**BIO 240 – Human Nutrition**

**Science Department**

**Semester: Summer 2014**

**Catalog Course Description:** This course is an introduction to human nutrition for students who have taken abiological sciences course in human anatomy and physiology. The student will learn nutritional biochemistry and apply these concepts to clinical nutrition, diet therapy, health promotion, and nutritional assessment.

**Prerequisite(s):** BIO210 or BIO112

**Credit Hours:** Lecture: 3.0

**Departmental Website:**  [http://www.midlandstech.edu/scienc](http://www.midlandstech.edu/science)e

**Departmental Assistant:** **Pam McPherson (mcphersonp@midlandstech.edu)**

**Department Chair:****Dr. Geralyne Lopez-de-Victoria** (lopezg@midlandstech.edu)

**Instructor:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Office:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Telephone:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**FAX:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**E-mail:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Campus Mailbox:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Class Schedule:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Office Hours:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Textbook(s):** Nutrition Update to the New MyPlate:Thompson/Manore

**Additional Textbooks/Readings:** Lecture notes or other material designated by instructor other than required textslisted on this course syllabus are considered optional.

**General Education Core Competency Statement:** This course is designed to meet the college’s generaleducation core competency for Scientific Reasoning.

**Course Objective:** The objective of this course is to enable the student to develop an integrated concept of the role ofnutrition in health and disease. A detailed list of course objectives are listed on the science department web site:  [www.midlandstech.edu/science](http://www.midlandstech.edu/science/)/

**Course Outcomes and Competencies:**

**Intended Course Outcome:** Students will learn and use scientific reasoning and principles through the studyof basic Human Nutrition

**Student Learning Objective (SLO):** The student will use scientific reasoning and principles to assessand understand nutrition through knowledge of nutrient function throughout the life span and in the disease process.

**Course Competency (Performance Measure):** Students will learn and demonstrate their ability use scientific reasoning and principles by answering examination questions based on the following learning objectives:

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| **Chapter** | **Selected Chapter Objective** |

1. The student will use scientific reasoning and principles to compare essential and nonessential nutrients.
2. The student will use scientific reasoning to calculate percentages and/or grams of macronutrients when given kilocalories.
3. The student will use scientific reasoning to distinguish between appetite and hunger.
4. The student will use scientific reasoning and principles to describe how carbohydrates are digested and absorbed in the body.
5. The student will use scientific reasoning and principles to determine the effect of saturation of fatty acids.
6. The student will use scientific reasoning and principles to determine how proteins differ from lipids and carbohydrates.
7. The student will use scientific reasoning and principles in determining how electrolytes assist in regulation of fluid balance.
8. The student will use scientific reasoning to determine how oxygen free radicals damage the body and the role of antioxidants in disease prevention.
9. The student will use scientific reasoning and principles to describe the importance of nutrition in bone formation and prevention of osteoporosis.
10. The student will use scientific reasoning and principles to determine the relationship between nutrition and Type II Diabetes.
11. The student will use scientific reasoning and principles to interpret BMI and compare to ideal body weight and obesity.
12. The student will use scientific reasoning and principles to distinguish the changes in nutrient needs due to physical activity.
13. The student will use scientific reasoning to distinguish between eating disorders and the association with the female athlete triad.
14. The student will use scientific reasoning and principles to describe which individuals are more susceptible to food borne illnesses.
15. The student will use scientific reasoning to determine the specific nutrients needed to meet fetal development and during the first month of life.
16. The student will use scientific reasoning and principles to determine how nutritional needs can be met in adults with diseases of the GI tract.

**MEASUREMENT INSTRUMENT AND SUCCESS CRITERIA**

Students will complete a set of examination questions prepared by faculty based on the course learning objectives listed above. The success criterion is that 80% of the students will answer 75% or more of the questions correctly.

Program and course assessment activities are deployed and results collected in accordance with the College’s assessment schedule. Refer to the information in the syllabus regarding the applicability of assessment activity for the current semester.

**Course Attendance:**

Students will be allowed to miss twice the number of times a lecture or laboratory section meets per week. If the lecture meets 3 times per week, 6 absences are allowed.

