

# **III. NUTRITION AND DIETETICS**

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## Majors in the Department of Nutrition and Dietetics

The Department of Nutrition and Dietetics is committed to producing graduates whose professional practices are grounded in Biblical principles and supported by a solid foundation of nutrition science. Through cooperation with the chemistry, biology, and dining services departments at Messiah College, as well as local Nutrition and Dietetics practitioners, Messiah is one of a few Christian Colleges able to offer students excellent preparation for careers in nutrition science, public health, dietetics practice, and food service. The Department of Nutrition and Dietetics offers two majors. The Nutrition and Dietetics major is designed for students whose primary goal is providing food and nutrition care. The Nutrition Science major is designed for students who wish to use undergraduate nutrition science as a foundation for graduate study in nutrition, public health, or medical school. Students in both majors design and carry out a food or nutrition related research project. Recent projects have been related to nutrition assessment, food nutrition content, and the health habits of college students. In addition to these majors, the department offers a Foods and Nutrition minor and a non-majors nutrition course which meets the college general laboratory science requirement.

### Nutrition and Dietetics Major

Dietetics is a profession concerned with the science and art of human nutritional care. Students study a wide variety of subjects, including anatomy and physiology, chemistry and biochemistry, food science and technology, nutrition science, management and business, education and counseling, and medical nutrition. In addition to course work, students are strongly encouraged to obtain work or volunteer experience in nutrition and dietetics. Students who wish to further explore a particular area of nutrition and dietetics practices may choose to complete a practicum in nutrition and dietetics. In the past, students have completed practica in hospitals, nursing homes, and community health agencies.

Many jobs in nutrition care require that an individual be credentialed as a Registered Dietitian (R.D.). To earn the R.D. credential an individual must complete a three step process: 1) Complete a minimum of a bachelor's degree at a US regionally accredited college or university and course work approved by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetics Association (ADA). Students interested in becoming registered dietitians should be careful to enroll in a school with a CADE-accredited nutrition or dietetics major. 2) Complete a CADE-accredited dietetic internship. Typically these programs are offered by health care facilities, community agencies, foodservice corporations, or educational institutions and are 9-12 months in length. 3) Pass a national examination administered by the Commission on Dietetic Registration (CDR). Once the R.D. credential has been earned, continuing professional educational requirements must be met to maintain it. For additional information on dietetics education contact CADE at: American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, Illinois 60606-6995, Phone: 312-899-0040 Ext. 5400, or [www.eatright.org](http://www.eatright.org).

The Messiah College Nutrition and Dietetics major is approved by CADE as a Didactic Program in Dietetics and enables students to complete the first step towards becoming a Registered Dietitian. Nutrition and Dietetics graduates who wish to become Registered Dietitians apply to a CADE-accredited internship (Step 2). After successful completion of a CADE – accredited dietetic internship they are eligible to take the national registration exam (Step 3).

Nutrition and Dietetics majors who do not begin CADE – accredited dietetic internships after graduation are employable as dietetic technicians in health care institutions and businesses, nutrition counselors in community nutrition programs and food service managers in health care institutions, schools and industry. Additionally, graduates may choose to continue their education by applying to graduate school in areas such as nutrition science, nutrition education, or international nutrition.

The Department of Nutrition and Dietetics also offers a verification program for individuals who already have at least a bachelor's degree from an accredited institution but have not taken all of the course work required by CADE. Individuals seeking to obtain verification of the CADE Didactic Program in Dietetics academic requirements complete an individualized plan of study based on evaluation of their academic transcripts, including at least 18 credits in Food and Nutrition courses at Messiah College. Individuals who complete the verification program requirements are eligible to apply for CADE-accredited supervised practice programs.

## Nutrition Science Major

The Nutrition Science major is designed for strong science students who wish to prepare for careers in nutrition research, public health, or medicine. Students study anatomy and physiology, general chemistry, organic chemistry, biochemistry, statistics, basic food science, and nutrition science. The Nutrition Science major does not satisfy the CADE academic requirements. Nutrition Science majors who wish to pursue dietetic registration should take NUTR 331 as a part of the major, PSYC 101 as a social science general education course, and the following additional courses: HRM 120, NUTR 352, NUTR 341, NUTR 342, NUTR 411, NUTR 410, NUTR 412. Students who wish to use the Nutrition Science major as preparation for medical school should take BIOL 385/6 and PHYS 211 and take PHYS 212 as an elective.

