

WSU Five-Year Program Review
Self-Study

Cover Page



Department/Program: Exercise and Nutrition Sciences, Nutrition Program

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Brief Introductory Statement

(Should align with or compliment the Annual Strategic Planning Report)

The Nutrition Education program in the department of Exercise and Nutrition Sciences (ENS) within the Moyes College of Education (MCOE) offers a Bachelor's degree with two different emphases (Integrative Nutrition and Sports Nutrition), a Minor, and a Bachelor's of Integrated Studies (BIS) emphasis. The Nutrition Education major program was approved by the Utah Board of Regents' on September 16, 2016 and prepares students for non-Registered Dietitian Nutritionist (RDN) job outcomes such as: nutrition educator for the community, non-profit organizations, and in culinary arts; long term care or skilled nursing facility diet aide; government programs like women infants children (WIC) nutritionist, national school lunch program (NSLP), supplemental nutrition assistance program (SNAP, formerly food stamps) and others. Our program also offers courses that contribute to the university's commitment to General Education, and courses that fulfill both the university's Life Science and Sustainability offerings. Students who graduate from the Nutrition Education major are prepared for a wide range of graduate programs as well as for employment in a wide range of diverse holistic and integrative nutrition, health, and fitness job markets.

Standard A - Mission Statement

The department of Exercise and Nutrition Sciences (ENS) supports and enhances the mission of the university through learning, access, and community partnerships in exercise and nutrition sciences. We provide effective instruction, exploratory research, and engaged service to prepare exercise, fitness, and nutrition professionals for the workforce and graduate studies and to promote optimal health, human performance, and overall well-being. Nutrition students will learn all aspects of nutrition, from diet design to current issues, and prepare for graduate studies or a wide range of careers. The Nutrition Education faculty members are committed to providing students with quality academic experiences. Our curriculum develops diverse skills, knowledge, and competencies in nutrition.

The Nutrition Education program has the dual purposes of preparing students for graduate study in nutrition or a related field and/or for employment through collaborative program efforts (integrated academic programs and institutional entities with varied course delivery methods and high impact practices) to ensure timely degree completion. The Sport's Nutrition graduate will be prepared to enter a coordinated Master's program to become a Registered Dietitian Nutritionist (RDN) and will have demonstrated competence and knowledge in chemistry, anatomy, physiology, diet analysis and design, sports and fitness nutrition, diet therapy, nutrition assessment, life cycle nutrition, advanced nutrition and human metabolism, research, and related exercise science topics with cultural application and sensitivity for individuals and athletes. The Integrative Nutrition graduate will support the health and wellbeing of individuals and groups and have demonstrated competence and knowledge in diet analysis and design, life cycle nutrition, fitness nutrition, sustainable cooking, and related exercise science, health, child and family studies, botany, microbiology, physical education, recreation, and/or psychology topics with cultural application and sensitivity. Students will achieve the program's well-defined learning outcomes (based largely on the Society of Nutrition Education and Behavior's competencies) and through community service and/or directed research will promote wellbeing and add to the nutrition science knowledge base.

In 2020, seven initiatives were reported in the strategic planning report (SPR) for the ENS department. In 2022, initiatives were narrowed to the following five:

1. **Initiative 1: Use data and practice to align to WSU objectives of value/quality, affordability, and access/growth.** We seek to accomplish this by incorporating findings from: (a) Program reviews, (b) Biennial assessment reports, (c) Report galley, and (d) Exit surveys. We also seek to (e) Meet WSU growth & graduation goals, (f) Prepare students for graduate/professional programs & meet workforce demands, (g) Form an advisory board (this has not been accomplished yet due to COVID setbacks), and (h) Form and maintain a student club.
2. **Initiative 2: Continue to focus on high impact educational experiences (HIEE).** The nutrition program requires field experience for integrative nutrition majors and directed readings in our BIS emphasis. We offer directed undergraduate research and integrate multiple HIEE experiences across the program at the lower and upper division course levels; to be discussed in detail under standard E of this report.
3. **Initiative 3: Establish and strengthen community partnerships.** The nutrition program continues to expand diverse nutrition internship/field experience (clinical, industry, agricultural, exercise/fitness, health, and wellness) sites and partners. We strive to establish professional relationships with community entities to address related issues such as food insecurity, physical activity, and special population dietary and exercise needs.

4. ***Initiative 4: Maintain excellence in faculty directed undergraduate research and student achievement/recognition.*** The ENS department faculty and students are dedicated to continuing to be active in faculty directed undergraduate research. Nutrition program faculty and student research continues to represent WSU and the Moyes College of Education very well.

Standard B - Curriculum

The department of Exercise and Nutrition Sciences within the Moyes College of Education offers an undergraduate bachelorette of science degree program in Nutrition Education with two emphasis options (Integrative and Sports Nutrition), a Bachelor of Integrated Studies (BIS) emphasis, and a nutrition minor. The current curriculum is shown in table 1. We prepare students for a variety of career options and for graduate school to pursue advanced degrees [including Master's of science (MS), doctorate of philosophy (PhD), physician's assistant (PA), medical doctor (MD), naturopathic doctor (ND), and osteopathic doctor (DO) degrees], licensures, and certificates.

- A. The Nutrition Education, BS degree path has two emphases: **Sports Nutrition** and **Integrative Nutrition** (see Table 1A). Students may declare one or both emphases.

The **Sport's Nutrition** graduate will have demonstrated competence and knowledge in chemistry, anatomy, physiology, diet analysis and design, nutrition assessment, sports and fitness nutrition, diet therapy, lifespan nutrition, research, and related exercise science topics with cultural application and sensitivity for individuals and athletes. Information and courses are provided for typical graduate Registered Dietitian Nutritionist (RDN) program prerequisites. The prerequisites vary somewhat from one graduate program to another and it is the student's responsibility to ensure that all pre-professional courses fulfill entrance requirements. Students have ample opportunities for academic advisement to plan for their graduation and future employment and/or graduate program needs.

Integrative Nutrition includes nutrition as it intersects with other related fields to support health and wellbeing of individuals and groups. The Integrative Nutrition graduate will have demonstrated competence and knowledge in diet analysis and design, fitness nutrition, lifespan nutrition, sustainable cooking, and related exercise science, health, child and family studies, botany, microbiology, physical education, recreation, and/or psychology topics with cultural application and sensitivity.

- B. The nutrition program also offers nutrition as an emphasis for the **Bachelor of Integrated Studies** (BIS) degree. The BIS is an interdisciplinary degree that allows students to combine three areas of study to create a unique major that matches their interests. It is a program that is both academically rigorous and intellectually flexible, allowing students to pursue their passions. It prepares students for careers or graduate school, and, more generally, equips them to address the complex problems of our times from a range of perspectives (see Table 1B).
- C. The nutrition program offers a **Nutrition Education Minor** that complements numerous majors at WSU including exercise and sports science and health promotion (see Table 1C).

Table 1: Nutrition Curriculum

A. NUTRITION EDUCATION MAJOR COURSE REQUIREMENTS FOR BS DEGREE (60 credit hours) Students will complete the Nutrition Education required core, select the Integrative Nutrition emphasis and/or Sports Nutrition emphasis and complete the required, elective, and General Education and support courses in the selected emphasis.	
NUTRITION EDUCATION REQUIRED CORE COURSES (15 credit hours, 9 Upper Division credits) <ul style="list-style-type: none"> ▪ NUTR 2020 - Nutrition in the Life Cycle: (3) ▪ NUTR 2320 - Food Values, Diet Design and Health: (3) ▪ NUTR 3020 - Sports Nutrition: (3) ▪ NUTR 3420 - Multicultural Health & Nutrition: (3) ▪ NUTR 4320 - Current Issues in Nutrition: (2) ▪ NUTR 4990 - Senior Seminar: (1) 	
INTEGRATIVE NUTRITION EMPHASIS Required Courses (5 credit hours, 2 Upper Division credits) <ul style="list-style-type: none"> • NUTR 1240 SUS - Nutrition and Sustainable Cooking: (3) • NUTR 4860 INT - Field Experience: (1-2) (2 credits required) 	
Required General Education Courses (14-17 credit hours) <ul style="list-style-type: none"> • CHEM 1210 PS - Principles of Chemistry I: (5) or • CHEM 1110 PS - Elementary Chemistry: (5) • HLTH 1030 SS - Healthy Lifestyles: (3) • NUTR 1020 LS SUS - Science and Application of Human Nutrition: (3) • PSY 1010 SS - Introductory Psychology: (3) or CHF 1500 SS/DV - Human Development: (3) • COMM 1020 HU - Principles of Public Speaking: (3) or COMM 1500 - Introduction to Mass Communication: (3) or COMM 2010 HU - Mass Media and Society: (3) or COMM 2110 HU CEL - Interpersonal and 	Electives (23 credit hours required, 23 Upper Division credits possible) <ul style="list-style-type: none"> • RHS 3080 - Evidence Based Practice for Rehabilitation Sciences: (3) • BTNY 2303 - Ethnobotany: (3) • BTNY 3583 - Medicinal Plants-Chemistry and Use: (4) • CHF 3150 - Consumer Rights and Responsibilities: (3) • CHF 4400 - The Family in Stress: (3) • COMM 3820 - Persuasive Communication: (3) or PS 3250 - Business Communication: (3) or MGMT 3200 - Managerial Communications: (3) • HLTH 1110 - Stress Management: (3) • HLTH 2400 - Mind/Body Wellness: (3) • HLTH 3400 - Substance Abuse Prevention: (3) • HLTH 4700 - Wellness Coaching: (3) • ESS 2300 - Health/Fitness Evaluation and Exercise Prescription: (3) • MICR 3203 - The Immune System in Health & Disease: (3) • NUTR 3020 - Sports Nutrition: (3) • NUTR 4440 - Advanced Human Nutrition: (3) • NUTR 4520 - Directed Undergraduate Nutrition Research: (1-4) • PE 1080 - Strength Training, Level I: (1) • PEP 3280 - Methods of Teaching Strength and Conditioning: (3) • PEP 3290 - Methods of Teaching Fitness for Life: (3) • PSY 3000 - Child Psychology: (3) or PSY 3140 - Adolescent Psychology: (3) or PSY 3560 - Group Dynamics and Counseling: (3) • PSY 3255 - Conditioning, Learning, & Behavior Modification: (3) • PS 3203 - Customer Service Techniques: (3) or PS 3563 - Principles of Sales Supervision: (3) • NUTR 3320 - Health and Nutrition in the Older Adult: (3)

Small Group Communication: (3)	<ul style="list-style-type: none"> • NUTR 3040 - Nutrition Assessment: (3) • NUTR 4830 - Directed Readings: (1-3) • NUTR 4420 - Nutrition and Fitness: (3) • NUTR 3220 - Foundations in Diet Therapy: (3) • NUTR 3070 - Advanced Food Science: (3)
<p style="text-align: center;">SPORTS NUTRITION EMPHASIS</p> <p>Required Courses (25 credit hours, 15 Upper Division credits)</p> <ul style="list-style-type: none"> • CHEM 1220 - Principles of Chemistry II: (5) • CHEM 2310 - Organic Chemistry I: (4) • CHEM 2315 - Organic Chemistry I Lab: (1) • CHEM 3070 - Biochemistry I: (3) • NUTR 3070 - Advanced Food Science: (3) • NUTR 3040 - Nutrition Assessment: (3) • NUTR 4440 - Advanced Human Nutrition: (3) • NUTR 3220 - Foundations in Diet Therapy: (3) 	
<p>Required General Education and Support Courses (16 credit hours)</p> <ul style="list-style-type: none"> • CHEM 1210 PS - Principles of Chemistry I: (5) (w/ lab) • HTHS 1110 LS - Integrated Human Anatomy and Physiology I: (4) or • ZOOL 2100 - Human Anatomy: (4) • HTHS 1111 - Integrated Human Anatomy and Physiology II: (4) or • ZOOL 2200 LS - Human Physiology: (4) • NUTR 1020 LS SUS - Science and Application of Human Nutrition: (3) 	<p>Electives (4 credit hours required, 4 Upper Division credits possible)</p> <ul style="list-style-type: none"> • ESS 2300 - Health/Fitness Evaluation and Exercise Prescription: (3) • ESS 3450 - Structural Kinesiology: (3) • ESS 3500 - Biomechanics: (3) • ESS 3510 - Exercise Physiology: (3) • ESS 3600 - Measurement and Statistics in Exercise Science: (3) • ESS 4370 - Clinical Exercise Physiology: (3) • NUTR 1120 - Nutrition for the Athlete: (2) • NUTR 1240 SUS - Nutrition and Sustainable Cooking: (3) • NUTR 4520 - Directed Undergraduate Nutrition Research: (1-4) • NUTR 4860 INT - Field Experience: (1-2) • PE 1080 - Strength Training, Level I: (1) • PEP 3280 - Methods of Teaching Strength and Conditioning: (3) • PEP 3400 - Sport Psychology for Coaches: (3) or PSY 3010 - Abnormal Psychology: (3) or RHS 3200 - Psychology of Sport, Injury & Rehabilitation: (3) • NUTR 3320 - Health and Nutrition in the Older Adult: (3) • NUTR 4830 - Directed Readings: (1-3) • NUTR 4420 - Nutrition and Fitness: (3) • BTNY 3583 - Medicinal Plants-Chemistry and Use: (4)
<p>B. NUTRITION EDUCATION BIS DEGREE REQUIREMENTS (18 credit hours)</p> <p>Students must select three areas of emphasis; each area must contain a minimum of 18 semester hours. Below are the requirements for a nutrition emphasis.</p>	
<p>REQUIRED NUTRITION COURSES (7-9 credit hours)</p> <ul style="list-style-type: none"> ▪ NUTR LS1020- Science & Application of Human Nutrition: (3) 	<p>ELECTIVE COURSES (9-13 credit hours)</p> <ul style="list-style-type: none"> ▪ NUTR 1120- Nutrition and the Athlete: (2) ▪ NUTR 1240- Nutrition and Sustainable Cooking: (3) ▪ NUTR 2220- Prenatal and Infant Nutrition: (2) ▪ NUTR 2420- Childhood and Adolescent Nutrition: (2) ▪ NUTR 3020- Sports Nutrition: (3) ▪ NUTR 3040- Nutrition Assessment: (3)