If the lecture meets 2 times per week, 4 absences are allowed. If the laboratory meets once a week, 2 absences are allowed.

If the student misses more than 10 minutes of class by either arriving late or leaving early, then the student will be counted as absent, missing fewer than 10 minutes is a tardy. Three tardies count as one absence.

Students adding courses after classes begin are responsible for work covered from the first day of class. All classes missed count as absences. Please note the following: You are responsible for all material and announcements presented, whether you are present or absent.

**Withdrawal:**

Students may withdraw from a course anytime before the last week of classes (see the current semester college calendar, available on the MTC web site, for official dates). Students who wish to withdraw from a course must submit a withdrawal form to records. The date of withdrawal may affect a number of things, including financial aid/ tuition reimbursement, tuition

refunds, and course grades. The effective date of withdrawal depends upon the date the withdrawal form is submitted to records. It is the student’s responsibility to be aware

of relevant dates, to make an informed decision, and if necessary, to submit withdrawal forms in a timely fashion.

For questions regarding the effect of withdrawal on financial aid or tuition reimbursement students should contact Student Financial Services. Deadlines for tuition refunds may be found on the current semester college calendar, available on the

MTC web site, or by calling the cashier’s office.

Students who withdraw before midterm will receive a grade of W. Students who withdraw after midterm and have an overall class average of 60% or greater will receive a grade of W. Students who withdraw after midterm and have an overall class average below 60% will receive a grade of WF, which is calculated as an F.

Grades of W or WF are also assigned when a student exceeds the maximum number of absences allowed in a course. These grades are entered on the final grade roster along with the last date of attendance (LDA). Students should understand that the LDA does not constitute an effective date of withdrawal and should not consider a decision to stop attending class to be equivalent to withdrawal.

**BIO 240: TENTATIVE WEEKLY SCHEDULE**

**WEEK LECTURE TOPIC CHAPTER**

1Role of Nutrition 1

 Overview of all vitamins and minerals

 And deficiency disorders

 Designing a Healthful Diet 2

 Are We really What We Eat? 3 (Review of Digestive System)

**Clinical Nutrition Topic:****Enteral and Parenteral Nutrition**

 **Alternate Feeding**

 2 Carbohydrates 4

Clinical Nutrition Topic: **Diabetes**

 3 Fats 5

 Clinical Nutrition Topic: **Cardiovascular Disease**

 **4** Proteins6

 5 Nutrients in metabolism 10

**Examination I** 1-6 & portion of 10

 Nutrients involved in fluid & electrolyte balance 7

 Clinical Nutrition Topic: **Hypertension**

 Clinical Nutrition Topic: **Renal Disease**

 Clinical Nutrition Topic: **Liver Disease**

 6 Antioxidants 8

 Clinical Nutrition Topic: **Cancer**

 Nutrients for Bone Health 9

 Clinical Nutrition Topic: **Osteoporosis**

 7 Nutrients in blood 10

 Clinical Nutrition Topic: **Anemias**

 8 Weight Control 11

 Clinical Nutrition Topic: **Obesity** 11

**Examination II 7**-11

 9 Nutrition & Physical Activity 12

 Eating Disorders 12

 Food Safety & Technology 13

 10 Nutrition through the Lifecycle: Pregnancy & Infant 14

 Clinical Nutrition Topic: **Benefits of Mother’s Milk**

 **Comparison of Human Milk**

 Nutrition through the Lifecycle: Childhood to adult 15

 TBA **FINAL EXAM 12-15 (about 25%)**

 **Cumulative Portion (about 75%)**

**PLEASE NOTE:** Should change become necessary, the instructor reserves the right to adjust the requirements, pace, or scheduling of this course. Any change will be announced in class before it becomes effective.

