

NORTHERN ESSEX COMMUNITY COLLEGE
HAVERHILL, MASSACHUSETTS

COURSE OUTLINE

Fall 2014

COURSE: BIO 103-LT1 (CRN: 1691), HUMAN NUTRITION and HEALTH

INSTRUCTOR: Professor Noel Ways

TEXT: Nutrition for Healthy Living, Third Edition, by Wendy J. Schiff, McGraw Hill Publishing Co., Inc. © 2014

ADDITIONAL SUPPLIES: Tape Recorder

LOCATION AND TIME: Lecture: L141 MWF 1:45-3:00

COLLEGE COURSE DESCRIPTION:

BIO 103 Human Nutrition and Health

This course begins with an overview of the basic chemistry needed to understand the biology of nutrition. The primary focus of the course is on eating practices and their effect on the overall health of the human body. Topics covered include the composition and function of the major food groups, vitamins and minerals, product label interpretation, and nutrition's role in disease and wellness. Note: This course may be taken alone as a 3 credit biology course OR in conjunction with BIO104 Human Nutrition & Health Laboratory, as a 4 credit biology course.

3.000 Credit hours

3.000 Lecture hours

INSTRUCTIONAL OBJECTIVES:

Human Nutrition is designed to explore the relationships between human physiology and health and the bodies nutritional requirement. Beyond this, the relationships between dietary imbalances and disease processes will be explored. As the course progresses the student is expected to discover and explore personal health issues, particularly where diet and healthful living may play a remediation role.

The course will commence with a discussion of foundational principles particularly as they relate to nutritional standards, and how to interpret these standards. The anatomy and select physiological concerns of the digestive system and associated structures will then be discussed. Next, a detailed discussion of major nutrient groups will ensue. These will include proteins, lipids, vitamins, and minerals. Once

the foundation of human nutrition is laid, then nutritional concerns will be discussed as they may be applied to significant population groups within society. These will include family issues, various stages of the life of an individual, and differences between male and female. Finally, throughout the lecture sequence specific dietary concerns as they are related to the states of disease of various systems and organs will be discussed.

As human nutrition is a core course fulfilling college core requirements, the approach will be holistic, designed to broaden the student's education within the life sciences. With this goal set, the following course objectives will be met. The student will gain:

- 1. An overall appreciation for the complexity of the human organism and the impact that proper and poor nutrition can have on the quality of life.*
- 2. The appreciation of the homeostatic mechanisms that regulate human health, and how these mechanisms respond to both normal and abnormal nutritional inputs.*
- 3. A solid understanding of basic biochemistry of nutrients particularly as they apply to nutritional concerns that will be confronted in literature and the media.*
- 4. An understanding of the function of nutrients in maintaining homeostasis.*
- 5. A greater appreciation for the complexity of the human being and human metabolism.*
- 6. The student should expect to gain a foundational knowledge such that wiser decisions and appropriate questions can be asked at appropriate points on one's life, particularly as they relate to dietary concerns.*

TEACHING PROCEDURES:

The lecture sequence will be presented in a systematic fashion with accompanying overheads to facilitate organization and understanding of the lecture material. Significant emphasis will be placed upon physiological processes where appropriate with an aim toward an appreciation for the integration of various physiological processes.

GRADING POLICY

The assignment of a final semester grade will be dependent upon the completion of approximately 9 lecture exams, although this may be changed depending upon the progress of the lecture sequence and other issues.

Of all the exam give, the lowest grade may be dropped, with the exception of the final exam. The nature of all exams are non-comprehensive and will cover material

from the previous exam.

The final assignment of grades for both courses is based upon an absolute scale, see chart below.

Grading Policy:

A	4.0	93-100	B-	2.7	80-82	D+	1.3	67-69
A-	3.7	90-92	C+	2.3	77-79	D	1.0	63-66
B+	3.3	87-89	C	2.0	73-76	D-	0.7	60-62
B	3.0	83-86	C-	1.7	70-72	N	0.0	0-59

NOTES

- **The Syllabus** Please keep a copy of this syllabus as a record of course content for future application purposes.
- **Recording of Lectures** Recording of the lectures is always permitted. The use of lap-top computers or word processors is encouraged if it helps the student integrate the material. Feel free to use a digital camera to photograph laboratory dissections, models, or any other supportive tool. You may videotape the lecture if you like. In short, you may do anything you deem necessary to master the subject matter as long as it is legal, ethical, and non-disruptive.
- **Attendance** of every lecture and every lab is strongly encouraged, as material will be presented that may not be otherwise covered in the text.
- **Tardiness** Please be on time. Tardiness is disruptive to both the students and the instructor. If you are late, please make sure that you are marked down on the attendance sheet before you leave.
- **Cellular Phones and Text Messaging** - Unless you anticipate an emergency call, please turn your phones off. Text messaging is prohibited during class.
- **Alternative Textbook** If the student chooses to use an alternative textbook, or an edition other than the one required for this course, it is the responsibility of the student to obtain information that is either not covered or otherwise not approached in similar manner as in the required text, as deemed necessary by the student.
- **Textbook Usage** The role of the textbook is to be a supportive tool to the lectures. The student is not expected to memorize the entire textbook, but to use it to reinforce concepts and material presented during lecture.
- **Web Site** Outlines, handouts, course information, and email can be found at: www.noelways.com
- **Lecture Outlines and Supplemental Materials** are to be found on the internet. Should you have difficulty downloading any of the material at home, then you are encouraged to do this task at the school. All materials should be