<ul style="list-style-type: none"> ▪ NUTR 2320- Food Values, Diet Design, and Health: (3) ▪ NUTR 4830- Directed Readings: (1-3) 	<ul style="list-style-type: none"> ▪ NUTR 3070- Advanced Food Science: (3) ▪ NUTR 3220- Foundations in Diet Therapy: (3) ▪ NUTR 3320- Health and Nutrition in the Older Adult: (3) ▪ NUTR 3420- Multicultural Health and Nutrition: (3) ▪ NUTR 4320- Current Issues in Nutrition: (2) ▪ NUTR 4420- Nutrition and Fitness: (3) ▪ NUTR 4440- Advance Human Nutrition: (3) ▪ NUTR 4520- Directed Undergrad Research: (1-4) ▪ NUTR 4860- Field Experience: (1-2)
C. NUTRITION EDUCATION MINOR COURSE REQUIREMENTS (18 credit hours)	
Required Core Courses (11 credit hours) <ul style="list-style-type: none"> ▪ NUTR 1020 LS - Science and Application of Human Nutrition: (3) ▪ NUTR 2320 - Food Values, Diet Design and Health: (3) ▪ NUTR 3420 - Multicultural Health & Nutrition: (3) ▪ NUTR 4320 - Current Issues in Nutrition: (2) 	Elective Courses (7 credit hours) Select 7 credit hours from the following: <ul style="list-style-type: none"> ▪ NUTR 1120 - Nutrition for the Athlete: (2) ▪ NUTR 1240 - Nutrition and Sustainable Cooking: (3) ▪ NUTR 3020 - Sports Nutrition: (3) ▪ NUTR 3220 - Foundations in Diet Therapy: (2) ▪ NUTR 3320 - Health and Nutrition in the Older Adult: (3) ▪ NUTR 4420 - Nutrition and Fitness: (3) ▪ NUTR 4520 - Directed Undergraduate Nutrition Research: (1-4) ▪ NUTR 4860 - Field Experience: (1-2) ▪ NUTR 2020 - Nutrition in the Life Cycle: (3) ▪ NUTR 4440 - Advanced Human Nutrition: (3) ▪ NUTR 3040 - Nutrition Assessment: (3)

Standard C - Student Learning Outcomes and Assessment

- Section A. Measurable Program Learning Outcomes

The nutrition program has carefully crafted and defined eight measurable learning outcomes with four outcomes each in two categories: Concepts and Competencies (see Table 2). The Nutrition Education program concepts and competencies are based largely off of the Society for Nutrition Education and Behavior (SNEB) Competencies for Promoting Healthy Individuals, Communities, and Food Systems. The learning outcomes meet the expected knowledge, skills, and behaviors students need to be successful for employment and/or graduate studies and thus support the various industry, community and educational constituencies they are expected to serve. Tables 3 and 4 below show how the learning outcomes directly link to the program curriculum and how measures of assessment are defined and applied. The program faculty routinely collect data and submit biennial assessment reports as scheduled by the WSU office of institutional effectiveness. In the biennial assessment and department strategic planning reports, the ways in which assessment data are used to improve and further develop the program are articulated. All core courses shown in Table 3 are offered every fall, spring, and summer to meet student needs and to support timely graduation. The department chair routinely studies enrollment trends and data. Additional seats and/or sections are offered when students are waitlisted and instructional wage funding is secured (this is supported through the MCOE Dean, WSU Provost, and/or Continuing Education offices). The nutrition program director, with help from the nutrition faculty, collects assessment data every semester for biennial assessment reporting and program reflection and modifies assessment methods and thresholds when needed to support curriculum changes based on changing industry standards over time and advancement in teaching pedagogy.

Table 2: The Nutrition Program Learning Outcomes.

Concepts: Students completing the Bachelor of Science in Nutrition Education will have:	A. Knowledge & Skills to solve nutrition and health related problems. B. Integrated & Applied Expertise to educate and communicate for optimal health promotion and human performance. C. Personal and Community Responsibility to optimize healthful behaviors of individuals, families, and/or communities through the life cycle with networking, resources, and. Support. D. High Impact Experiences from assimilating or engaging in research, group projects, senior capstone work, and/or community-based fieldwork.
Competencies: Students completing the Nutrition Education programs will master nutrition concepts in:	1. Diet Analysis & Design by performing accurate diet analysis and design according to dietary guidelines for Americans, for health, fitness, and/or sport performance and with comprehensive evaluation, interpretation, and application. 2. Nutrient Needs & Functions by gender and activity level for various age groups and health conditions using healthy and sustainable food preparation methods. 3. Nutrition Issues & Assessment across cultures and the lifespan, for fitness and sport performance, in culinary science, and for the prevention and treatment of various medical conditions. 4. Human Structure and Function by understanding how nutrition intersects with living and nonliving hierarchies within the human body. <i>Note: Sports nutrition graduates will have more emphasis in learning outcomes 3 and 4.</i>

Nutrition Program Learning Outcomes

Table 3: Core Courses in the Nutrition Program, Alignment, and Rating of Learning Outcomes

Nutrition Education Core Courses	A. Knowledge & Skills	B. Integrated & Applied Expertise	C. Responsibility	D. High Impact	1. Diet Analysis & Design	2. Nutrient Needs & Functions	3. Nutrition Issues & Assessment	4. Structure & Function
NUTR LS SUS 1020- Science & Application of Human Nutrition	3	3	2	2	1	2	3	1
NUTR 2020 – Nutrition in the Life Cycle	3	3	3	3	0	3	3	2
NUTR 2320 – Food Values, Diet Design & Health	3	3	2	3	1	1	3	1
NUTR 3020 – Sports Nutrition	3	3	3	2	1	3	3	3
NUTR 3420 – Multicultural Health & Nutrition	3	3	3	2	1	2	2	1
NUTR 4320 – Current Issues in Nutrition	2	3	3	3	2	0	1	3
NUTR 4990 – Senior Seminar	1	3	3	3	3	0	1	3

Integrative Nutrition Emphasis Core Courses

NUTR 1240 SUS- Nutrition & Sustainable Cooking	3	1	3	3	3	1	2	0
NUTR 3220- Foundations in Diet Therapy	3	3	2	1	0	0	3	3
NUTR 4860- Field Experience	2	2	3	3	3	0	1	1

Sports Nutrition Emphasis Core Courses

NUTR 3070- Advanced Food Science	3	3	3	1	1	0	1	2
NUTR 3040- Nutrition Assessment	3	3	2	2	2	2	2	3
NUTR 4440- Advanced Human Nutrition	3	3	1	1	1	0	3	3

BIS Nutrition Emphasis Core Courses

NUTR LS1020- Science & Application of Human Nutrition	3	3	2	2	1	2	3	1
NUTR 2320- Food Values, Diet Design, & Health	3	3	2	3	1	1	3	1
NUTR 4830- Directed Readings	1-2	3	3	2	3	0	3	3

Nutrition Education Minor Core Courses

NUTR LS1020- Science & Application of Human Nutrition	3	3	2	2	1	2	3	1
NUTR 2320- Food Values, Diet Design, & Health	3	3	2	3	1	1	3	1
NUTR 3420 – Multicultural Health & Nutrition	3	3	3	2	1	2	2	1
NUTR 4320 – Current Issues in Nutrition	2	3	3	3	2	0	1	3

KEY: 0 = Not Addressed, 1 = Introduced, Minor Emphasis, 2 = Emphasized, Moderate Importance, 3 = Assessed Comprehensive, Major Emphasis

Table 4: Methods of Assessment & Thresholds for Nutrition Education Concepts & Competencies.

CONCEPTS: At the end of their program of study in nutrition at WSU: Students completing the Nutrition Education programs will have mastered nutrition concepts in four learning outcome areas as assessed by a minimum of two direct methods with four methods of assessment with thresholds established in multiple nutrition program courses.	
A. Knowledge & Skills to solve nutrition and health related problems.	<ul style="list-style-type: none"> • Method 1: 80% of students will score 70% or better on NUTR 2320 exams. • Method 2: 80% of students will score 70% or better on the comprehensive NUTR 4440 final exam. • Method 3: 70% of students will score 70% or better on NUTR 1020 exams tied to this outcome. • Method 4: 80% of students will score 70% or better on the NUTR 2020 comprehensive final exam.
B. Integrated & Applied Expertise to educate and communicate for optimal health promotion and human performance.	<ul style="list-style-type: none"> • Method 1: 80% of students will score 70% or better on the NUTR 3020 supplement facts sheet research presentation. • Method 2: 80% of students will score 70% or better on NUTR 4320 presentations. • Method 3: 80% of students will score 70% or better on the Nutrition LS1020 exam 4 Diet and Exercise Analysis assimilation and communication of results. • Method 4: 80% of students will score 70% or better on NUTR 4420 Laboratory exercises.
C. Personal & Community Responsibility to optimize healthful behaviors of individuals, families, and/or communities through the life cycle with networking, resources, and support.	<ul style="list-style-type: none"> • Method 1: 80% of students will score 70% or better on the Nutrition LS1020 Signature Assignment essay. • Method 2: 80% of students will score 70% or better on the NUTR 3420 major project research paper. • Method 3: 80% of students will score 70% or better on NUTR 2320 exam questions tied to this outcome. • Method 4: 80% of students will score 70% or better on the NUTR 2220, 2420, and/or 2020 community observation assignments.
D. High Impact Experiences from assimilating or engaging in research, group projects, senior capstone work, and/or community-based fieldwork.	<ul style="list-style-type: none"> • Method 1: 90% of NUTR 1240 students will engage in hands on nutrition and sustainable cooking and earn a 70% or better score in their cooking demonstration assignment. • Method 2: 90% of NUTR 4520 directed research students will earn a course grade of 70% or better. • Method 3: 90% of NUTR 4830 directed readings students will earn a course grade of 70% or better. • Method 4: 80% of students will score 70% or better on the NUTR 2020 lifecycle community observation project.

COMPETENCIES: Students completing the Nutrition Education programs will have mastered nutrition competencies in four areas as assessed by a minimum of two direct methods with four to six methods of assessment with thresholds established in multiple nutrition program courses (see below).	
1. Diet Analysis & Design by performing accurate diet analysis and design according to dietary guidelines for Americans, for health, fitness, and/or sport performance and with comprehensive evaluation, interpretation, and application.	<ul style="list-style-type: none"> • Method 1: 80% of students will score 70% or better on the NUTR 2320 diet design assignments 4 and 5. • Method 2: 80% of students will score 70% or better on the NUTR 3020 evaluation of student athlete diet analysis and design projects. • Method 3: 70% of students will score 70% or better on the Nutrition LS1020 exam 2 diet analysis reports. • Method 4: 80% of students will score 70% or better on the NUTR 4420 self-fitness-oriented diet project.
2. Nutrient Needs & Functions by gender and activity level for various age groups and health conditions using healthy and sustainable food preparation methods.	<ul style="list-style-type: none"> • Method 1: 70% of students will score 70% or better on NUTR 1020 exam questions tied to this outcome • Method 2: 80% of students will score 70% or better on NUTR 4420 exam 2. • Method 3: 80% of students will score 70% or better on NUTR 2020 case studies tied to this outcome. • Method 4: 80% of students will score 70% or better on NUTR 3040 exams 4, 5 and 6.
3. Nutrition Issues & Assessment across cultures and the lifespan, for fitness and sport performance, in culinary science, and for the prevention and treatment of various medical conditions.	<ul style="list-style-type: none"> • Method 1: 80% of students will score 70% or better on the NUTR 1240 cooking demonstration project • Method 2: 80% of students will score 70% or better on NUTR 3420 exams. • Method 3: 80% of students will score 70% or better on NUTR 2020 case studies tied to this outcome. • Method 4: 80% of students will score 70% or better on NUTR 3040 case studies tied to this outcome. • Method 5: 80% of students will score 70% or better on NUTR 4420 exams 3 and 5. • Method 6: 80% of students will score 70% or better on NUTR 3220 case studies tied to this outcome
4. Human Structure & Function by understanding how nutrition intersects with living and nonliving hierarchies within the human body.	<ul style="list-style-type: none"> • Method 1: 70% of students will score 70% or better on NUTR 1020 exams tied to this outcome. • Method 2: 80% of students will score 70% or better on the comprehensive NUTR 4440 final exam. • Method 3: 80% of students will score 70% or better on NUTR 4420 exams 1 and 4. • Method 4: 80% of students will score 70% or better on NUTR 2320 exams tied to this outcome.

Standard C.

- Section B. Other programs

i. General Education Outcomes.

The nutrition program supports General Education in the following area(s): Life Science (LS) and Sustainability (SUS). Table 5 shows student learning outcomes including the four General Education Learning Outcomes (GELOs), eight LS Learning Outcomes (LSLOs), and two SUS Learning Outcomes (SUSLOs) as defined by the General Education program and area committees.

- | | | | | |
|------------------------------|-------------------------------|--|-----------------------------|---|
| <input type="checkbox"/> AI | <input type="checkbox"/> Comp | <input type="checkbox"/> IL | <input type="checkbox"/> QL | |
| <input type="checkbox"/> CA | <input type="checkbox"/> HU | <input checked="" type="checkbox"/> LS | <input type="checkbox"/> PS | <input checked="" type="checkbox"/> SUS |
| <input type="checkbox"/> WSU | <input type="checkbox"/> DV | | | |

Table 5: General Education, Life Science, and Sustainability Student Learning Outcomes

General Education Learning Outcomes (GELOs):

- **GELO 1: CONTENT KNOWLEDGE:** This outcome addresses students' understanding of the worlds in which they live and disciplinary approaches for analyzing those worlds. The knowledge is well defined in R470 and further refined by Core and Breadth Area Committees.
- **GELO 2: INTELLECTUAL TOOLS:** This outcome focuses on students' practice using and facility with skills necessary for them to construct knowledge, evaluate claims, solve problems, and communicate effectively.
- **GELO 3: RESPONSIBILITY TO SELF AND OTHERS:** This outcome highlights students' relationship with, obligations to, engagement of, and sustainable stewardship of themselves, others, and the world to promote diversity, social justice, and personal and community well-being.
- **GELO 4: CONNECTED AND APPLIED LEARNING:** This outcome emphasizes how General Education classes should be connected and applied in meaningful ways to significant issues in their lives to ensure that the knowledge and skills remain actively used in and out of school.