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| **GRADING** |  |  |  |  |  |
| **Tentative Exam Dates & Grading** |  |  |  |  |
| Exam #1 |  | Date: | Grade: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 25% of grade |
| Exam #2 |  | Date: | Grade:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 25% of grade |
| Final Exam | Date: | Grade:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 25% of grade |
| Assignments: | TBA | Grade:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 25% of grade |
|  | All assignments are expected to be submitted on time in the D2L drop box. Points will be deducted for submission of |
|  | assignments after the announced due date. |  |  |  |
| **GRADING:** | **A (90-100)** | **B (80-89)** | **C (70-79)** | **D (60-69)** | **F (<60)** |

The faculty, coordinators and Science Department Chair are here to assist you. If you are having any difficulty with your class please talk to your instructor first. You can discuss your concerns with the Science Coordinator and then with the Department Chair, if necessary, after you have addressed your concerns with your instructor. Dr. Geralyne Lopez-de-Victoria is Department Chair and can be reached through Jan Oliver, Departmental Assistant at 822-3548. Dr. Gregory Mancini is Beltline Science Coordinator and can be reached at 738-7660 or in LET 421J. The Airport Science Coordinator is TBA.



**Academic Affairs Student Guidelines and Expectations**

***MTC Student Handbook:***

Students are expected to read the *MTC Student Handbook* and abide by its policies. You can find the handbook online at http://www.midlandstech.edu/handbook/; copies are also available at various locations on campus. Some of the more important handbook policies that impact your academic success are listed below.

**Academic Integrity:**

The students of MTC have adopted the following Honor Code:

*As a member of the Midlands Technical College community, I will adhere to the college’s Student Code. I will act honorably, responsibly, and with academic integrity and honesty. I will be responsible for my own academic work and will neither give nor receive unauthorized or unacknowledged aid. I will behave courteously to all members of the MTC community and its guests and will respect college property and the property of others.*

The Student Code (Appendix I of the *MTC Student Handbook*) defines academic dishonesty, which includes, but is not limited to, cheating on tests, plagiarism, collusion, and falsification. Such actions will result in discipline.

* Cheating on tests includes:

. Copying from another student’s paper.

. Copying or presenting someone else’s work as your own.

. Using unauthorized materials during a test.

. Collaborating with any other person during a test without permission.

. Knowingly obtaining, using, buying, or selling in whole or part the contents of any test.

. Bribing any other person to obtain information about tests.

. Substituting for another student, or permitting another student to substitute for you.

Plagiarism is taking another person’s work and using it without giving the source credit in any graded assignment.

* The use of cell phones or other portable electronic devices for purposes of academic dishonesty in any form is strictly prohibited; students who violate this policy will be subject to the disciplinary procedures and sanctions outlined in the Student Code.
* For more information about academic dishonesty, see the Student Code.

**Class Attendance and Participation**:

Students are responsible for meeting all attendance and participation requirements outlined in each course syllabus.

**Portable Electronic Devices:**

Cell phones and other portable electronic devices may be used in classrooms only for maintaining access to *MTC Alerts!*, the college’s emergency notification system. Other uses of portable electronic devices (for example, leaving class to make or receive phone calls, sending or reading text messages, accessing the internet, taking pictures or videos, listening to music, etc.) will be considered disruptive activities, and the student will be subject to disciplinary action.

**Student Email Accounts (*MyMTC* Email)**:

 All MTC students are assigned a college email account called*MyMTC*Email. For access, follow the link on the *Enrolled Students* page or go to <http://www.midlandstech.edu/myemail>.

 *MyMTC*Email is the primary way the college communicates with students. You are responsible for checking your college email regularly for important information and announcements about registration, financial aid, cancelled classes, emergencies, etc.

 Students can use their college email accounts to communicate with faculty, staff, fellow students, and others, as well as to maintain personal calendars and task lists.

 In addition to using *MyMtc* Email, students may also be required to communicate with instructors through Desire 2

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| Learn (D2L, the college-wide learning management system), or through course-specific software, such as |  |
| MyMathLab. |  |

***MyMTC*:**

The college conducts business with students through *MyMTC*, which provides many services and resources, including access to transcripts, grades, and program evaluations; information about financial aid status; and how to search and register for courses. To access *MyMTC*, follow the link on the *Enrolled Students* page or go to http://mymtc.midlandstech.edu.

**Children on Campus:**

Children are generally not permitted on campus except for special events. Children are not permitted in classes, labs, or advisors’ offices. Children can never be left unattended on campus, including in the library, the Academic Success

Center, or parking lots.

