/illnesses
2. Explain how to wash hands properly and its importance
3. Describe How to handle food to avoid contamination (from farm to table)
4. Discuss the effects of food borne illness on the individual and society

17.2 Activities and Assignments
This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 8
4. Complete the Individual Assignment for Session 8

18. SESSION 9 – ENERGY BALANCE

18.1 Learning Objectives
At the end of the session, the student will be able
1. Explain Energy Balance
2. Explain the factors that determine energy expenditure
3. Differentiate between Overweight and Obesity
4. Explain the reasons for food choices

18.2 Activities and Assignments
This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 9
4. Complete the Individual Assignment for Session 9

19. SESSION 10 – BREASTFEEDING

19.1 Learning Objectives
At the end of the session, the student will be able to
1. Describe how breast-milk is made
2. Explain why Breast milk is the best food for the human infant
3. Know the benefits of breast-feeding for the infant and the mother
4. Describe the difference between Human and Cow’s milk
5. Discuss Breastfeeding in the context of HIV
6. Know the Breastfeeding trends in Ghana and Ghana's policy on breast feeding
7. Discuss efforts to protect, promote and support breastfeeding
19.2 Activities and Assignments

This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session10
4. Complete the Individual Assignment for Session 10

20. SESSION 11 – FOOD FADDISM

20.1 Learning Objectives

At the end of the session, the student will be able to:
1. Explain what is meant by ‘food fad’ and who follows food fads
2. List some characteristics of food fads and the issues associated with food fads
3. Distinguish between ‘fad’ and ‘sound’ claims of foods
4. Describe eating disorders and their associated problems

20.2 Activities and Assignments

This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session11
4. Complete the Individual Assignment for Session 11

21. SESSION 12 – FOOD HABITS

21.1 Learning Objectives

At the end of the session, the student will be to:
1. Explain the term ‘food habit’
2. Explain why people eat the way they eat
3. Discuss what factors influence food habits
4. Examine the relationship between beliefs and food habits

21.2 Activities and Assignments

This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session12
4. Complete the Individual Assignment for Session 12

22. SESSION 13 – TRADITIONAL FOOD PROCESSING

22.1 Learning Objectives

At the end of the session, the student will able to
1. Explain the term ‘food processing’ and advances made in the field
2. Describe some processing/preservation methods
3. Identify and explain some technologies used in food processing and preservation in Ghana
4. List some examples of traditionally processed foods in Ghana and the processing technology employed
5. Explain the effects of food processing on the nutritional value/quality of food

22.2 Activities and Assignments

This week, complete the following tasks:
1. Log onto the UG Sakai LMS course site:
2. Read Chapter of Recommended Text, Handouts and other appropriate reading materials
3. Review Lecture Slides: Session 13
4. Complete the Individual Assignment for Session 13

APPENDIX A

UG SAKAI LMS COURSE WEBSITE: UGRC 145-Nutrition and Nutrition in Everyday Life

Log onto the UG Sakai LMS course site:

INDIVIDUAL ASSIGNMENT

Assignment: Answer the question given by course instructor after each session.

Submission Guidelines: Each assignment, therefore, should be carefully edited for grammar, typos, and/or spelling mistakes. Appropriate citations should be provided using the American Psychological Association (APA) format. The following website offers information about writing and formatting papers in the APA style including general format, reference of the works of others in your texts, reference list, examples, notes, and additional resources:

- http://owl.english.purdue.edu/workshops/hypertext/apa/index.html

Multiple Choice Questions (MCQs): MCQs covering the various sessions have been uploaded on the Sakai platform. Follow appropriate link to access questions to test your level of knowledge and application in relation to various sessions/topics covered in the course.

Activity Questions: Short essay/open ended questions have been provided as a means of revision at the end of each session/topic. Students must attempt to answer all the questions by following the appropriate direction/instruction to these questions.