Life Science Learning Outcomes (LSLOs):

1. The **nature of science:** *Scientific knowledge is based on evidence that is repeatedly examined, and can change with new information. Scientific explanations differ fundamentally from those that are not scientific.* They will be able to:
 - a. Identify scientific experimental designs and understand that dietary recommendations are based on repeatedly examined data, and are progressively updated and revised based on newly published scientific findings.
 - b. Distinguish scientific information from information that is not scientific by recognizing sound scientific methods.
 - c. Utilize scientific inquiry to test hypotheses by collecting, analyzing data, interpreting, and drawing conclusions about their data in regards to the hypothesis tested.
 - d. Utilize dietary software to determine the nutritional adequacy of food intake and make recommendations for improving the diet based on diet analytical results.

2. The **integration of science**: *All natural phenomena are interrelated and share basic organizational principles. Scientific explanations obtained from different disciplines should be cohesive and integrated.* They will be able to:
 - a. Demonstrate knowledge of the shared basic organizational principles of life (molecules, cells, organs, organ systems, and organisms) and relate the knowledge across several different scientific disciplines such as physiology, anatomy, biochemistry, biology, immunology, and microbiology.
 - b. Obtain the chemical composition of food from the plant and animal kingdoms and explain how they meet the nutritional needs of humankind.
 - c. Distinguish science from other views for understanding living systems on Earth.
3. The **role of science in society**: *The study of science provides explanations that have significant impact on society, including technological advancements, improvement of human life, and better understanding of human and other influences on the Earth's environment.* They will be able to:
 - a. Demonstrate knowledge of human nutritional needs and the role of nutrition in improving individual health and the societal economic impact of good versus bad nutrition.
 - b. Relate technological advancements in medicine and food production to the advancement of the science of human nutrition.
 - c. Explain the impact that the food industry has on human food choices and the subsequent relationship to health and disease at the individual, society, and environmental level.
 - d. Provide examples of past and present nutrient and diet trends in modern society and the positive and/or negative implications for human health and earth's resources.
 - e. Utilize tools to determine nutrient values of foods consumed by diverse populations.
 - f. Plan, evaluate, and manage diets to improve and support life-long health.
4. **Problem-solving and data analysis**: *Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.* They will be able to:
 - a. Compute percentages, ratios, proportions, decimals, and fractions as applied to essential nutrients and energy for humans via dietary analysis and food package label interpretation.
 - b. Complete a 2-day, computer-aided analysis (nutrient intake and energy expenditure), and base the conclusions and recommendations on data collected, analyzed and interpreted.
 - c. Utilize current nutrition standards based on empirical nutrition and related scientific data that have been rigorously analyzed, interpreted, and generalized for public recommendations.
 - d. Evaluate and interpret laboratory and anthropometrical data in relation to chronic disease risk.
5. **Levels of organization**: *All life shares an organization that is based on molecules and cells and extends to organisms and ecosystems.* They will be able to:
 - a. Demonstrate and apply knowledge on life concepts from the genetic basis of life to cells, tissues, organs, organ systems, organisms and the ecosystem in which they interact.
 - b. Relate levels of organization to humans, plant and animal foods, and the environment.
6. **Metabolism and homeostasis**: *Living things obtain and use energy, and maintain homeostasis via organized chemical reactions known as metabolism.* They will be able to:
 - a. Identify essential nutrients for humans, how humans obtain and use energy, and how they maintain or disrupt homeostasis through sustained or altered metabolisms affected by their cumulative dietary food choices and lifestyle.
 - b. Provide specific roles of nutrition in metabolism and homeostasis in the human body.
 - c. Explain how the human body processes food and utilizes nutrients with additional reference to energy balance and weight control.

- d. Associate nutrition, genetics, metabolism, exercise, and lifestyle with health promotion and disease prevention.

7. Genetics and evolution: *Shared genetic processes and evolution by natural selection are universal features of all life.* They will be able to:

- a. Relate diet to examples of evolved genetic mutations in inborn errors of metabolism and predisposed genetic diseases that are reinforced by diet composition, preserved by natural selection, and passed on generationally.
- b. Provide examples of shared genetic processes in regards to essential nutrients, function, health, and disease.

8. Ecological interactions: *All organisms, including humans, interact with their environment and other living organisms.* They will be able to:

- a. Describe the interaction of the human with the environment for vitamin D synthesis and the current environmental and societal issues hindering adequate synthesis and the resulting disease complications.
- b. Relate the ecological impact and the role for environmental responsibility pertaining to food choices and food system sustainability.
- c. Demonstrate knowledge of the plant and animal kingdoms with regard to the food system, food webs, food chains, and human interaction.
- d. Provide examples of positive and negative interactions of humankind with microorganisms regarding sickness, health, and food production.
- e. Prevent food borne illness by adopting good food handling techniques that inhibit growth or prevent survival of microorganisms.
- f. Address diet and nutrient issues and concerns for weight control, disease prevention, physical activity, food availability, and biotechnology.
- g. Consume a healthy diet composed of more sustainably produced plant and animal foods.

Sustainability Learning Outcomes (SUSLOs):

Core

- 1. Comprehend the interconnection between environmental, social, and economic systems in relation to sustainable nutrition practices and policies.

Disciplinary

- 2. Understand the relationship between sustainable food consumption and individual societal and environmental wellness.

NUTR LS SUS 1020 is part of the General Education program at WSU. This course is articulated as a Life Science General Education course in the Utah System of Higher Education. The purpose of the WSU General Education program is to provide students with foundational knowledge and intellectual tools that enhance and transcend their academic program of study. The big questions (BQ) posed by General Education courses address significant issues about the world. General Education courses help students apply their learning and develop personal and social responsibility, which is demonstrated through signature assignments (SA). As noted above in the methods of measured outcomes, the General Education and Life Science outcomes have been integrated into course exams, and measured with a 70% threshold. The BQ for the SA is: "How do personal diet and activity choices impact self and society?" The SA requires students to compile and analyze their collected diet and activity data. Via interpretations and summarizations, they draw conclusions, using organized data, by writing an essay that accepts or rejects their initial hypothesis about their eating habits. Sample SA's can be found in Appendix H.

NUTR LS SUS 1020 and NUTR SUS 1240 are sustainability courses. Students comprehend the interconnection between environmental, social, and economic systems in relation to sustainable nutrition practices and policies. They gain an understanding between the relationship between sustainable food consumption and individual societal and environmental wellness. NUTR LS SUS has also been taught as 'Fast Start' for three years by a 'Fast Start' trained nutrition faculty member.

NUTR LS SUS 1020 is taught in multiple course delivery formats including face-to-face, hybrid, online, and accelerated. The course is supported by WSU peer mentors, supplemental instruction, and tutors. NUTR SUS 1240 is typically offered face to face at the Davis campus in our dedicated nutrition food lab classroom that bridges the greenhouse and garden to the food lab and sustainability learning outcomes. It is taught online in the summer to support students declared in the online integrative nutrition degree option.

The nutrition program will be pursuing the equity, diversity, and inclusion (EDI) designation for an upper division course that previously had diversity DV status prior to the revitalization efforts when only lower division Gen Ed courses were granted continuance of the DV designation.

Quality of instruction is measured through semester end of course evaluations, and assessment data collection and analysis. The NUTR LS SUS course continues to support high enrollment and semester credit hour (SCH) generation. Following is a summary of the nutrition program methods of measuring General Education learning outcomes with measures, thresholds, findings and action plans established and routinely reviewed through biennial assessment reporting.

Method of Measuring Learning Outcomes: There are two direct measures of assessment used to generate direct evidence of meeting the Life Science and General Education learning outcomes. Chi Tester was used to administer all of the exams and has provided a tool for the program to consistently collect and analyze the data. Because each section of the course taught is assessed each semester, hundreds to thousands of data points were generated per learning outcome.

Direct Measure #1: The first direct measure of assessment includes aligning all Life Science and General Education course learning outcomes to each Nutrition exam question. There were four 50-question exams and one 16 question exam analyzed for all sections each semester. Online, hybrid, and face-to-face classes were assessed for all of the learning outcomes. Additionally, there was one project-based exam where students collect, analyze, interpret, and report their own data. All exams were administered using Chi Tester. With Chi Tester being retired, all future exams will be administered using Canvas. Exam questions are tied to the appropriate learning outcome(s). Each of the trimesters has a different set of the exam questions and exams are consistently used for assessment.

Direct Measure #2: The second direct measure of assessment includes administering a closed-book exam consisting of 40 questions that include five competency-based questions from each of the eight Life Science General Education course learning outcomes that were developed and approved by the Life Science General Education Area Committee in the spring of 2013.

Threshold: The Life Science General Education Area Committee set the threshold of 70% for Life Science courses. This threshold of 70% is used for both the first and second direct measures of assessment. The 70% threshold is above what is needed to receive credit for the course.

Findings: Students being capable of answering exam and competency-based questions correctly demonstrated that learning outcomes were met. All Life Science and General Education course learning outcomes were met for both direct measures with the threshold of 70%. The Nutrition program evaluates the consistency of student performance over time due to the consistent process used to assess learning outcomes.

Action Plan: Continue to collect the evidence to ensure that General Education and Life Science learning outcomes continue to be met as determined by student performance. No changes are needed at this time for GELOs and LSLOs. The SUS attribute is relatively new to NUTR LS SUS 1020 and NUTR SUS 1240. The nutrition program needs to establish direct measures to assess and report SUSLOs.

ii. Concurrent Enrollment (*if applicable*)

The statute governing Concurrent Enrollment (CE) divides the state of Utah into service areas, each of which is served by one USHE (Utah System of Higher Education) institution. Weber State University's service area includes Davis, Weber, and Morgan counties, which encompass the Davis, Weber, Ogden, and Morgan school districts plus a few charter and private schools. Our nutrition program has two courses available via concurrent enrollment: NUTR LS SUS 1020- Science & Application of Human Nutrition and NUTR 1240 SUS- Nutrition and Sustainable Cooking. There are currently 33 active course sections for NUTR LS1020 and 9 active course sections for NUTR 1240 SUS.

The ENS department and nutrition program, as part of WSU, seek to fulfill the institution's mission of access, learning, and community partnerships. By creating and maintaining two quality concurrent Enrollment (CE) courses we are supporting the mission.

The ENS department has a staff member who has the responsibility of evaluating CE sections and instructors each year. This nutrition program director approves, trains, and coordinates with the CE instructors, locations, and site visitor, all using the WSU approved tools, apps, and processes. The NUTR LS SUS 1020 and NUTR SUS 1240 courses are standardized. Instructors who meet the criteria to teach the course typically take the WSU course prior to teaching it. They receive training and access to a Canvas Sandbox and instructor Box folder with all the course materials, syllabus, and assessments. The site visit ensures that the instructor is an effective teacher and is using the required course materials.

iii. Other interdisciplinary

The nutrition program is part of the departmental honors program. Students who meet the criterion to graduate with honors in nutrition education. As previously mentioned, the nutrition program has a Bachelor's of Integrated Studies (BIS) emphasis. Nutrition faculty serve routinely on BIS capstone projects and support students pursuing a BIS degree.

The nutrition program collaborates with the botany department in the College of Science in interdisciplinary efforts at the Davis campus. We share a greenhouse and garden and a staff member who maintains the areas to support classroom education and high-impact experiences integrating the greenhouse, garden, and food lab.

In addition, every year, we collaborate to support primary research students from other programs, including neuroscience, medical laboratory science, mathematics and health and human performance. Nutrition faculty serve as thesis directors for Master's of Athletic Training (MSAT) graduate students.

Standard C.

- Section C. Five-year Assessment Summary

Two biennial assessments have been completed since the start of the nutrition program, the first one covering Summer 2017 through Spring 2019 and the second covering Summer 2019 through Spring 2021.

Below is the Nutrition Education program assessment findings and recommendations from the office of institutional assessment:

- Our student learning outcomes are concise, articulated in measurable language, and concrete rather than abstract.
- Our curriculum grid demonstrates proficiency in the intersection of student learning outcomes. Intersections are leveled so that it is clear when outcomes are introduced, continue to be developed, and ultimately mastered. Students have multiple exposures to each outcome at different levels.
- Our assessment plan is outcome-driven, with specific courses changing over time. It is a holistic plan that covers multiple years.
- The program learning outcomes evidence covers all outcomes the course is designed to address. Multiple measures were included (direct and indirect) and were well-defined. Evidence was Reliable and valid for each outcome. A clear description of assessment instruments or tools was provided. However, it was noted that there was a heavy reliance on exams with hands-on demos, presentations, and assignments mixed in for a well-rounded use of evidence.
- The thresholds established on learning outcomes were varied in what appears to be a logical way (less rigorous for Gen Ed, more rigorous for engagement and individualized instruction). An explanation of the selection of the threshold was recommended for future reports. A recommendation to consider different thresholds for declared Nutrition Education majors was made. All learning outcomes were met at the established threshold level (Appendix G).
- Our interpretation of our assessment results was robust and meaningful and can be tied to action.
- Our action plan to address findings was proficient. When thresholds were not met, the action provided was robust and aligned with the results. When thresholds were met, there was a discussion of the need to continue to monitor (Appendix G).

In addition, General Education Area Learning Outcomes were assessed for the Life Science General Education course NUTR LS SUS 1020 Science and Application of Human Nutrition. The findings are below:

NUTR LS SUS 1020 is a well-organized course with a clear assessment plan; relying on two measures for each outcome is a thorough examination of the outcomes. The method for assessment is very successful, with multiple measures and a broad sample taken from the students (Appendix G). The threshold is set at 65%, and is being exceeded by almost all results and higher. Threshold could be raised to 70 or 75% to be consistent with most other Gen Ed. Actions to raise results do not seem necessary, but the report could include information on ongoing improvements beyond the outcomes, such as updates to material or course content. I would like to know the number of questions being evaluated to provide some context for the data.

Note: Since this report, the recommendation to raise the threshold to 70% was implemented on all Gen Ed learning outcomes for NUTR LS SUS 1020.

Assessment of Graduating Students

Assessment of graduating students in our program befalls on Nutrition Field Experience (NUTR 4860), Senior Seminar (NUTR 4990), and Current issues of Nutrition (NUTR 4320). Each of those courses has instruments that collect information on student competencies and gather feedback on strengths and weaknesses within our curriculum and program.

At the end of the Nutrition Field Experience course, we receive an evaluation from the preceptor on the experience of working with the Nutrition Education student intern. This information is shared with faculty and utilized to create strategies in our curriculum to address it. For example, the most frequent concern observed in our students is the lack of initiative, low ability to work autonomously, and reluctance to take leadership roles without being asked.

During the Senior Seminar course, students are required to complete two key assignments: 1) Create a resume and cover letter directed to a nutrition-related job, and 2) Complete a mock interview. The faculty assess the student's ability to answer and communicate nutrition competency-related questions during the mock interview. For the resume and cover letter, the ability to utilize adequate writing skills and jargon for a nutrition position is also assessed.

