MS Nutrition curriculum (45 units)

Catalog number	Course title	Units	Req'd course?	G or UG	Pre-requisites
Core courses					
FSN 599*	Thesis	1-6 (6 total required)	Y	G	Graduate standing and consent of instructor
STAT 512	Statistical Methods	4	Y	G	Graduate standing and intermediate algebra
FSN 516	Population Health and Epidemiology	3	Y	G	FSN 416 or equivalent, graduate standing, or consent of instructor
FSN 528	Biochemical and Molecular Aspects of Human Macronutrient Metabolism	4	Y	G	FSN 328 or equivalent, graduate standing, or consent of instructor
FSN 529	Metabolic and Molecular Aspects of Vitamins	2	Y	G	FSN 329 or equivalent, graduate standing, or consent of instructor
FSN 530	Metabolic and Molecular Aspects of Minerals	2	Y	G	FSN 329 or equivalent, graduate standing, or consent of instructor
FSN 581*	Research Seminar (to be taken 3 times during program)	1 (3 total required)	Y	G	Graduate standing or consent of instructor
	Total required core course units	24			
	Emphasis area courses (vary)	21			
	Total required units	45			

*Course will vary depending on the department offering the 599 or 581

FSN 528, 529, and 530 do not need to be taken in sequential order

Note: Depending on the thesis committee chair home department, the Thesis (599) units may be more appropriate with a different prefix (e.g., a student with a committee chair from ASCI may sign up for ASCI 599).

There will be an additional 21 elective units for the MS in Nutrition, and these course selections will be dependent on students' emphasis areas. They will be chosen according to area of emphasis and thesis supervisor and committee recommendations. One-on-one advising with the thesis supervisor will ensure appropriate alignment of student objectives with course requirements and pre-requisite requirements. Most instructors of 400 and 500-level courses have historically been open to admitting graduate students on a case-by-case basis depending on background, using the "consent of instructor" criterion. Selections may include any 400- or 500-level courses that complement the thesis research and student interest, are appropriate based on student undergraduate background and training, and are approved by the thesis committee. Students may select from any of these electives, but will be encouraged to fulfill one of the three areas of emphasis (Table below).

Examples from existing courses taught at Cal Poly that would be appropriate for MS Nutrition emphasis areas

Table 4.f.2. Course selections from existing courses taught at Cal Poly that would be appropriate choices for three suggested emphasis areas for the MS Nutrition degree (21 units total required).

Course number	Course title	Units	Pre-requisites
Molecular Nutrition emphasis area			
ASCI 403	Applied Biotechnology in Animal Science	5	BIO 161, BIO 162, upper division genetics course (BIO 302 or BIO 303 or BIO 351 or ASCI 304) or consent of instructor
ASCI 420	Animal Metabolism and Nutrition	3	ASCI 220; ASCI 320 or CHEM 313 or CHEM 371.
ASCI 503	Advanced Molecular Techniques in Animal Science	4	ASCI 403 or equivalent course
BIO/CHEM 441	Bioinformatics Applications	4	Junior standing; BIO 161 or BIO 303. Recommended: BIO 302 or BIO 303 or BIO 351 or CHEM 373
BIO/CHEM 475	Molecular Biology	3	BIO 161, and grade of C- or better in BIO 351 or CHEM 373 or consent of instructor
BIO/CHEM 476	Gene Expression Laboratory	2	BIO/CHEM 475; CHEM 313 or CHEM 371, or graduate standing in Biological Sciences
BIO 501	Molecular and Cellular Biology	4	Graduate standing in Biological Sciences or consent of instructor
CHEM 474	Protein Techniques Laboratory	2	CHEM 371 or consent of instructor
CHEM 528	Nutritional Biochemistry	3	CHEM 313 or CHEM 372 or consent of instructor
KINE 454	Exercise Metabolism	3	KINE 303 and CHEM 312 and CHEM 313. Recommended: KINE 304
STAT 523	Design and Analysis of Experiments	4	STAT 513 or STAT 542