**Inclement Weather Policy:**

 If weather conditions or other emergencies cause the college to close or open late, announcements will be made over local radio and TV stations, on the MTC website, and on the college’s information line (803-738-8324).

* Notices will be sent to students via *MyMTC* Email and *MTC Alerts!* when applicable.
* Check for separate announcements for day and evening classes because weather conditions can change during the day.
* Inclement weather schedules: In standard non-lab and non-clinical classes, if the college closing or reopening means that there is at least 30 minutes of a class remaining, plan to attend that class. For example, if the college opens at 10 a.m., classes that normally meet at 8 a.m. will not meet, but classes that normally begin at 9:35 a.m. will begin at 10 a.m. Similarly, if the college closes at 8 p.m., 6 p.m. classes will meet for their regular time, but 7:35 p.m. classes will not meet.
* Check your syllabus for specific information about the inclement weather policy for that course.

**Campus Emergency Protocol**:

To report safety concerns or suspicious activities, call Campus Security at 7850 (on campus) or 738-7850 (cell phone or off campus).

* To report a security emergency, call Campus Security at 738-7199 or dial local 911 immediately.
* The college also provides emergency call boxes; look for these red call boxes in or near parking lots on all campuses.
* If a college-wide emergency occurs, the college will communicate additional information and instructions in a number of ways, including the MTC Information Centers, campus loud speakers, *MyMTC* Email, the MTC website, and *MTC Alerts!*. To sign up for *MTC Alerts!* and receive emergency notifications on your cell phone, go to: http://www.midlandstech.edu/Phone\_Alert.htm.

**Student Evaluation of Instruction**:

Toward the end of the semester, students will be encouraged to participate in evaluating their courses. You can complete this confidential evaluation through *MyMTC* using your username and password. Announcements will be made during the term concerning how and when to complete the online evaluation.

**Students Requiring Special Accommodations**:

 If a student with a disability requires special accommodations, the student should go to Counseling Services in the Student Center on Beltline or Airport Campus for assistance. Documentation regarding a specific disability is required in order for special arrangements to be made. All information received will remain confidential.

* For more information, follow the *Disability Resource Centers* link under *Online Resources* on the *Enrolled Students* page.

(Approved July 12, 2011)



**SCIENCE DEPARTMENT CODE OF CONDUCT**

Student rights and responsibilities are outlined in the MTC Student Handbook.  [http://www.midlandstech.edu/planner](http://www.midlandstech.edu/planner/)/

We are extremely proud of the quality of students in the Science Department; however, there have been occasions where disciplinary action is necessary to prevent disruptive and dishonest behavior. The following items are specific violations and consequences supported by the Science Department. Your instructor will circulate a form for your signature stating that you understand the Science Department Course Syllabus, which includes this document.

Any student who exhibits behavior that is disruptive to the learning process such as talking, discourtesy to faculty or fellow students to include obscene language or gestures, or uncooperative actions will be asked to leave the classroom. The student will be counted absent for this class. Depending upon the nature of the offense or if it occurs during an exam the instructor may require that the student see the science coordinator, chair of the science department, or the Assistant Vice President for SDS before returning to class. Campus Security will be called for any threatening or violent behavior.

Cell phones and other portable electronic devices may be used in classrooms only for maintaining access to *MTC Alerts!,* the college’s emergency notification system. Other uses of portable electronic devices (for example, leaving class to make or receive phone calls, sending or reading text messages, accessing the internet, taking pictures or videos, listening to music, etc.) will be considered disruptive activities, and the student will be subject to disciplinary action.

Any student proven to have engaged in academic dishonesty will be given a grade of zero on the exam or assignment. This includes, but is not limited to, giving or receiving information during an exam, use of unauthorized materials during an exam or assignment, plagiarism, or changing answers after a grade has been assigned. Any incident involving academic dishonesty will be reported to the Assistant Vice President for SDS. For more information, please refer to your MTC Student Handbook  [http://www.midlandstech.edu/planner](http://www.midlandstech.edu/planner/)/