Finally, our Current Issues of Nutrition course is centered on assessing each student's ability to research, write and communicate a nutrition-related topic utilizing evidence-based information. At the end of the course, the student capstone project is evaluated on all 8 Nutrition Education Program (NEP) Measurable Learning Outcomes: Concepts and Competencies (Appendix G). Data from NEP Learning Outcomes Score Extra Credit assignments will serve to identify deficiencies in specific Concepts and Competencies.

Standard D - Academic Advising

- Section A. Advising Strategy and Process

The Nutrition Education program has a dedicated academic advisor. Faculty members also mentor and advise students in the major, minor, and BIS emphasis. The faculty and academic advisor are strongly committed to assisting each student in a planned advisement program that is most effective. Student satisfaction and timely graduation are goals. Students are advised of program requirements, transfer articulation, typical prerequisites for RDN graduate programs, other related graduate programs, career ideas and resources. The Nutrition Education program offers internship opportunities to help students find employment opportunities they may be interested in. The nutrition advisor encourages students to find meaningful internships that align with their nutrition interests. Finally, our advisor provides information about nutrition and dietetics Master's programs throughout the nation. This helps students know options and requirements to be candidates for such programs upon graduation.

The current advisement process is: new students attend an individual advisement session by appointment. Once students are declared with a nutrition program, they continue to schedule individual advisement sessions with the advisement coordinator; typically, twice a year prior to fall and spring course enrollment. The academic advisor uses a communication plan that is executed at specific times of the academic year to engage and retain students and to help them reach out for an advisement session to improve retention and timely graduation. Students may also meet with a faculty advisor or the program director as well. The advisement coordinator seeks to maintain academic program requirements, follow degree maps, attend training and conferences related to advisement and WSU, as well as, for the specific program, and attend department and program meetings.

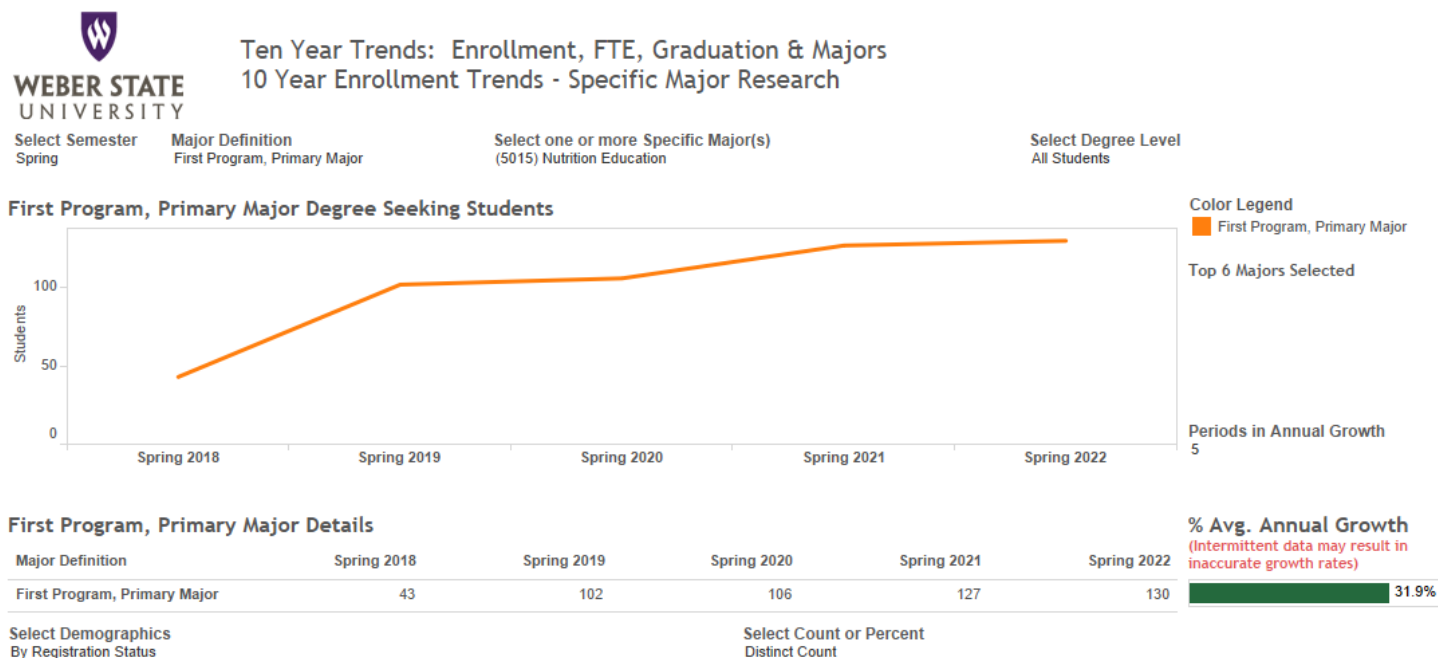
The NUTR 4990 Senior Seminar course helps students compile their nutrition knowledge, skills, and abilities and prepare to enter the workforce. Students are coached on job searching and resume, cover letter, and interviewing. Faculty frequently assist students in securing jobs and admission into graduate programs by writing letters of support and serving as a reference for the students.

Standard D

- Section B. Effectiveness of Advising

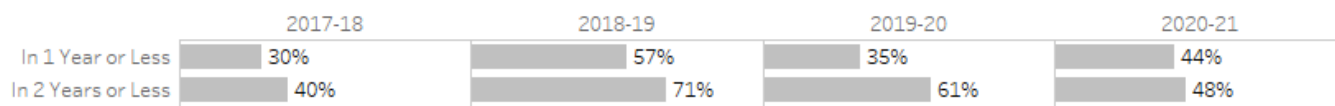
The Exercise and Nutrition Science department currently has two advisors, with one of them fully dedicated to the Nutrition Education program. The results of effective academic advising are reflected in program growth, tracking and supporting diverse student demographics, decreased years to graduation, and increased retention. Below are the charts with the data pertaining to these markers of effective advising. The Nutrition Education program median time to degree over the past five years was 4.98 years, which is shorter than the average for the entire university (5.30 years).

Program growth



The Nutrition Education program is experiencing an average annual growth of 31.9 % with 31 declared majors in the fall of 2017 and 130 majors declared by the Spring of 2022.

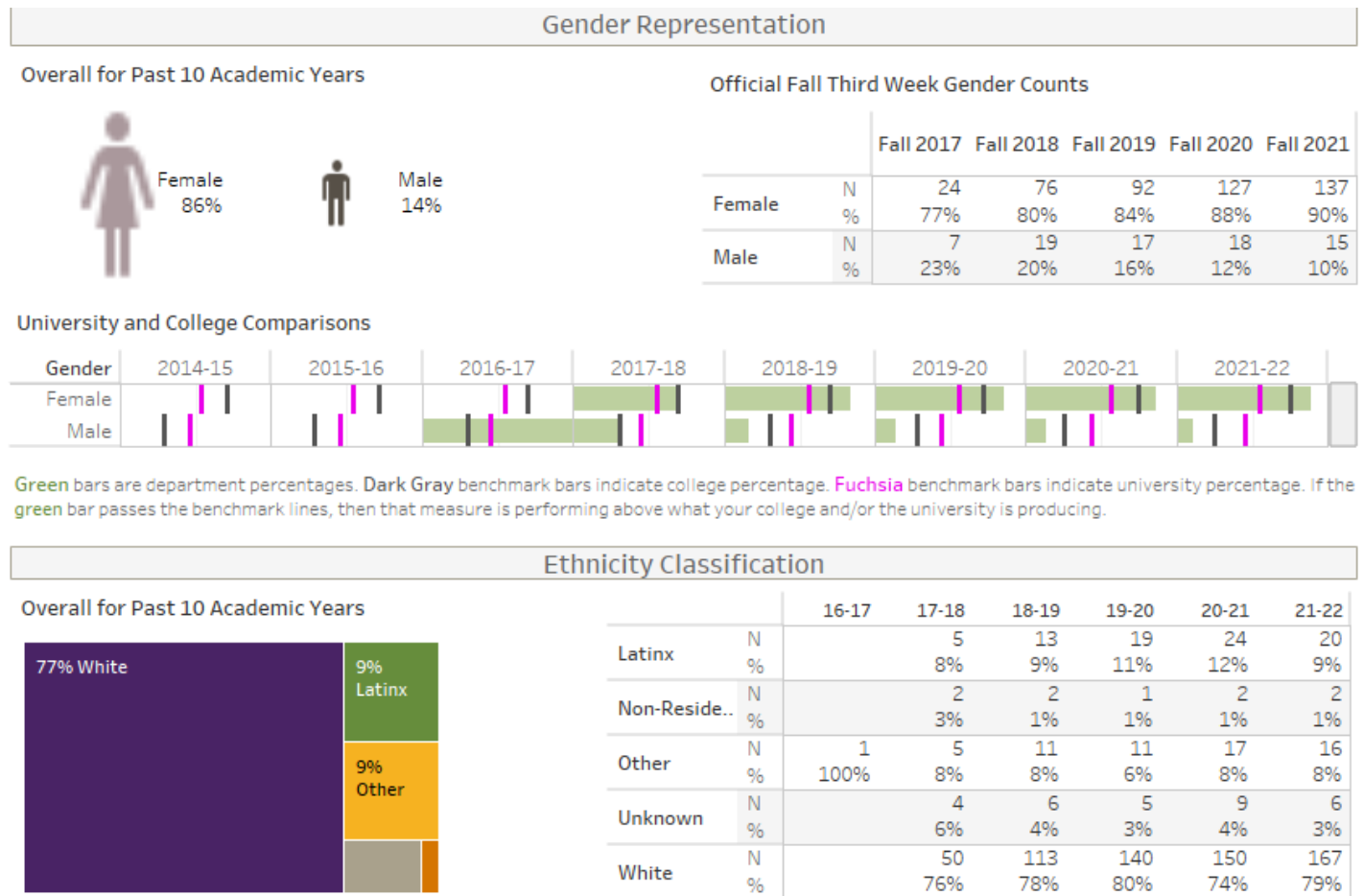
Time to baccalaureate degree from 90 credit hours (CH)



The Nutrition Education program averages the following degree completion rate within 2 years of 90 CH. 40% 2017-2018, 71% from 2018-2019, 61% from 2019-2020 and 48% from 2020-2021.

As a reference the WSU overall degree completion rate within 2 years of 90 CH was 63%. The first catalog year for the Nutrition Education program was 2017-2018.

Student demographics



Our student demographics have not presented a significant change since the start of our Nutrition Education major program. However, in 2021-2022 the department of Exercise and Nutrition Science with its two programs (Exercise Science and Nutrition Education) received recognition as the highest degree completion for Black, Indigenous, People of Color (BIPOC) students. That is a testament to the effort that advisors and faculty devote to support underrepresented students.

Standard D

- Section C. Past Changes and Future Recommendations

One of the main focuses in recent years, based on recommendation, has been to standardize criteria and procedures to grant waivers or/overrides. We have established specific criteria to grant this exception which has resulted in increased fairness and equity among students. Our academic advisor communicates with all parties involved including faculty, program director, and department chair to ensure decisions are shared and expectations are clear. This has helped enhance the trust between student/advisor/faculty in our program majors.

Advisement is a key component of our program. Our advisor is up to date on the latest technology implemented by the university (Starfish, Argos, etc.). This helps facilitate reach and communication. It is expected that WSU will initiate mandatory advising for all students which will likely result in better academic planning and mentorship for our students to be successful.

As a program, we have established specific criteria for course waivers or overrides so that cases are treated fairly and consistently. While maintaining this consistency, we consider each student's unique circumstance individually. Our academic advisor keeps the lines of communication for all participating in advising decision-making open and knowledgeable. This has established the trust and enhanced the support of this critical relationship for student success. Both advisors in our department are involved in the university plan to produce data driven retention initiatives designed to promote more proactive advisement. Interventions specific to at-risk students will be offered to prevent a stop-out. Finally, over the last five years we have recognized the importance of continuous support for our academic advisor. The role they play supporting our students and streamlining their paths to graduation and further careers is invaluable.

Standard E - Faculty

Standard E

- Section A. Programmatic/Departmental Teaching Standards

The faculty members of the nutrition program are held to the Moyes College of Education teaching standards and policies and procedures for tenure and promotion (per the tenure document and [PPM 8-11](#)). Each faculty member undergoes a teaching review in their second and fifth year. This evaluation is conducted by the department chair and a peer-review committee comprised of ENS Faculty members. During the third and sixth years, department and college ranking tenure and evaluation committees review faculty according to policy. Teaching practices/innovations, scholarship/research, and university service serve as the review criteria. Instructors are evaluated yearly by the department chair.

Faculty's teaching schedules are determined by the department chair in consultation with the program director and faculty member. They are established based on the strengths of the faculty member, needs of the program, and performance factors. All courses taught by both faculty members and adjunct faculty are evaluated by students via Chi-Tester and compared to program and department standards and averages. Results include student commendations and recommendations. Numerical data based on a scale of one to five is interpreted and tracked by semester and over time. The student evaluation instrument has been consistently used for over ten years.

Standard E

- Section B. Faculty Qualifications

Each faculty member is highly qualified to teach in this program. Each tenure and tenure track faculty member holds a PhD in nutrition science or closely related nutrition area of expertise. Currently, there are three tenured nutrition faculty members and one tenure track faculty member. One tenured faculty member is in the process of completing a Registered Dietitian credential and one tenure-track faculty member holds an active Certified Strength and Conditioning Specialist (CSCS) certification. All tenure and tenure track faculty hold current professional memberships and contribute to professional organizations such as: The Society for Nutrition Education and Behavior, The American Society for Nutrition, The National Strength and Conditioning Association etc.

Nutrition instructors and adjunct faculty meet the department minimum qualifications to teach in the department and program, including holding a Master's degree and having experience with Weber State nutrition courses (taking the Weber State course counts toward experience). Currently, there is one nutrition instructor with the RDN credential and two adjunct faculty with an RDN. Two of the adjunct faculty hold PhDs.