Public Health Nutrition emphasis area			
AGB 543	Agribusiness Policy and Program Analysis	4	Graduate standing or consent of instructor
AGB 554	Food System Marketing	4	Graduate standing or consent of instructor
BIO 542	Multivariate Biometry	4	Two courses in statistics or consent of instructor
FSN 480	Policy Arguments in Nutrition	2	Junior standing and consent of instructor
KINE 503	Current Health Issues	3	KINE 517, graduate standing, and consent of instructor
KINE 510	Health Behavior Change	3	KINE 250 or KINE 255 or KINE 260 and KINE 503 or KINE 504 and graduate standing
STAT 417	Survival Analysis Methods	4	STAT 302
STAT 419	Applied Multivariate Statistics	4	Two courses in statistics. Recommended: MATH 206
STAT 421	Survey Sampling and Methodology	4	One of the following: STAT 252, STAT 302, STAT 313, STAT 512, or STAT 513
STAT 524	Applied Regression Analysis	4	STAT 513 or STAT 542
STAT 530	Statistical Computing I: SAS	4	STAT 512 or STAT 513 or STAT 542 or equivalent

Health and Wellness emphasis area			
COMS 418	Health Communication	4	Completion of GE Area A and junior standing
KINE 408	Exercise and Health Gerontology	4	KINE 250, KINE 255 or KINE 260; and KINE 227, KINE 228, KINE 231 (formerly KINE 220) or KINE 311 (formerly KINE 219)
KINE 434	Health Promotion Program Planning	4	KINE 250 or KINE 255 or KINE 260, KINE 265, and junior standing
KINE 450	Worksite Health Promotion Programs	3	KINE 250 or KINE 255 or KINE 260, and senior standing
KINE 503	Current Health Issues	3	KINE 250 or KINE 255 or KINE 260 and graduate standing
KINE 504	Advanced Pathophysiology and Exercise	3	KINE 303 or equivalent, and graduate standing
KINE 510	Health Behavior Change	3	KINE 250 or KINE 255 or KINE 260 and KINE 503 or KINE 504 and graduate standing
KINE 522	Advanced Biomechanics	4	KINE 302 or equivalent
KINE 525	Advanced Motor Learning and Control	3	KINE 402 or equivalent
KINE 526	Sport and Exercise Psychology	3	Graduate standing
KINE 530	Advanced Physiology of Exercise	4	KINE 303 and graduate standing
KINE 534	Advanced Health Promotion Program Planning	4	KINE 503 or KINE 504 or KINE 510; graduate standing
PSY 465	Cross-Cultural Issues in Psychology	4	PSY 201 or PSY 202 and junior standing
Applicable to all emphasis areas			
FSN 420	Critical Evaluation of Nutrition Research	4	STAT 218; and senior standing. Corequisite: FSN 329
FSN* 500	Individual Study	1-6	Graduate standing, consent of supervising faculty member and graduate advisor
STAT 513	Applied Experimental Design/Regression Models	4	Graduate standing and one of the following: STAT 512, STAT 542, STAT 217, STAT 218, STAT 252, STAT 312, or equivalent
Or other electives approved by the GGN Executive Committee			

*FSN departmental offering as example, actual course will vary depending on the department offering the course

Graduate students must file the Formal Study Plan for the degree with the Nutrition MS Graduate Coordinator no later than the end of the quarter in which the 12th unit of approved courses is completed. The Formal Study Plan must include at least 45 units of committee-approved graduate coursework (including degree-required plus elective coursework). At least 60% of the units required by the committee as reflected on the Formal Study Plan must be at the 500 level. A minimum GPA of 3.0 is required for coursework in the Formal Study Plan. Working Formal Study Plans should be developed with students' thesis committee chairs and committee members prior to submitting the Final Formal Study Plan. All candidates must meet the University's current Graduation Writing Requirement. In addition, all students must pass an oral defense of the thesis and satisfactorily complete the written thesis.