- downloaded and organized in a three ring binder by the first exam.*
- **Computer Lab Access** may require a current student ID.
 - **The Schedule** below is a tentative but probable schedule of topics and dates. The schedule will be modified according to the progress of the lectures. The exam dates are target dates and will represent only material actually covered in class. Specifics regarding content will be given as the exam date approaches.
 - **Exam Dates** Please note exam dates on the schedule below.
 - **Exam Filing** All exams are returned to the instructor and filed after being handed back for review.
 - **Make-up Exams** are to be avoided! If a make-up exam is needed, fill out a make-up petition form (found on web) and provide requested documentation. If a doctor's note is submitted, then a make-up exam is permitted. If a doctor's note is not submitted, a penalty is applied at the discretion of the instructor, and the instructor reserves the right to refuse the make-up. If there is to be a make-up, this task must be accomplished as soon as the student returns to school in good health, and within 5 school days. Lab practicals are very difficult to make up. Generally, if you miss a lab practical, this will be the exam grade you drop.
 - **Exam Grades** are not given over the internet.
 - **Dropping One Exam** The lowest grade of the semester is dropped, with exception of the last exam, which is not dropped.
 - **Final Grade** Your final course grade is typically determined the day of the final exam. Once the grades are submitted, confirm your grade with the college, and contact me if there are any issues. After four weeks of the grades being submitted, exams are recycled, and grades are final.
 - **Tutoring** The college provides free tutoring services during Fall and Spring semesters. Contact the academic support center for the days and times. Tutoring is a free service of the college and designed to assist students who desire to excel in their mastery of the material as well as those struggling.
 - **Identification** of all texts, recorders, and lab manuals is important. Please put your name and phone number on all personal belongings. If you leave something behind, you may be contacted as to where to pick it up.
 - **Unscheduled School Cancellations** Should class be cancelled, the student is expected to master the material that is scheduled for that day on the downloadable outline. Should additional instructions be necessary, they can be found on the web site, under "announcements". During the subsequent class period, some topics may be reviewed, but responsibility for mastery of the material is upon the student.
 - **Contact Information** My email address can be found on the web. When emailing, always identify yourself and the class that you are in. Always have the subject line appropriately filled in. I will not open mail that is not properly

identified.

This schedule is tentative and will be adjusted according to the progress of the lectures.

Schedule of Lecture Topics and Target Dates

	<i>LECTURE</i>	<i>READINGS</i>
<i>Unit 1</i>	<i>Introduction to the Basics of Nutrition</i>	<i>Chapter 1</i>
<i>Unit 2</i>	<i>Nutritional Information</i>	<i>Chapter 2</i>
<i>Unit 3</i>	<i>Planning Nutritious Diets</i>	<i>Chapter 3</i>
<i>Unit 4</i>	<i>Essential Chemistry</i>	<i>Chapter 4</i>
<i>Unit 5</i>	<i>Body Basics (Digestive System Focus)</i>	<i>Chapter 4</i>
<i>Unit 6</i>	<i>Carbohydrates</i>	<i>Chapter 5</i>
<i>Unit 7</i>	<i>Lipids</i>	<i>Chapter 6</i>
<i>Unit 8</i>	<i>Heart Disease</i>	<i>Chapter 6</i>
<i>Unit 9</i>	<i>Alcohol</i>	<i>Chapter 6</i>
<i>Unit 10</i>	<i>Proteins</i>	<i>Chapter 7</i>
<i>Unit 11</i>	<i>Fat Soluble Vitamins</i>	<i>Chapter 8</i>
<i>Unit 12</i>	<i>Water Soluble Vitamins</i>	<i>Chapter 8</i>
<i>Unit 13</i>	<i>Water</i>	<i>Chapter 9</i>
<i>Unit 14</i>	<i>Minerals</i>	<i>Chapter 9</i>
<i>Unit 15</i>	<i>Energy Balance and Weight</i>	<i>Chapter 10</i>
<i>Unit 16</i>	<i>Nutrition for Active Lifestyles</i>	<i>Chapter 11</i>
<i>Unit 17</i>	<i>Food Safety</i>	<i>Chapter 12</i>