Standard E

- Section C. Faculty Scholarship

The Exercise and Nutrition (ENS) department has a strategic planning initiative to maintain excellence in faculty directed undergraduate research and student achievement/recognition. The ENS department faculty and students are dedicated to continuing to be active in faculty directed undergraduate research. ENS faculty and student research continues to represent WSU and the Moyes College of Education very

well. Nutrition faculty direct undergraduate student research and are engaged in multiple research projects including Metabolic Syndrome Study, WSU Ferritin Study, Evaluation of Anemia Prevalence and Essential Nutrients risk Among Ghana Communities among others.

Nutrition major students have presented their research findings at international, national, state, and local professional conferences. These include: Experimental Biology, ASN Nutrition, Food and Nutrition Conference and Expo, American Oil Chemist Annual Meeting and Expo, National Conference of Undergraduate Research, National Athletic Trainers' Association Clinical Symposia and AT Expo, Utah Conference of Undergraduate Research, Utah Academy of Nutrition and Dietetics Annual Meeting, Wyoming Academy of Nutrition and Dietetics Meeting, and the Sports Medicine Journal Series at McKay Dee Hospital University.

With the mentorship of faculty advisors, Nutrition Education student majors have also prepared and published multiple research articles in high impact journals. This includes: *"Effects of Indigenous Diet Iron Content and Location on Hemoglobin Levels of Ghanaians"*. *Nutrients*, 12(9), 2710. *"Dietary Determinants of Metabolic Syndrome Parameters Differ by Gender in College Students"*. *Nutrients*, 11(12), 2892. Every year nutrition faculty pursue and receive grants from Research, Scholarship, and Professional Growth Committee grants (RSPG), the office of undergraduate research (OUR), Moyes College of Education Endowment, and Academic Resources and Computing Committee (ARCC) grant to support scholarship endeavors.

Standard E

- Section D. Mentoring Activities

Faculty members of the nutrition program have the opportunity to mentor undergraduate student research, and serve as committee members/chairs for Bachelor's of Integrated Studies (BIS) capstone projects and projects for Master's students in the Athletic Training program. BIS projects typically span the course of one semester and involve regular meetings with the student and other committee members to assess the project's feasibility and timeline. BIS students must hold a proposal meeting at the beginning of the semester and a formal defense of their project and literature review at the end of the semester. Nutrition faculty participate in both of these meetings, working with other committee members to rate and assign a course grade and provide feedback of the student's work ethic, communication, project originality, and reach. Current nutrition faculty work with five to eight BIS students each semester.

Nutrition faculty serving on Master's committees have similar roles, although the timeline is not limited to a specific semester. Undergraduate and Master's researchers are trained on the use of biochemistry analyzers, multiplex immunoassays, anthropometrics, diet data collection and analysis, statistics and scientific writing. This allows our student researchers to gain valuable bench lab skills and experiences. From 2016 to 2021 every year a student mentored by a nutrition program faculty has received the College of Education outstanding researcher award.

Nutrition faculty also participate in a junior faculty mentoring program. In this program, the senior faculty member is assigned to recent faculty hires (in their first two years) to provide advice, orientation, networking, etc. In addition, the department chair holds individual meetings with junior faculty to go over their teaching, scholarship, and service development. Finally, the nutrition program director conducts the training and onboarding of the new adjunct faculty and concurrent enrollment instructors.

Standard E

- Section E. Diversity of Faculty

The department and program aspire to have diversity within the faculty but always hire the most qualified applicant in faculty searches regardless of factors such as gender, ethnicity, and age. Currently, our tenure and tenure-track faculty consist of three males (two who are white and one who is Hispanic/Latino) and one female (white). Each brings a unique academic background to the program, with most earning their PhD out of state. Our full-time instructor is a white female; our adjunct faculty consists of one white male and five females (four white, and one Indian).

Standard E

- Section F. Ongoing Review and Professional Development

Department faculty members are reviewed according to the institutional Policies and Procedures Manual schedules. Adjunct faculty are evaluated annually via peer review and review of end of course evaluations. The typical schedule after hire as a tenure track assistant professor is:

- 2nd year: peer review of teaching by committee and department chair review
- 3rd Year: formal tenure rank and evaluation committee review
- 5th year: peer review of teaching by committee
- 6th Year: formal tenure rank and evaluation committee review

If tenure and rank advancement was granted:

- 11th year: eligible for full-professor promotion or post-tenure review
- Every five years after 11th year: post-tenure review

Current nutrition faculty attend and participate in professional conferences each year. This includes presenting undergraduate research as well as faculty research. Funding for attending conferences comes from several internal sources: the WSU Research, Scholarship, and Professional Growth Committee grants (RSPG), and WSU College of Education Endowment grants. Faculty also regularly attend teaching improvement workshops on campus sponsored by the Teaching and Learning Forum. As needed, the faculty also attend Weber State-sponsored training for professional improvement.

Standard E

- Section G. Use and impact of high impact educational experiences

In 2020, WSU engaged in a strategic planning process. Once the new WSU strategic plan was established, the MCOE engaged in a strategic planning process. The MCOE strategic plan was finalized in 2021 and a Strategic Plan Taskforce was implemented in 2021-2022. The primary vision statement of the MCOE is "We aspire to prepare transformative professionals who positively impact society" with a supportive mission statement of "The Moyes College of Education prepares professionals for excellence in serving individuals and communities through meaningful relationships, inclusive culture, immersive learning opportunities, and creative advancement of knowledge."

The MCOE strategic plan taskforce established committees to work on actions items within the four strategic plan primary goals of: (1) Justice and Equity Foundation, (2) Personal Connections and Academic Excellence Ecosystem, (3) Community -University- Workforce Innovation Ecosystem, and (4) Recruitment, Retention, and Completion Outcome. An action item of “Provide each program graduate with two or more HIEE experiences” exists within the Personal Connections and Academic Excellence Ecosystem goal. A dedicated committee consisting of representation across each MCOE department worked for a year on this action item. The implementation task was to collect baseline data for all programs and to consider HIEE options for MCOE students. The performance measures were to identify one HIEE for students in each program to achieve in the first two years (in lower division courses) and to identify one HIEE for students to complete in years three to four (in upper division courses).

The committee first reviewed the literature on HIEEs then defined 26 common HIEEs to include in the program level review. The goal was to explore and determine teaching practices and/or experiences that promote HIEEs within MCOE undergraduate programs. The committee surveyed the college for what HIEEs programs are currently using. Baseline HIEE data was collected for all programs. The HIEE's that already exist in programs and when they occur was identified. Google Forms were created and sent to each program director and department chair to complete with input from program faculty. The goal was to extract program data collected into lower and upper-division courses and by HIEE types.

The 2021-2022 data was collected and analyzed with the findings summarized for the college by department and program. The results showed that MCOE programs do very well in incorporating a variety of HIEEs and many HIEEs in lower division and upper division courses. Overall, the MCOE has met and exceeded its strategic planning goal. Table 6 below includes the data from this committee work for the nutrition program.

The ENS department also has a strategic planning initiative to continue to focus on high impact educational experiences (HIEE). The integrative nutrition program currently requires field experience course work. The nutrition program offers directed undergraduate research and directed readings courses along with multiple other HIEE experiences across the program, as shown in Table 6. In summary, the nutrition program excels in providing multiple types of HIEEs in lower and upper division courses. Then nutrition program meets and exceeds established learning outcomes, goals, and metrics. It supports the institution, college, department, and program mission of providing multiple and various types of HIEEs across the curriculum. Future goals are to study and report on the impact of the HIEE by surveying students in NUTR 4990 senior seminar and through academic advisement exit interviews.

Table 6: Nutrition Program HIEEs by course and type.

Nutrition Program	Integrative Nutrition	Sports Nutrition
LD # Courses	4	4
LD Courses	NUTR 1020, 1240/L, 2020, 2320	NUTR 1020, 1240/L, 2020, 2320
LD # HIEE Types	5	5
LD HIEE Types	3, 5, 10, 14, 18	3, 5, 10, 14, 18
UD # Courses	12	11
UD Courses	NUTR 3020, 3040, 3070, 3220, 3320, 3420, 4320, 4440, 4520, 4830, 4860, 4990	NUTR 3020, 3040, 3070, 3220, 3320, 3420, 4320, 4440, 4520, 4830, 4990
UD # HIEE Types	12	11

UD HIEE Types	1, 3, 4, 5, 7, 8, 12, 14, 15, 16, 20, 21	1, 3, 4, 5, 7, 12, 14, 15, 16, 20, 21
<i>Course Designation Key & HIEE Type Numerical Reference Key & ENS Use (in purple)</i>		
LD: Lower Division, 1000 & 2000 courses UD: Upper Division, 3000 & 4000 courses	<ol style="list-style-type: none"> 1. Capstone Course/Project 2. Collaborative Assignments & Projects 3. Community Engaged Learning 4. Diversity & Global Learning 5. Evidence-based Teaching Practices 6. First Year Experience 7. Honors 8. Internship/Field Experience 9. Learning Community 10. Peer Mentor Programs 11. Practicum/Supervised Teaching 12. Pre-professional/Career Development 13. Proactive Advising 14. Project-based Learning 15. Student Leadership 16. Student On-Campus Employment 17. Study Abroad/Away 18. Supplemental Instruction/Tutoring 19. Teaching Observation 20. Undergraduate Research 21. Writing Intensive Course 	

Standard E

- Section H. Evidence of Effective Instruction

i. Regular Faculty

Every year full-time faculty, including instructors, complete the Moyes College of Education Annual Faculty Report. As part of this report, variables of effective instruction are evaluated by the department chair and the college dean. These include: changes or improvements made based on student course evaluations, changes or improvements based on peer feedback, new and innovative instructional and/or course delivery strategies, new and innovative instructional and/or course delivery strategies, teaching awards, equity minded and inclusive teaching practices, among others. In addition, during their tenure file review, tenure track faculty in the College of Education are required to achieve a rating of GOOD instead of SATISFACTORY in order to obtain tenure. As part of the tenure process, results of end of course/instructor evaluations are included in each faculty member's professional files to be reviewed by departmental, college and university committees. The department chair also visits two classes of the faculty member being evaluated during the 2nd and 5th peer teaching evaluation period.

ii. Adjunct Faculty

Adjunct faculty are onboarded by full time faculty that designed or already have taught the course for which the adjunct faculty was hired to teach. Most courses have standardized content and methods to measure mastery of learning outcomes. This makes the assessment of effective instruction much simpler. The chair of the department and the program director meet to discuss adjunct faculty performance and determine if the instructor is effective. Finally, end of course/instructor evaluations are conducted and are assessed by the department chair.

Standard F – Program Support *(including Support Staff, Administration, Facilities, Equipment, and Library)*

Standard F

- Section A. Adequacy of Staff *(including evidence of ongoing staff development)*

The department staff is adequate and currently has one non-exempt staff administrative specialist (Marrisela Lopez) along with four exempt staff personnel including two academic advisors/internship coordinators (Heidi Costello and Matthew Smith), one human performance lab coordinator (Anthony Fuji Ludwig), and greenhouse and garden coordinator (Michelle Parada). The college also employs a recruiter (Lindsey Strickland) who assists with recruitment for the nutrition program. Please see Appendix C for staff profiles.

Ongoing Staff Development: department staff members are extended opportunities for WSU development including travel to appropriate professional conferences, WSU specific trainings through training tracker, and enrollment in WSU courses. Each staff member regularly attends such trainings and takes advantage of development opportunities.

Standard F

- Section B. Adequacy of Administrative Support

The department receives great support from the dean and the provost when requested or necessary. Some examples include: our dean's support of a 5th tenure track nutrition faculty member, support of the provost for additional sections or seats when enrollment warrants this, support of adding the shared botany staff position based on strategic planning reports, data, and collaborative efforts. Our program also sees support from Weber State Continuing Education for online, evening, and off campus sections of nutrition courses and supplementing instructional wage for these sections.

Standard F

- Section C. Adequacy of Facilities and Equipment

The department is housed in the Swenson Building within the Stromberg Complex. The facility provides adequate classrooms, laboratories, and equipment to support the program. Faculty members along with some staff members write research grants for equipment needed for teaching and research. Funds are usually secured for these excellent proposals.

Our program has a large biochemical laboratory, which houses the majority of equipment used for research and teaching. This lab space is used to conduct faculty and undergraduate research, and is the location for nutrition courses in assessment methods. Our program also shares space for the Human Performance Lab with the Exercise Science program. This lab houses equipment for exercise research and body composition assessment and is the location for many exercise science courses. At the Davis campus, we have a large dedicated nutrition food lab and share a greenhouse and garden to support classroom education and high-impact experiences integrating the greenhouse, garden, and food lab.

The tables and chairs in many of our classes are dated and in need of replacement. This is especially true of our large classroom (room 134), where many sections of nutrition and exercise science courses are held.

Standard F

- Section D. Adequacy of Library Resources

The Stewart Library provides information resources and services on multiple WSU campuses. Print, electronic including databases, and audio-visual materials are provided in adequate titles. Hours of operation are extensive and meet student and faculty needs. The library website (<http://library.weber.edu>) assists with meeting 24/7 needs. The library assigns a librarian to each college. The librarian has an annual budget to provide current resources for the program. Additionally, the librarian meets faculty classes when invited in scheduled teaching rooms within the library and provides electronic resources for specific classes taught when requested. When a resource is not in the library, the interlibrary loan process enables access to most materials. The resources adequately meet the program, faculty, and student needs.

Standard G - Relationships with External Communities

Standard G

- Section A. Description of Role in External Communities

The ENS department has a strategic planning initiative to “Establish and strengthen community partnerships.” The nutrition program seeks to expand and provide diverse nutrition internship and field experience (clinical, industry, agricultural, exercise/fitness, health, and wellness) sites and partners. We establish professional relationships with community entities to address related issues such as food insecurity, physical activity, and special population dietary and exercise needs.

The Nutrition Education program currently works with Dairy West, among other organizations. Our students routinely participate in internships and dairy farm tours as part of our lower division Nutrition and Sustainable Cooking course. We have worked with the Ogden Civic Action Network (OgdenCAN), to provide workshops at the WSU Community Education Center. In addition, nutrition faculty provided dietary expertise and reviewed the OgdenCAN Spanish Way to Wellness Guide. This document is a community resource guide for physical activity, nutrition, and safety in Weber and Morgan counties.

Our program is currently collaborating with the Weber Cares Program (food pantry) and have supported cooking literature series including ‘Healthy Cooking’ and ‘Freeze Dry Cooking’. Faculty in the Nutrition Education program have provided their nutrition expertise to Charity Beyond Borders Ghana Medical Education and Humanitarian Services Trip. In that capacity, faculty provided professional expertise related to the nutrition care process to medical students, respiratory therapy students, and nurses at three different hospitals, including the Komfo Anokye Teaching Hospital, University of Ghana Teaching Hospital and St Joseph Hospital. The Exercise and Nutrition Science department have started a partnership with McKay Dee Hospital to support their Family and Sports Training Program. The nutrition and exercise science faculty will train and provide expertise in the testing performed at our lab facilities.