### Suggested Program of Study

Four year course planning guides for the Nutrition and Dietetics major and Nutrition Science major can be found on the Course Scheduling Guidelines link on the Messiah College Department of Nutrition and Dietetics web page (<http://www.messiah.edu/departments/nutrition/CourseSchedulingGuidelines.html>). The course planning forms are organized by the year you plan to graduate. Separate planning forms for Nutrition and Dietetics majors who wish to spend a semester studying abroad and Nutrition Science majors who plan on applying to medical school are provided.

(Note, the study abroad plan is not needed for students planning to take a January term or May term cross cultural course, only for Nutrition and Dietetics majors who plan to study abroad for a full semester.)

# Planning Your Academic Program

## Consult the Course Scheduling

In planning your program at Messiah, example of a typical program for your major. Keep in mind that this is only a suggested program. The actual courses required are those listed under Major Requirements. They are also listed on the checklist in this handbook. To help you plan, the following list of major courses is offered: (Please be aware that this list does not guarantee that any particular course will be offered in a given semester.)

### EVERY SEMESTER

Nutrition Theory  
Microbiology

Senior Research

### FALL SEMESTER ONLY

General Chemistry I  
Human Anatomy and Physiology I  
Introduction to Organic Chemistry  
Opportunities in Nutrition and Dietetics

Nutrition Through the Life Cycle  
Nutrition and Dietetics Seminar

### SPRING SEMESTER ONLY

Community Nutrition  
Human Anatomy and Physiology II  
Research Methods

General Chemistry II  
Food and Food Science  
Nutrition Counseling Experience

### ALTERNATE YEARS ONLY

#### Fall

Advanced Food Science and Technology  
Food Service Operations  
Advanced Nutrition I  
Medical Nutrition Therapy I

#### Spring

Food and Nutrition Services Management  
Medical Nutrition Therapy II  
Advanced Nutrition II

### Remember:

1. You are personally responsible to plan your program to meet all graduation requirements.
2. Completion of all major and general education requirements with a minimum of a total of 123 credits.
3. The last thirty (30) credits preceding the conferring of the degree must be earned at Messiah College with a minimum of twelve (12) credits in the major.
4. To continue at Messiah, you will need to maintain a cumulative grade point of 1.80 (0-23 credits), 1.9 (24-56 credits), and 2.0 (57 credits or above).

## Guideline for Mathematical Sciences Courses

Students in the Nutrition and Dietetics major should take STAT 269 Introductory Statistics to satisfy the General Education Mathematics requirements.

Students in the Nutrition Science major can take STAT 269 Introductory Statistics or STAT 291 Statistics for Math Sciences to satisfy the General Education Mathematics requirement. Students in the Nutrition Science major also need to take either MATH 111 or MATH 109 and MATH 110 (Calculus I)

### **Students with Advanced Placement credit:**

Requirements for courses in mathematical sciences can be met through Advanced Placement exam credit. Students who have taken AP exams in calculus, computer science, or statistics should go to the registrar's website (<http://www.messiah.edu/office/registrar>) to find out how credit is awarded for your scores.

# Nutrition and Dietetics (B.S.)

(Department of Nutrition and Dietetics)

General Education requirements on reverse side

## Major Requirements

<u>Major Courses</u>	<u>Credits</u>	<u>Semester Completed</u>
[BIOL 185] Human Anatomy & Physiology I	4	_____
[BIOL 186] Human Anatomy & Physiology II	4	_____
[BIOL 382] Microbiology for Health Professions	4	_____
[CHEM 105] General Chemistry I	4	_____
[CHEM 106] General Chemistry II	4	_____
[CHEM 204] Introduction to Organic Chemistry	4	_____
[HRM 120] Principles of Management	3	_____
[NUTR 099] Opportunities in Nutrition and Dietetics	1	_____
[NUTR 121] Food and Food Science	3	_____
[NUTR 222] Nutrition Theory	3	_____
[NUTR 322] Nutrition Through the Life Cycle	3	_____
[NUTR 331] Advanced Food Science and Technology	3	_____
[NUTR 341] Food Service Operations	3	_____
[NUTR 342] Food & Nutrition Services Management	3	_____
[NUTR 352] Community Nutrition	3	_____
[NUTR 410] Nutrition Counseling Experience	1	_____
[NUTR 411] Medical Nutrition Therapy I	3	_____
[NUTR 412] Medical Nutrition Therapy II	3	_____
[NUTR 425] Advanced Nutrition I	4	_____
[NUTR 426] Advanced Nutrition II	3	_____
[NUTR 493] Nutrition and Dietetics Seminar	1	_____
[PSYC 101] Introduction to Psychology	3	_____
[STAT 269] Introductory Statistics	3	_____