1. Catalog description

The MS Nutrition program is designed to prepare graduates for advancement, specialization, and leadership in nutrition or healthcare careers. In addition, graduates will be prepared for further education in dietetic internships, professional schools, allied health professions, or doctoral studies in a number of academic areas including public health, animal science, or the social sciences.

The interdisciplinary Graduate Group in Nutrition (GGN) allows students to work with faculty from several departments and to choose a research topic from a broad range of themes including human nutrition, animal nutrition, kinesiology, public health, business, or social sciences.

Students select a suggested area of emphasis (Molecular Nutrition; Public Health Nutrition; or Health and Wellness) compatible with their interests and career goals. Students will complete coursework and a research-based thesis conducted under the supervision of a committee chair who must be a member of the GGN, which is comprised of qualified faculty from across diverse disciplines. A current list of GGN members and their research interests is available on the GGN website or from the Nutrition MS Graduate Coordinator. In addition to the committee chair, the student's committee must have a minimum of two other qualified members. One of the three committee members must be a GGN member from the Food Science and Nutrition Department, the administrative home for the MS program.

2. Admission requirements

Minimum requirements for applicants to be considered are:

- Filing of an application for Graduate Admission via www.csumentor.edu/ by the deadlines specified at http://admissions.calpoly.edu/applicants/
- Submission of Graduate Record Exam (GRE) General Test scores electronically to Institution Code: R4038. While no minimum GRE scores have been established, they will be used along with other factors (statement of purpose, transcripts, recommendations, etc.) by potential thesis committee chairpersons as they consider student applications.
- Submission of three letters of recommendation
- Completion of a bachelor's degree from an accredited college/university with a minimum grade point average of 3.00 in the last 90-quarter units and completion of the following undergraduate coursework: cell and molecular biology, general chemistry, organic chemistry, and statistics.

All applicants who do not speak and write English as their primary language are required to complete the Test of English as a Foreign Language (TOEFL), taken within the last 2 years with a minimum score of 550 (paper version), 213 (computerized version), or 80 (internet based). Submit scores electronically to Institution Code: 4038. This requirement does not apply if country of citizenship is listed on Cal Poly Admissions website: http://admissions.calpoly.edu/applicants/international/checklist.html

Beyond the minimum requirements, the following considerations are relevant:

- An applicant who lacks prerequisite coursework may be admitted as a conditionally classified student and must make up any deficiencies before advancement to classified graduate standing.
    - Coursework in nutrition (introductory nutrition, nutrient metabolism, lifecycle nutrition, and others), biochemistry, and anatomy/physiology is advantageous and may be prerequisite for specific courses required in the program. Students with degrees other than Nutrition may be accepted into the MS program conditionally and will be required to take courses determined by the faculty advisor. For example, common requirements might include biochemistry, FSN 328 Nutrient Metabolism I and FSN 329 Nutrient Metabolism II. There are several pre-requisites for these courses that include Chemistry courses (CHEM 127, CHEM 128, CHEM 312, CHEM 313), a biology course (BIO 161) and an introductory Nutrition course. Once conditional courses are completed with an acceptable GPA (3.0), the student will be designated a classified graduate student.
- Acceptance requires agreement by a GGN member to serve as the student's thesis committee chair.

3. Culminating experience for master's degree

The thesis is based on independent, supervised research and must be approved by the thesis committee. The final copy of the thesis must meet the standards explained in the "Formatting Guidelines for Preparing Master's Theses and Project Reports" available from the Cal Poly Graduate Education Office, online at: http://grad.calpoly.edu/policies/thesis.html. A copy of the thesis must be received and reviewed by the Thesis Editor in the Graduate Education Office. An oral defense of the rationale and objectives for the thesis project is recommended and an oral defense of the findings of the thesis project is required. Upon completion of any required corrections, the student submits the electronic thesis/project report to the DigitalCommons@CalPoly, a digital archive for the University. These steps must be completed before the degree is awarded.