Standard G

- Section B. Summary of External Advisory Committee Minutes

Standard G

- Section C. Community and graduate Success

Nutrition Education graduates work in a variety of settings throughout the community. We survey our graduates yearly. In our more recent surveys, graduates from the program reported working as supervisors over school lunch kitchens, nutrition supervisors for the Salt Lake County jail, high school chemistry teachers, community health educators, physician assistant students, dental medicine students, adjunct instructors, and registered dietitian students, among others.

Over the years, we have created multiple partnerships with local and regional organizations that serve as internship sites for majors. We have set up internships at Ogden Clinic, Women in motion, Dairy West, OgdenCAN, Weber Cares pantry, Brigham City Senior's Center, Optavia, Box Elder County Wellness, and multiple other organizations. These valuable experiences help advance student confidence and competency by providing hands-on real-life experiences. All integrative Nutrition Education students are required to complete NUTR 4860 INT - Field Experience and are guided by our advisor to find an internship that aligns to their career interests.

Standard H – Program Summary

- Section A. Results of Previous Program Reviews

This 2022-2023 program review is the first program review for the Nutrition program. We do not have results of previous program reviews.

Standard H

- Section B. Action Plan for Ongoing Assessment Based on Current Self Study Findings

Standard H

- Section C. Action Plan for Staff, Administration, or Budgetary Findings

APPENDICES

Appendix A: Student and Faculty Statistical Summary Table 7: Student and Faculty Statistical Summary Nutrition Sciences	2017-2018	2018-2019	2019-2020	2020-2021	2021-22
Department Student Credit Hours Total ¹	9,212	9,118	8,379	8,748	8,652
Exercise and Sport Science SCH	1,452	1,352	1,439	1,558	1,613
MSAT SCH	888	764	0	0	0
Nutrition SCH	6,872	7,002	6,940	7,190	7,039
Department Student FTE Total ²	321.9	316.7	279.3	291.6	288.4
Exercise and Sport Science FTE	48.4	45.1	48.0	51.9	53.8
MSAT FTE	44.4	38.2	0.0	0.0	0.0
Nutrition FTE	229.1	233.4	231.3	239.7	234.6
Student Majors ³ (NUTR Only)	31	95	109	145	152
Second Major or Concentration	36	34	41	44	29
Minors	73	64	52	53	47
Program Graduates ⁴ (NUTR Only)					
Associate Degree	0	0	0	0	0
Bachelor Degree	6	11	23	21	28
Student Demographic Profile ⁵ (NUTR Only)					
Female	24	76	109	127	137
Male	7	19	17	18	15

Faculty FTE Total ⁶ (Department: Includes AT and NUTR for FY 18 then ENS for 19, 20, and 21)	19.1	18.7	13.8	13.8	N/A
Adjunct FTE	10.6	10.2	7.5	7.3	N/A
Contract FTE	8.5	8.5	6.3	6.4	N/A
Student/Faculty Ratio ⁷ (Department)	16.8	16.9	20.2	21.2	N/A

Appendix B: Faculty & Contract/Adjunct Faculty Profile

Table 8: Faculty Summary (current academic year)

	Tenure and tenure-track	Contract	Adjunct
Number of faculty with Doctoral degrees	4		4
Number of faculty with Master's degrees		1	3 Noah, Tacie & Becky
Number of faculty with Bachelor's degrees			1 for NUTR 1240
Other Faculty			
Total	4	1	7

Table 9: Tenure/Tenure Track Faculty Profile Summary

Name	Rank	Tenure Status	Highest Degree	Years of Teaching	Areas of Expertise
Rod Hansen	Full Professor	Tenured	PhD	15	Student athlete nutrition, fish oil, undergraduate research, general education
Jennifer Turley	Full Professor	Tenured	PhD	15	Senior seminar, lifespan nutrition, current issues in nutrition, general nutrition, diet design
David Aguilar-Alvarez	Associate Professor	Tenured	PhD	7	Food science, nutrition assessment, multicultural nutrition, undergraduate research, BIS programs
Damon Joyner	Assistant Professor	Tenure Track	PhD, CSCS	5	Sports nutrition, advanced nutrition, diet and health, carotenoids, BIS programs

Table 10: Contract/Adjunct Faculty Profile Summary

Name	Rank	Tenure Status	Highest Degree	Years of Teaching	Areas of Expertise
Jamie Stein	Full-time Instructor	n/a	MS, RDN	4	General, lifespan, sports, and clinical nutrition.
Lindsay Garr	Assistant Professor	Yes, in Health Professions	PhD	15	General nutrition and health
Maria Richards	n/a	n/a	PhD	20	Nutrition in the older adult, food values, diet design, and health, and diet therapy.
Rebecca Richards	n/a	n/a	MS, RDN	15	General and lifespan nutrition; diet design and health
Tacie Hall	n/a	n/a	MS, RDN	5	General nutrition and health
Habiba Nur	n/a	n/a	PhD	25	General, lifespan, and advanced nutrition. Food science and safety, sustainability.
Noah Erb	n/a	n/a	MS	2	General and multicultural health and nutrition
Michelle Parada	n/a	n/a	BS		Food lab, greenhouse, garden, food safety and sustainability.

Summary Information

The Nutrition program needs a 5th tenure track faculty member, preferably a tenure-track assistant professor to teach across lower and upper division courses. The Nutrition program continues to have 40-46 credits taught by adjunct instructors each fall and spring semester (80-92 in the academic year, not counting summer). Courses include General Education NUTR LS SUS 1020 (18 credit per semester), 1120, 2020, 2320, 3220, 3320, 3420, and occasionally 4440. The Nutrition Education program accrued 17% of the college semester credit hours in 2021-2022. There were 202 unique Nutrition program students in the 2021 academic year with 22% incoming, 53% continuing, 17% outgoing and 8% graduating. Time to graduation is in line with college and WSU benchmarks.

Appendix C: Staff Profile

Table 10: Staff Profile Summary

Name	Job Title	Years of Employment	Areas of Expertise
Marrisela Lopez	Administrative Specialist II	2	Budgets, pcards, class scheduling, meeting minutes, purchasing, tracking and maintaining data
Heidi Costello	Academic Advisor, internships, and lab coordinator	7	Nutrition advisement, internships, nutrition biochemistry lab, concurrent enrollment site visits, communication, adjunct instruction, research, collaboration, assisting faculty and students, inventory.
Michelle Parada	Greenhouse, garden and food lab coordinator	1	Botany, greenhouse, garden, beekeeping, food lab.
Matthew Smith	Academic advisor and internship coordinator	4	Exercise and sport science advisement, internships, communication
Anthony Fuji Ludwig	Human performance lab coordinator	<1	Exercise and sport science, human performance lab classroom support, community engagement, collaboration, assisting faculty and students, inventory.

Appendix D: Financial Analysis Summary

(This information will be provided by the Office of Institutional Effectiveness)

Exercise and Nutrition Sciences (Includes MSAT for FY 18 and 19)					
Funding	17-18	18-19	19-20	20-21	21-22
Appropriated Fund	1,162,643	1,197,554	963,668	978,023	867,724
Other: IW Funding from CE	168,865	179,620	203,273	223,773	215,783
Special Legislative Appropriation					
Grants or Contracts					
Special Fees/Differential Tuition	69,354	42,665	57,042	32,620	50,325
Total	1,400,862	1,419,839	1,223,983	1,234,416	1,133,832
Student FTE Total	321.87	316.67	279.30	291.60	288.40
Cost per FTE	4352.31	4483.70	4382.32	4233.25	3931.46

Note – with this information and the student information, we will calculate a ‘cost per fte’ as part of the financial summary

Appendix E: External Community Involvement Names and Organizations

Table 12: External Community Involvement

Name	Organization
Katy Gerbich	Brigham City Senior's Center
Colton Jackson	Optavia
Jenica Baggs	Box Elder County Wellness Program
Ryan Van Brunt	Boys and Girls Club of Greater Salt Lake
Rashel Clark	Dairy West
Clark Madsen	McKay Dee Hospital
William Cook	OgdenCAN
Becky Jo Gesteland	Weber Cares Pantry
Lisa Trujillo	Charity beyond borders
Janna Trovato	The Lupus Foundation of America

Appendix F: Site Visit Team (both internal and external members)

Table 13: 2022-2023 Site Visit Team Members

Name	Position	Affiliation
Hugo Valle	Associate Professor, School of Computing	Weber State University
Jeffrey M. Willardson	Associate Professor, Health and Human Performance Department	Montana State University Billings

Appendix G: Evidence of Learning Courses within the Major & General Education

Table 14: Evidence of Learning Courses within the Nutrition Major

Part 1. Concepts

Data reported for concepts from **Summer 2019/Fall 2019/Spring 2020/Summer 2020/Fall 2020/Spring 2021**

Nutrition Education Learning Outcomes: Concepts					
Measurable Learning Outcome: Students will...	Method of Measurement*	Threshold for Evidence of Student Learning	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results
Learning Outcome CONCEPT A: Knowledge & Skills to solve nutrition and health related problems.	Measure 1: Correct exam responses	Measure 1: 80% of students will score 70% or better on NUTR 2320 exams.	Measure 1: 81/100/86/80/75/83 % of students scored 70% or more across all combined course exams from all sections.	Measure 1: Five out of six semesters, the threshold was met.	Measure 1: Exam questions will be evaluated and those with more than 50% of students answering incorrectly will be revised. Teaching methods and course content tied to this learning outcome will be evaluated and edited if necessary.
	Measure 2: Correct exam responses	Measure 2: 80% of students will score 70% or better on the comprehensive NUTR 4440 final exam.	Measure 2: na/na/84/100/83/na % of students scored 70% or more in the final exam across all sections.	Measure 2: Students successfully demonstrated Knowledge and skills to solve nutrition and health problems	Measure 2: No changes needed. Continue to collect data and monitor student performance
Learning Outcome CONCEPT B: Integrated & Applied Expertise to educate and communicate for optimal health promotion and human performance.	Measure 1: Research presentation and discussion	Measure 1: 80% of students will score 70% or better on the NUTR 3020 supplement facts sheet research presentation.	Measure 1: na/94/96/na/96/93 % of students scored 70% or more on this assignment across all sections.	Measure 1: Four of four semesters, the threshold was met.	Measure 1: The instructions for the assignment will be evaluated and rewritten for clarity if needed. Sample work will be provided. Students will be asked to peer-evaluate their work prior to submission. Teaching methods and course content tied to this learning outcome will be evaluated and edited if necessary.

Nutrition Education Learning Outcomes: Concepts

Measurable Learning Outcome: Students will...	Method of Measurement*	Threshold for Evidence of Student Learning	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results
	Measure 2: Secondary research presentation and discussion	Measure 2: 80% of students will score 70% or better on NUTR 4320 presentations.	Measure 1: na/93/99/90/94/93 % of students scored 80% or more on their presentation across all sections.	Measure 2: Students successfully applied and integrated their expertise to educate and communicate optimal health promotion	Measure 2: No changes needed. Continue to collect data and monitor student performance
Learning Outcome CONCEPT C: Personal and Community Responsibility to optimize healthful behaviors of individuals, families, and/or communities through the life cycle with networking, resources, and support.	Measure 1: Interpretation and discussion of results from self-food intake study Measure 2: Completion of assignment tied to global nutrition issues, health and food practices	Measure 1: 80% of students will score 70% or better on the Nutrition LS1020 Signature Assignment essay Measure 2: 80% of students will score 70% or better on the NUTR 3420 major project research paper	Measure 1: 88/83/90/83/94/81 % of students scored 70% or more on this assignment across all combined course sections. Measure 2: 97/na/97/80/na/91 % of students scored 70% or more on this assignment across all combined course sections	Measure 1: Students successfully demonstrated personal and community responsibility to improve society. Measure 2: Students successfully demonstrated personal and community responsibility to improve society.	Measure 1: No changes needed. Continue to collect data and monitor student performance Measure 2: No changes needed. Continue to collect data and monitor student performance
Learning Outcome CONCEPT D: High Impact Experiences from assimilating or engaging in research, group projects, senior capstone work, and/or community-based fieldwork.	Measure 1: complete and record a cooking demo (sustainability, food science, nutrition adequacy and food safety). Measure 2: completion of 1-4 credit hours of primary research	Measure 1: 90% of NUTR 1240 students will engage in hands on nutrition and sus cooking and earn a 70% or better score in their cooking demonstration assignment. Measure 2: 90% of NUTR 4520 directed research students will earn a course grade of 70% or better.	Measure 1: 100/100/100/100/100/100 % of students scored 70% or more on this cooking demonstration across all combined course sections. Measure 2: na/100/100/100/na/100 % of students earned a course grade 70% or better	Measure 1: Students successfully engaged in high impact experiences Measure 2: Students successfully engaged in high impact experiences	Measure 1: No changes needed. Continue to collect data and monitor student performance Measure 2: No changes needed. Continue to collect data and monitor student performance

Can be a mix of [direct](#) and [indirect](#) measures, but at least one measure must be direct

Part 2. Competencies

Data reported from Summer 2019/Fall 2019/Spring 2020/Summer 2020/Fall 2020/Spring 2021