# Nutrition and Dietetics (B.S.)

(Department of Nutrition and Dietetics)

Major requirements on reverse side

## General Education Requirements

<u>Courses</u>	<u>Credits</u>	<u>Semester Completed</u>
First Year Seminar	3	_____
Oral Communications	3	_____
Created and Called for Community	3	_____
Mathematical Sciences ([STAT 269])	3 or 4	met by major
Laboratory Science ([CHEM 105])	3 or 4	met by major
Science, Technology & the World	3	waived
Two of the following:	6	_____
Social Science (3 credits – [PSYC 101])		met by major
European History (3 credits)		_____
United States History (3 credits)		_____
Literature	3	_____
Philosophy and Religion	3	_____
Arts	3	_____
Language/Cross Cultural		
First Semester of Language	3	_____
Second Semester of Language	3	_____
Third Semester of Language or Cross Cultural	3	_____
Non-Western Studies	2 or 3	_____
Bible	3	_____
Christian Beliefs	3	_____
Health and Physical Fitness		
Introduction to Wellness	2	_____
Activity Course	1	_____
One of the following:	3	_____
Ethics (3 credits)		_____
World Views (3 credits)		_____
Pluralism in Contemporary Society (3 credits)		_____
Writing Enriched Course		_____

### SUMMARY OF DEGREE REQUIREMENTS:

General Education	44
Major Requirements	70
Free Electives	9
Total	123

# Nutrition Science (B.A.)

(Department of Nutrition and Dietetics)

General Education requirements on following page

## Major Requirements

<u>Major Courses</u>	<u>Credits</u>	<u>Semester Completed</u>
One of the following:	8	_____
[BIOL 185] and [BIOL 186] Human Anatomy & Physiology I, II OR		_____
[BIOL 385] Physiology and [BIOL 386] Human Anatomy		_____
[BIOL 382] Microbiology for Health Professions	4	_____
[CHEM 105] General Chemistry I	4	_____
[CHEM 106] General Chemistry II	4	_____
[CHEM 309] Organic Chemistry I	4	_____
[CHEM 310] Organic Chemistry II	4	_____
[CHEM 410] Biochemistry I	4	_____
[CHEM 412] Biochemistry II	4	_____
[MATH 111] Calculus I	4	_____
[NUTR 099] Opportunities in Nutrition and Dietetics	1	_____
[NUTR 121] Food and Food Science	3	_____
[NUTR 222] Nutrition Theory	3	_____
[NUTR 322] Nutrition through the Life Cycle	3	_____
One of the following:	3-4	_____
[NUTR 331] Advanced Food Science and Technology (3)		_____
[PHYS 211] General Physics I (4)		_____
[NUTR 425] Advanced Nutrition I	4	_____
[NUTR 426] Advanced Nutrition II	3	_____
[NUTR 493] Senior Seminar in Nutrition and Dietetics	1	_____
One of the following:	3-6	_____
[STAT 269] Introductory Statistics (3) OR		_____
[STAT 291] Statistics for Math Sciences I (3) AND		_____
[STAT 292] Statistics for Math Sciences II (3)		_____

**Nutrition Science (B.A.)**  
 (Department of Nutrition and Dietetics)  
*Major requirements on preceding page*

**General Education Requirements**

<u>Courses</u>	<u>Credits</u>	<u>Semester Completed</u>
First Year Seminar	3	_____
Oral Communications	3	_____
Created and Called for Community	3	_____
Mathematical Sciences ([STAT 269] or [STAT 291] and [STAT 292])	3 or 4	met by major
Laboratory Science ([CHEM 105])	3 or 4	met by major
Science, Technology & the World	3	waived
Two of the following:	6	_____
Social Science (3 credits)		_____
European History (3 credits)		_____
United States History (3 credits)		_____
Literature	3	_____
Philosophy and Religion	3	_____
Arts	3	_____
Language/Cross Cultural		
First Semester of Language	3	_____
Second Semester of Language	3	_____
Third Semester of Language or Cross Cultural	3	_____
Non-Western Studies	2 or 3	_____
Bible	3	_____
Christian Beliefs		_____
Health and Physical Fitness		
Introduction to Wellness	2	_____
Activity Course	1	_____
One of the following:	3	_____
Ethics (3 credits)		_____
World Views (3 credits)		_____
Pluralism in Contemporary Society (3 credits)		_____
Writing Enriched Course		_____

SUMMARY OF DEGREE REQUIREMENTS:

General Education	47-48
Major Requirements	64-68
Free Electives	7-12
Total	123

## Nutrition and Dietetics

Career Center for Vocation and Development, Messiah College

The Career Center offers comprehensive services to all students throughout their program of study. From identifying skills and personality traits, to choosing a major, to gaining related experience and preparing for graduate school or job interviews, the staff at the Career Center are available at every step along the path.