Nutrition Education Learning Outcomes: Competencies

Measurable Learning Outcome: Students will...	Method of Measurement*	Threshold for Evidence of Student Learning	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results
Learning Outcome COMPETENCY 1: Diet Analysis & Design by performing accurate diet analysis and design according to dietary guidelines for Americans, for health, fitness, and/or sport performance and with comprehensive evaluation, interpretation, and application.	Measure 1: Successful Completion of diet design assignment Measure 2: Successful completion of athlete diet design	Measure 1: 80% of students will score 70% or better on the NUTR 2320 diet design assignments 4 and 5. Measure 2: 80% of students will score 70% or better on the NUTR 3020 evaluation of student athlete diet analysis and design projects.	Measure 1: 90/81/74/80/82/70 % of students scored 70% or more on this diet design assignment across all combined course sections Measure 2: na/84/85/na/88/86% % of students scored 70% or more on this diet design assignment across all combined course sections.	Measure 1: Five out of six semesters, the threshold was met. Students successfully demonstrated ability to analyze and design diets Measure 2: four of four semesters, the threshold was met.	Measure 1: No changes needed. Continue to collect data and monitor student performance Measure 2: The instructions for the project will be evaluated and rewritten for clarity if needed. Sample work will be provided. Students will be asked to peer-evaluate their work prior to submission. Teaching methods and course content tied to this learning outcome will be evaluated and edited if necessary.
Learning Outcome COMPETENCY 2: Nutrient Needs & Functions by gender and activity level for various age groups and health conditions using healthy and sustainable food preparation methods.	Measure 1: Correct responses of exam questions tied to LO Measure 2: Correct exam responses	Measure 1: 70% of students will score 70% or better on NUTR 1020 exam questions tied to this outcome Measure 2: 80% of students will score 70% or better on NUTR 4420 exam 2.	Measure 1: 77/81/80/84/83/83 % of students scored 70% or more on exam questions aligned to similar Chi Tester nutrition minor and statewide articulation outcomes across all combined course sections. Measure 2: This student % na/85.0/78.0/na/83.0/71.0 scored 70% or more in exam 2 across all sections.	Measure 1: Students successfully demonstrated understanding of human nutrient needs and functions Measure 2: Two of four semesters, the threshold was met.	Measure 1: No changes needed. Continue to collect data and monitor student performance Measure 2: Exam questions will be evaluated and those with more than 50% of students answering incorrectly will be revised. Teaching methods and course content tied to this

					learning outcome will be evaluated and edited if necessary.
Learning Outcome COMPETENCY 3: Nutrition Issues & Assessment across cultures and the lifespan, for fitness and sport performance, in culinary science, and for the prevention and treatment of various medical conditions	Measure 1: Complete and record a cooking demo Measure 2: Correct exam responses	Measure 1: 80% of students will score 70% or better on the NUTR 1240 cooking demonstration project Measure 2: 80% of students will score 70% or better on NUTR 3420 exams.	Measure 1: This student % 100/100/100/100/100.0/100.0 scored 70% or more on this project. Measure 2: This student % 99/na/100.0/100/na/100 scored 70% or more across all combined course exams from all sections.	Measure 1: Students successfully demonstrated understanding of nutrition issues and assessment across multiple populations Measure 2: Students successfully demonstrated understanding of nutrition issues and assessment across multiple populations	Measure 1: No changes needed. Continue to collect data and monitor student performance Measure 2: No changes needed. Continue to collect data and monitor student performance
Learning Outcome COMPETENCY 4: Human Structure and Function by understanding how nutrition intersects with living and nonliving hierarchies within the human body.	Measure 1: Correct responses of exam questions tied to LO Measure 2: Correct exam responses	Measure 1: 70% of students will score 70% or better on NUTR 1020 exams tied to this outcome. Measure 2: 80% of students will score 70% or better on the comprehensive NUTR 4440 final exam.	Measure 1: 66/76/75/75/79/80 % of students scored 70% or more on exam questions aligned to similar Chi Tester nutrition minor and statewide articulation outcomes across all combined course sections. Measure 2: This student % na/na/84/100/83 /scored 70% or more in the comprehensive final exam across all sections.	Measure 1: x of y semesters, the threshold was met. Measure 2: Students successfully demonstrated understanding of Human Structure and Function.	Measure 1: Exam questions will be evaluated and those with more than 50% of students answering incorrectly will be revised. Teaching methods and course content tied to this learning outcome will be evaluated and edited if necessary. Faculty teaching separate sections will discuss and compare exams and question alignment to learning outcomes for consistency. Measure 2: No changes needed. Continue to collect data and monitor student performance

Additional narrative (optional – use as much space as needed):

3. Evidence of Learning: General Education Courses

NUTR LS1020 is a General Education course taught in the Exercise and Nutrition Sciences Department and Nutrition Education program.

Method of Measuring the Outcomes: There are two direct measures of assessment used in NUTR LS1020 to generate direct evidence of meeting the Life Science General Education learning outcomes. Chi Tester was used to administer all of the NUTR LS1020 exams and has provided a tool for the program to consistently collect and analyze the data. Because each section of the course taught is assessed each semester, hundreds to thousands of data points were generated per learning outcome.

- **Direct Measure #1 (DM 1):** The first direct measure of assessment includes aligning the eight Life Science General Education course learning outcomes to each Nutrition exam question. There were four 50-question exams and one 16 question exam analyzed for all sections of NUTR LS1020 each semester. Online, hybrid, and face-to-face classes were assessed for all of the learning outcomes. Additionally, there was one project-based exam where students collect, analyze, interpret, and report their own data. All exams were administered using Chi Tester. Every question is tied to the appropriate learning outcome(s). Each of the trimesters has a different set of the exam questions and exams are consistently used for assessment.
- **Direct Measure #2 (DM 2):** The second direct measure of assessment includes administering a closed-book exam consisting of 40 questions that include five competency-based questions from each of the eight Life Science General Education course learning outcomes that were developed and approved by the Life Science General Education Area Committee in the Spring of 2013.

Threshold: The Life Science General Education Area Committee set the threshold of 70% for Life Science courses. This threshold of 70% is used for NUTR LS1020 for both the first and second direct measures of assessment. The 70% threshold is above what is needed to receive credit for the course.

Findings: Students being capable of answering exam and competency-based questions correctly demonstrated that learning outcomes were met. All eight Life Science General Education course learning outcomes were met for DM 1 and DM 2 with the threshold of 70%. The Nutrition program evaluates the consistency of student performance over time due to the consistent process used to assess learning outcomes.

Action Plan: Continue to collect the evidence to ensure that learning outcomes continue to be met as determined by student performance. No changes are needed at this time.

Evidence of Learning: General Education Courses
(use as a supplement to your five-year summary, if needed)

Table 15: Evidence of Learning Courses within General Education

NUTR LS1020 (Science and Application of Human Nutrition)

Data reported from **Summer 2019/Fall 2019/Spring 2020/Summer 2020/Fall 2020/Spring 2021**

15A: Nature of science learning outcomes

Gen Ed Learning Goal	Measurable Learning Outcome (LO)	Method of Measurement	Threshold	Findings <i>Linked to Learning Outcomes</i>	Interpretation of Findings	Action Plan/Use of Results
<i>Students will demonstrate understanding of the Nature of Science:</i> Scientific knowledge is based on evidence that is repeatedly examined, and can change with new information. Scientific explanations differ fundamentally from those that are not scientific.	NUTR LS1020 Students will demonstrate their understanding by applying and evaluating principles reflecting the <i>Nature of Science</i> .	Direct Measure (DM) 1: Correct responses of exam questions tied to LOs.	DM 1: Students will answer 70% of the aligned exam questions correctly across all combined course sections.	DM 1: Students answered 75/74/81/92/90/90% of the aligned exam questions correctly across all combined course sections.	Students demonstrated an understanding of the <i>Nature of Science</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.
		Direct Measure (DM) 2: Correct responses to WSU LS Gen Ed standard Competency-based questions tied to LOs.	DM 2: Students will answer 70% of the standardized exam questions correctly across all combined course sections.	DM 2: Students answered 82/87/87/84/86/87% of the standardized exam questions correctly across all combined course sections.	Students demonstrated an understanding of the <i>Nature of Science</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.

GE Learning Goal	Measurable Learning Outcome (LO)	Method of Measurement	Threshold	Findings	Interpretation	Action Plan/Use of Results
<i>Students will demonstrate understanding of the</i> Integration of Science: All natural phenomena are interrelated and share basic organizational principles. Scientific explanations obtained from different disciplines should be cohesive and integrated.	NUTR LS1020 Students will demonstrate their understanding by applying and evaluating principles reflecting the <i>Integration of Science</i> .	Direct Measure (DM) 1: Correct responses of exam questions tied to LOs.	DM 1: Students will answer 70% of the aligned exam questions correctly across all combined course sections.	DM 1: Students answered 72/79/76/78/80/80% of the aligned exam questions correctly across all combined course sections.	Students demonstrated an understanding of the <i>Integration of Science</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.
		Direct Measure (DM) 2: Correct responses to WSU LS Gen Ed standard Competency-based questions tied to LOs.	DM 2: Students will answer 70% of the standardized exam questions correctly across all combined course sections.	DM 2: Students answered 79/89/89/85/89/90% of the standardized exam questions correctly across all combined course sections.	Students demonstrated an understanding of the <i>Integration of Science</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.

GE Learning Goal	Measurable Learning Outcome (LO)	Method of Measurement	Threshold	Findings	Interpretation	Action Plan/Use of Results
<i>Students will demonstrate understanding of</i> Science and Society: The study of science provides explanations that have significant impact on society, including technological advancements, improvement of human life, and better understanding of human and other influences on the Earth's environment.	NUTR LS1020 Students will demonstrate their understanding by applying and evaluating principles reflecting <i>Science and Society</i> .	Direct Measure (DM) 1: Correct responses of exam questions tied to LOs.	DM 1: Students will answer 70% of the aligned exam questions correctly across all combined course sections.	DM 1: Students answered 80/76/76/75/78/77% of the aligned exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Science and Society</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.
		Direct Measure (DM) 2: Correct responses to WSU LS Gen Ed standard Competency-based questions tied to LOs.	DM 2: Students will answer 70% of the standardized exam questions correctly across all combined course sections.	DM 2: Students answered 86/93/93/93/93/95% of the standardized exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Science and Society</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.

GE Learning Goal	Measurable Learning Outcome (LO)	Method of Measurement	Threshold	Findings	Interpretation	Action Plan/Use of Results
<i>Students will demonstrate understanding of</i> Problem Solving & Data Analysis: Science relies on empirical data, and such data must be analyzed, interpreted, and generalized in a rigorous manner.	NUTR LS1020 Students will demonstrate their understanding by applying and evaluating principles reflecting <i>Problem Solving and Data Analysis</i> .	Direct Measure (DM) 1: Correct responses of exam questions tied to LOs.	DM 1: Students will answer 70% of the aligned exam questions correctly across all combined course sections.	DM 1: Students answered 72/76/67/73/73/72% of the aligned exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Problem Solving and Data Analysis</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.
		Direct Measure (DM) 2: Correct responses to WSU LS Gen Ed standard Competency-based questions tied to LOs.	DM 2: Students will answer 70% of the standardized exam questions correctly across all combined course sections.	DM 2: Students answered 85/87/88/88/88/88% of the standardized exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Problem Solving and Data Analysis</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.

15B. Life science learning outcomes

GE Learning Goal	Measurable Learning Outcome (LO)	Method of Measurement	Threshold	Findings	Interpretation	Action Plan/Use of Results
<i>Students will demonstrate understanding of the</i> Levels of Organization: All life shares an organization that is based on molecules and cells and extends to organisms and ecosystems.	NUTR LS1020 Students will demonstrate their understanding by applying and evaluating principles reflecting the <i>Levels of Organization</i> .	Direct Measure (DM) 1: Correct responses of exam questions tied to LOs.	DM 1: Students will answer 70% of the aligned exam questions correctly across all combined course sections.	DM 1: Students answered 71/83/85/81/82/83% of the aligned exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Levels of Organization</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.
		Direct Measure (DM) 2: Correct responses to WSU LS Gen Ed standard Competency-based questions tied to LOs.	DM 2: Students will answer 70% of the standardized exam questions correctly across all combined course sections.	DM 2: Students answered 85/92/96/96/96/96% of the standardized exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Levels of Organization</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.

GE Learning Goal	Measurable Learning Outcome (LO)	Method of Measurement	Threshold	Findings	Interpretation	Action Plan/Use of Results
<i>Students will demonstrate understanding of Metabolism and Homeostasis: Living things obtain and use energy, and maintain homeostasis via organized chemical reactions known as metabolism.</i>	NUTR LS1020 Students will demonstrate their understanding by applying and evaluating principles reflecting <i>Metabolism and Homeostasis</i> .	Direct Measure (DM) 1: Correct responses of exam questions tied to LOs.	DM 1: Students will answer 70% of the aligned exam questions correctly across all combined course sections.	DM 1: Students answered 79/79/75/77/79/78% of the aligned exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Metabolism and Homeostasis</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.
		Direct Measure (DM) 2: Correct responses to WSU LS Gen Ed standard Competency-based questions tied to LOs.	DM 2: Students will answer 70% of the standardized exam questions correctly across all combined course sections.	DM 2: Students answered 81/90/94/93/95/95% of the standardized exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Metabolism and Homeostasis</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.

GE Learning Goal	Measurable Learning Outcome (LO)	Method of Measurement	Threshold	Findings	Interpretation	Action Plan/Use of Results
<i>Students will demonstrate understanding of Genetics and Evolution: Shared genetic processes and evolution by natural selection are universal features of all life.</i>	NUTR LS1020 Students will demonstrate their understanding by applying and evaluating principles reflecting <i>Genetics and Evolution</i> .	Direct Measure (DM) 1: Correct responses of exam questions tied to LOs.	DM 1: Students will answer 70% of the aligned exam questions correctly across all combined course sections.	DM 1: Students answered 79/75/72/74/76/74% of the aligned exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Genetics and Evolution</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.
		Direct Measure (DM) 2: Correct responses to WSU LS Gen Ed standard Competency-based questions tied to LOs.	DM 2: Students will answer 70% of the standardized exam questions correctly across all combined course sections.	DM 2: Students answered 69/75/85/85/86/88% of the standardized exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Genetics and Evolution</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.

GE Learning Goal	Measurable Learning Outcome (LO)	Method of Measurement	Threshold	Findings	Interpretation	Action Plan/Use of Results
<i>Students will demonstrate understanding of</i> Ecological interactions: All organisms, including humans, interact with their environment and other living organisms.	NUTR LS1020 Students will demonstrate their understanding by applying and evaluating principles reflecting <i>Ecological Interactions</i> .	Direct Measure (DM) 1: Correct responses of exam questions tied to LOs.	DM 1: Students will answer 70% of the aligned exam questions correctly across all combined course sections.	DM 1: Students answered 75/75/78/76/82/72% of the aligned exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Ecological Interactions</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.
		Direct Measure (DM) 2: Correct responses to WSU LS Gen Ed standard Competency-based questions tied to LOs.	DM 2: Students will answer 70% of the standardized exam questions correctly across all combined course sections.	DM 2: Students answered 85/93/92/92/94/94% of the standardized exam questions correctly across all combined course sections.	Students demonstrated an understanding of <i>Ecological Interactions</i> . The learning outcome was met.	No changes needed. Continue to collect data and monitor student performance.

Appendix H: Sample Signature Assignments

SAMPLE: NUTR LS1020 Take-Home Exam 4: The Science of Nutrition Applied (150 points)

SAMPLE EXAM 4 PART A

Part A1 (20 points): 2-Day Average DWP combination report. Upload your raw combination data reports from Diet & Wellness Plus (DWP); compile and summarize your data. Upload a single ~6-page PDF file to Canvas. Use the example in Module 4. Model your combination report off the sample work provided.

Part A2 (52 points): Each data point is worth 1 point, each summary and interpretation of the data is worth 3 points. Complete the data analysis summary chart with questions 1-7 below. Complete the data analysis summary chart below.

AREA	INSTRUCTIONS	MY 2-DAY AVERAGE DATA (Include units such as Calories, g/day, %, etc.)
2. ENERGY (8 points)		
A. DRI: Calories	From the intake v goals report	2564
B. Intake: Calories	From the intake v goals report	2456
C. Expenditure: Calories	From the energy balance report	2625
D. Average Calorie Difference	From the energy balance report (if your intake is greater than your expenditure this is positive energy balance and weight gain).	-169
E. Weight loss/gain: Lbs	Calculate: Calorie difference ÷ 3500 Calories/lb fat = +/- weight change in pounds (lbs)	-169 Calorie difference ÷ 3500 Calories/lb fat = -0.05 lb weight loss
F. Short summary and interpretation of the data	Your interpretation based on your knowledge and data interpretation. Address your energy balance, weight change, and strategies to achieve and maintain a healthy body weight.	My Calorie intake was slightly below my DRI and energy expenditure. I was in negative energy balance with a small amount of weight loss. I don't need to lose weight and should stay physically active so I should add a few calories from legumes, whole grains, or vegetables to be in energy balance.

3. PROTEIN (8 points)		
A. Intake: g/day	From the intake v goals report	98.24g
B. Intake: % of the DRI	From the intake v goals report	169%
C. Intake: % of Calories	From the macronutrient range report	16%
D. % of Calories met AMDR: yes or no	Your interpretation based on AMDR of 10-35%	Yes
E. Complementation: yes or no	Your interpretation based on your knowledge and food sources	No
F. Short summary and interpretation of the data	Your interpretation based on your knowledge and data interpretation. Address the adequacy of your protein intake (%DRI), % AMDR,	My protein intake was adequate for the DRI and in range for the AMDR. I did not practice complementation. I could add

SAMPLE: NUTR LS1020 Take-Home Exam 4: The Science of Nutrition Applied (150 points)

	and dietary recommendations to achieve optimal protein intake.	more legumes, whole grains, and vegetables.
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4. CARBOHYDRATE (11 points)		
A. Intake: g/day	From the intake v goals report	322.18g
B. Intake met 130 g/day minimum: yes or no	Your interpretation	Yes
C. Intake: % of Calories	From the macronutrient range report	52%
D. % of Calories met AMDR: yes or no	Your interpretation based on AMDR of 45-65%	Yes
E. Calculated % Calories from sugar	___ g sugar X 4 Calories/g = ___ Calories sugar ÷ ___ total Calories X 100 = ___ % Calories sugar	147.55 g sugar X 4 Calories/g = 590.2 Calories sugar ÷ 2456 total Calories X 100 = 24% Calories sugar
F. Sugar intake met the AMDR: yes or no	Your interpretation based on AMDR of <25%	Yes
G. Calculated Recommendation for fiber: g/day	___ Calorie intake ÷ 100 x 1.4 = ___ g/day Recommendation	2456 Calorie intake ÷ 100 x 1.4 = 34.38 g/day Recommendation
H. Fiber intake: % calculated Recommendation	___ g fiber intake ÷ calculated fiber ___ g Recommendation X 100 = ___ % DRI	34.59 g fiber intake ÷ calculated fiber 34.38 g Recommendation X 100 = 101% Recommendation
I. Short summary and interpretation of the data	Your interpretation based on your knowledge and data interpretation. Address the gram amount of carbohydrate intake adequacy, % AMDR, sugars intake in terms of the AMDR, fiber intake based upon your calculated recommendation for fiber, and dietary recommendations to improve the healthiness of your carbohydrate intake.	My total carbohydrate intake met the minimum DRI and was in range per the AMDR. My sugar was nearly excessive from cookies, fruit, and honey. My fiber was barely adequate according to my personalized recommendation. I could add some legumes, whole grains, and vegetables if to increase my fiber and reduce food sources of simple sugars mentioned above. This will allow me to maintain my Calorie and Carbohydrate intake levels in a healthy range and improve upon what is already within acceptable ranges.

5. FAT (11 points)		
A. Intake: % of Calories	From the macronutrient range report	33%
B. % of Calories met AMDR: yes or no	Your interpretation based on AMDR of 20-35%	Yes
C. Intake: % of Calories saturated fat	From the fat breakdown report	12%

SAMPLE: NUTR LS1020 Take-Home Exam 4: The Science of Nutrition Applied (150 points)

minerals:		
B. I had an inadequate (IA) intake of the following minerals:	Intake was 66-99% of the DRI on the intake v goals report	Potassium
C. I had an deficient (D) intake of the following minerals:	Intake was <66% of the DRI on the intake v goals report	None
D. I had an excessive (E) intake of the following minerals:	Intake was >100% of the UL as indicated by "DRI Upper Limit Surpasses" in the notes section of the intake v goals report	Sodium
E. Short summary and interpretation of the data	Your interpretation based on your knowledge and data interpretation. Address food choice selections that would improve the adequacy of mineral intake for all minerals consumed IA or D.	Most of my minerals were adequate and in range. I should reduce sodium from chips and bacon and increase potassium from whole fresh plant foods.

Part A3 Signature Assignment Essay (30 points): For question 8 you will engage in personal and academic reflection and write an organized, short, concise, and coherent 12-20 sentence (300-400 word) essay to students who have yet to take the Nutrition LS1020 course worth 30 points. Include your applicable Diet and Wellness Plus software data analysis results, MyPlate results, and summary information. Use the WSU writing center. Address the big question: *How do personal diet and activity choices impact self and society?* Follow this format and Model your essay off the sample work provided.

- A. State your hypothesis (recall that you chose one of the following as a hypothesis in exam 2A).
- My personal diet and activity patterns are hypothesized to contribute to the obesity epidemic.
 - My personal diet and activity patterns are hypothesized to promote personal and community wellbeing.
 - My personal diet and activity patterns are hypothesized to positively impact the environment.
- B. Summarize your relevant data that supports or does not support your hypothesis.
- C. Draw your conclusion. Accept or reject the hypothesis based on the rationale that you communicated that was supported by the data you collected and analyzed and your knowledge.
- D. Demonstrate your knowledge of the subject matter by integrating and applying course content.
- E. Discuss what it meant for you to use the course content and tools to analyze, interpret, and draw conclusions about your diet plan as a nutrition scientist would.

Part A Grading Rubric

Question 1	20 points (complete & accurate), 10 points (incomplete or inaccurate, 0 points (missing, fragmented, or unacceptable).
Questions 2-7	7-11 points per area, data points (1 point each) match raw DWP data reports, calculations done correctly, valid short summary/interpretation (3 points each).
Question 8 Signature Assignment	30 (excellent), 25 (good), 20 (average & met threshold expectation), 15 (poor & below threshold expectation), 0 (missing or extremely poor).

Signature Assignment Essay: General Education Grading Rubric

GELO 1	Life Science Learning Outcomes (1. The nature of science, 2. The integration of science, 3. The role of science in society, 4. Problem-solving and data analysis, 5. Levels of organization, 6. Metabolism and homeostasis, 7. Genetics and evolution, and 8. Ecological interactions).	Above Expectation (2)
Content knowledge		Met Expectation (1)
		Below Expectation (0)
GELO 2	Focuses on students' practice using and facility with skills necessary for	Above Expectation (2)

Sample Exam 4 Part A

4

SAMPLE: NUTR LS1020 Take-Home Exam 4: The Science of Nutrition Applied (150 points)

D. % of SFA Calories met Dietary Guidelines: yes or no	Your interpretation based on <10% of Calories	No
E. Intake: % of Calories polyunsaturated fat	From the fat breakdown report	9%
F. Intake: % of Calories monounsaturated fat	From the fat breakdown report	11%
G. Linoleic acid intake was adequate: yes or no	Intake was 100% or more of the DRI on the intake v goals report	Yes
H. The primary source of dietary fat in my diet was either: saturated or unsaturated fats?	Which made the largest contribution to your diet?	Unsaturated, this is in line with recommendations.
I. Short summary and interpretation of the data	Your interpretation based on your knowledge and data interpretation. Address the healthiness of your total fat intake (% AMDR), SFA (<7% of Cals), cholesterol (<300mg/d), the adequacy of EFAs (%DRI linoleic and linolenic, and dietary recommendations to improve the healthiness of your fat intake.	My total fat, polyunsaturated, monounsaturated, and essential fatty acid intake was in range but my saturated fat intake exceeded dietary guideline recommendations. I should increase my serving size of trout and reduce my intake of butter and bacon.

6. VITAMINS (7 points)

A. I had an adequate (A) intake of the following vitamins:	Intake was 100% or more of the DRI on the intake v goals report	Thiamin, riboflavin, niacin, B6, B12, vitamin C, vitamin A, and vitamin K
B. I had an inadequate (IA) intake of the following vitamins:	Intake was 66-99% of the DRI on the intake v goals report	Folate
C. I had a deficient (D) intake of the following vitamins:	Intake was <66% of the DRI on the intake v goals report	Vitamin D and vitamin E
D. I had an excessive (E) intake of the following vitamins:	Intake was >100% of the UL as indicated by "DRI Upper Limit Surpasses" in the notes section of the intake v goals report	None
E. Short summary and interpretation of the data	Your interpretation based on your knowledge and data interpretation. Address food choice selections that would improve the adequacy of vitamin intake for all vitamins consumed IA or D.	Most of my vitamins were adequate and in range. I should increase vitamin E from plant oils, vitamin D from fish and mushrooms, and folate from green leafy vegetables.

7. MINERALS (7 points)

A. I had an adequate (A) intake of the following	Intake was 100% or more of the DRI on the intake v goals report	Calcium, iron, magnesium, and zinc.
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Sample Exam 4 Part A

3

SAMPLE: NUTR LS1020 Take-Home Exam 4: The Science of Nutrition Applied (150 points)

<i>Intellectual Tools</i>	them to construct knowledge, evaluate claims, solve problems, and communicate effectively.	Met Expectation (1)
		Below Expectation (0)
GELO 3 <i>Responsibility to Self and Others</i>	Highlights students' relationship with, obligations to, engagement of, and sustainable stewardship of themselves, others, and the world to promote diversity, social justice, and personal and community well-being	Above Expectation (2)
		Met Expectation (1)
GELO 4 <i>Connected and Applied Learning</i>	Emphasizes how general education classes should be connected and applied in meaningful ways to significant issues in their lives to ensure that the knowledge and skills remain actively used in and out of school	Below Expectation (0)
		Above Expectation (2)
		Met Expectation (1)

Essay:

I hypothesized that my personal diet and activity patterns **promote personal and community wellbeing**. According to my Diet and Wellness Plus (DWP) reports for the average of 2-days, my protein intake was adequate at 169% DRI and in range according to the AMDR at 16% of Calories. I consumed an adequate amount of carbohydrate at 322 grams, which was 52% of my total calories and in range according to the AMDR. My sugar intake was barely in range at 24% of calories. My fiber intake was barely adequate at 101% of my calculated recommendation. My total fat intake was in range at 33% of calories with saturated fat excessive at 10% of Calories. Monounsaturated fat intake was at 11% of Calories and polyunsaturated at 9% of calories. Both the essential fatty acids (linoleic acid and alpha-linolenic acid) were at adequate levels above the DRI. My cholesterol intake was excessive at 413 mg/d. According to the MyPlate analysis, my goal for grains was 9 ounces and my intake was 6.7 ounces; my goal for protein foods was 6.5 ounces and my intake was 9.1 ounces; my goal for fruit was 2.0 cups and my intake was 2.7 cups; my goal for vegetables was 3.5 cups and my intake was 2.5 cups; my goal for dairy was 3.0 cups and my intake was 0.9 cups; my goal for teaspoons of oil was 8 and my intake was approximately 4 teaspoons; my goal for empty Calories was under 362 Calories and my intake was 591 Calories. Based upon the MyPlate analysis, I should eat more vegetables and a variety of dark green, orange, beans and peas, starchy and other vegetables. I do consume milk alternatives and have adequate calcium intake. I should reduce my intake of solid fat and added sugars by eating less sugar, honey, butter, bacon, coffee cream, and cookies. Based upon this data, I could be at increased risk for heart disease and cancer. I reject the hypothesis that my personal diet and activity patterns promote personal and community wellbeing.

Appendix I: Additional Summary Information *(as needed)*

- a) Please discuss your alignment to metrics related to Academic Affairs strategic objectives (retention and completion, equity and inclusion, and interdisciplinary collaborations) and other related metrics (e.g., program quality, student next step success, faculty achievement).
- (1) ENS programs continue to provide more course offerings in bottleneck sections. We are being innovative and offering more hybrid and online, as student demand has increased for these offerings.*
 - (2) When students express a need for a course section to graduate, we do everything possible to provide it even if creating an IND section is necessary.*
 - (3) The ENS academic advisors have a communications plan for all programs that entails strategic messages to students during critical times such as before semester enrollment and graduation registration. Delivery of the communication plan assists with persistence, retention, and graduation rates.*
 - (4) All ENS faculty utilize Starfish surveys to identify students needing assistance or resources to persist, retain, and graduate.*
 - (5) The ENS student club creates a cohesive student and faculty group. We believe being connected with each other professionally will help with student success initiatives and outcomes.*
 - (6) The median years to graduation for ESS is still 4.30 and for NUTR this increased from 4.31 to 5.3 (still below the university of 5.67). I am unsure of the accuracy of this sudden change. Data accuracy may be questionable due to past department restructuring and lingering issues in our reports.*
 - (7) ENS programs fine tunes curriculum on a regular basis to make sure that we are helping students to have the right courses for their employment and graduate/professional school goals.*
 - (8) ENS programs employees and students, provide internship opportunities, and provide peer-mentors and supplemental instruction.*
 - (9) The ENS department is still planning to develop an advisory board.*
 - (10) ENS desires the assistance of career services, the alumni office, and other WSU resources to track graduates.*