### Identification of Strengths

Common characteristics and skills of students pursuing study in the Department of Nutrition and Dietetics:

- Proficiency with details, accuracy, organization and memorization
- Pleasure in learning new skills
- Curiosity; a desire to know how and why things work
- Desire to achieve; independent

We can help you identify your strengths through individual career counseling and self-assessment inventories like the Myers-Briggs, Self-Directed Search, and the Strong Interest Inventory. Understanding your unique skills and interests allows you to translate your personal characteristics into professional opportunities.

### Resources for Career Exploration and Employment Connections

- *270 Ways to Put Your Talent to Work in the Health Field*
- *Health Professions Education Directory*
- *Alternative Careers in Science*
- *Opportunities in Nutrition Careers*
- *Careers in Science*
- *Chronicle Guide – Dietitians*
- *Careers in Medicine*
- *Individual Career Coaching; creating a Career Plan*
- Individual handouts— “I’m interested in…” Nutrition
- Individual handouts— “What can I do with this degree?” e.g. Nutrition
- Alumni Contacts for Information Interviews & Job Shadowing
- On-campus Recruitment and Interviews
- *Career Center Alumni Survey of Recent Grads*
- *Job Choices* magazines
- *E-Recruiting Service* <http://messiah.erecruiting.com>
- *Pharmaceutical Industry Guide: Drug Companies, Biotech firms and CROs*
- *AAMC Medical School Admission Requirements*
- *Biotechnology Industry Guide*
- *Healthcare Career Directory: Nurses and Physicians*
- *Peterson’s Job Opportunities for Health & Science Majors*
- *The JobBank Guide to Health Care Companies*

### Internship Center

The Internship Center offers off-campus exploration and internships to all majors and can help you explore career areas through the following:

- Internships
- Practica

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*“Part of my cross-cultural trip with the Career Center to England was to observe a field related to my major. I had the opportunity to travel around London visiting patients with an Occupational Therapist.”*

—Biology  
'99 Grad

### Sample Practicum Opportunities

- Nutrition Clinic – Carlisle Hospital
- Harrisburg Diabetic Youth Camp
- WIC (Women, Infants & Children Program)
- S.H.A.R.E. Food Bank, Carlisle
- Wellness Center, Hoy Towers, Steelton
- Hershey Foods Corporation

### Career and Job Preparation Assistance

- Individual Career Coaching
- *Career action plan*
- “Snapshots of Vocation”—alumni stories (brochure and website)
- Senior focus events—sponsored by the Career Center and Alumni Office
- Resume and cover letter development, samples, and individual critiques
- Job and Graduate School Preparation Workshops
- Interview preparation and practice interviews
- Job and Graduate School Fairs
- Workshops on a variety of career-related topics
- Online job and resume posting (<http://messiah.erecruiting.com>)
- Practice Interviews

### College-Sponsored Job and Internship Fairs

- Career & Graduate School Expo
- Capital Region Internship Fair
- CPEC Internship and Job Fair
- CVC Internship and Job Fair
- TRD (Teacher Recruitment Day)

### Home Page Connections [www.messiah.edu/offices/career](http://www.messiah.edu/offices/career)

Visit our home page to access information on majors, employment opportunities, graduate and professional school preparation, and alumni stories of vocation. A complete calendar of events and registration options, resume referrals, and sign-up options for on-campus interviews are available through eRecruiting. Visit job searches by major, as well as general employment information.

### Graduate School Preparation

- *Graduate School Handbook*
- Assistance with graduate and professional school resumes, essays, applications, and interviews
- The *Graduate School Guide* and the *Christian Graduate* magazine (both free)
- Peterson’s grad school directories; test preparation booklets and guides
- Graduate School Fair and Seminary & Theological Studies Fair—held on campus, fall semester
- Gradschools.com—one of many sites for graduate school and program searches
- Kaplan Practice Test Sessions: GRE, GMAT, LSAT, and MCAT
- Celebration Reception for students accepted to grad school

# C A R E E R C E N T E R

*“The Career Center had a lot of resources on possible fields to go into which were very helpful in my search for a career. The practice interview was very helpful and gave me more confidence when interviewing with potential employers.”*

–Biology  
'00 Grad

# Nutrition and Dietetics

EpiCenter, Messiah College

Although EpiCenter programs are open to all students, there are some programs that may be of particular interest to students in the Department of Nutrition and Dietetics. Below is a description of these opportunities. For more details, stop by the EpiCenter. Due to required professional coursework in the junior and senior years, nutrition and dietetics majors who wish to spend a semester abroad do so during their sophomore year.

**“The world is a great book, of which they who never stir from home read only a page.”**

## Resources available in the EpiCenter include:

- Applications
- Brochures / Catalogs / Videos
- Course Listings
- International Student Identity Cards
- Fact Sheets
- Passport Photos

## Information is provided about:

- Costs
- Deadlines
- Names of Program Advisors
- Passports
- Requirements
- Traveling/Studying Abroad

## Creation Care Study Program

This semester-long program explores biblical stewardship, first hand, in New Zealand/Samoa.

- ✓ Sophomore, junior, or senior status
- ✓ 2.75 GPA

Explore biblical stewardship in New Zealand/Samoa while fulfilling a number of general education requirements, such as science; science, technology and the world; Christian beliefs; social science; and cross-cultural requirements.

## Go-Ed

Based in Kampala, Uganda, and Kigali, Rwanda, the GoED Program in Africa engages students with the reality of global poverty. Run by Food for the Hungry, the program fosters spiritual formation alongside academic courses and cross-cultural experience; students participate in one of the FTH service projects.

- ✓ Junior, or senior status
- ✓ 3.0 GPA

Students participate in service projects / internships; it is possible to work on a project related to nutrition.

## Internships

Students who participate in the Messiah College Internship Program have opportunities to test their educational theories as they preview possible career options.

- ✓ Junior or senior status
- ✓ 2.5 GPA

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*“This caused not only mental growth but growth in learning about who I am, who I want to become, and where I’m headed in the future.”*

–Dietetics major,  
Cross Cultural  
Course: Trinidad  
and Tobago

### Philadelphia Campus

Studying at Philadelphia allows students to have the benefits of a large university and the closeness of a small community as they experience an urban culture. Students take classes from both Messiah and Temple faculty and live in one of the seven Messiah-owned buildings on Broad Street.

- ✓ Sophomore, junior, or senior status
- ✓ 2.25 GPA

### Spring Semester in Thailand

Students study Thai language and culture by immersing themselves in a unique Asian experience. Home stays, internship / service projects, travel, and classroom instruction at Chiang Mai University are designed to give students a comprehensive view of life in Thailand. Students take a ten-day field trip to Lanpang, Sukhothai, Phitsanulok, Ayutthaya, Pattaya, and Bangkok.

- ✓ Sophomore, junior, or senior status
- ✓ 2.5 GPA

*Two nutrition students interned at McCormick Hospital in Chiang Mai, working with the hospital dietician and preparing meals.*

### University of Gloucestershire

Located in southwestern England (near the border of Wales). University of Gloucestershire is home to the BCA program in the UK. Messiah students experience British life in the quaint English town of Cheltenham. Students also travel to historical and cultural locations around the country.

- ✓ Sophomore, junior, or senior status
- ✓ 2.7 GPA

Offers a number of general education courses as well as course in Community Health Studies.

### University of San Francisco of Quito

Quito, often referred to as the "land of eternal spring," provides Messiah students with a beautiful location to work on their language skills. Students study in a South American university, live with Ecuadorian families, and travel to the Amazon rain forest and the Galapagos Islands.

- ✓ Junior or senior status\*
- ✓ Four semesters of college-level Spanish are required
- ✓ 3.0 GPA

The University of San Francisco Quito offers some science-related courses. \* Will accept students who can only study off campus during their sophomore years.

*Due to required professional course work in the junior and senior years, nutrition and dietetics majors who wish to spend a semester abroad should plan to do so during their sophomore year.*

**To discover more opportunities, visit the EpiCenter Online:**

**[www.messiah.edu/studyabroad](http://www.messiah.edu/studyabroad)**

**For More Information Contact:**

**Wendy Lippert (ext. 6089) or Fatih Minnich (ext. 7373)**

**[EpiCenter@messiah.edu](mailto:EpiCenter@messiah.edu)**

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5/09