

## New Academic Program Workflow Form

### General

**Proposed Name: Food Science and Fermentation**

Transaction Nbr: 00000000000235

Plan Type: Minor

Academic Career: Undergraduate

Degree Offered:

Do you want to offer a minor? N

Anticipated 1st Admission Term: Fall 2025

### Details

Department(s):

#### AGSC

DEPTMNT ID	DEPARTMENT NAME	HOST
1237	School of Nutritional Sciences and Wellness	Y

Campus(es):

#### MAIN

LOCATION	DESCRIPTION
TUCSON	Tucson

**Admission application terms for this plan:** Spring: Y Summer: Y Fall: Y

**Plan admission types:**

Freshman: Y Transfer: Y Readmit: Y Graduate: N

Non Degree Certificate (UCRT only): N

Other (For Community Campus specifics): N

**Plan Taxonomy:** 01.1001, Food Science.

Program Length Type: Program Length Value: 0.00

Report as NSC Program:

SULA Special Program:

**Print Option:**

Diploma: N

Transcript: Y Food Science and Fermentation Minor

**Conditions for Admission/Declaration for this Major:**

This is an application for a minor, and it requests a GPA of 2.0

**Requirements for Accreditation:**

N/A

**Program Comparisons**

**University Appropriateness**

The purpose of this Minor is to equip undergraduates with skills to succeed in Food Industry careers. Food Industry careers include, but are not limited to, food and beverage product development, quality assurance and food safety, technical sales and support, production management, sensory testing, and food labeling and regulation. This Minor would also provide undergraduates with the knowledge to advance in Food Science research.

Most of the Land Grant Universities across the country provide a Food Science curriculum. Examples include Ohio State University, the University of Illinois, Rutgers University, Cornell University, Oregon State University, and the University of Minnesota. Arizona is an exception to this. There is currently no Food Science Curriculum at any level provided by the ABOR University system. NIFA's 1890 land-grant institutions programs are intended to "strengthen research, extension and teaching in the food and agricultural sciences." (NIFA n. d.). The food industry in the state of Arizona is a \$23.3 billion industry, employing 162,000 workers (Killian, 2018). Providing students with the tools they need to succeed in this strong and growing field supports job development in the state. This Minor also helps to fulfill the CALES promise of delivering on the state of Arizona land-grant mission.

**Arizona University System**

NBR	PROGRAM	DEGREE	#STDNTS	LOCATION	ACCRDT
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**Peer Comparison**

Please see attachment

## Resources

### Library

Acquisitions Needed:

### Physical Facilities & Equipment

Existing Physical Facilities:

The NSW Foods Lab, Fermentation Lab and Analytical Fermentation Lab are adequate facilities with adequate equipment to support this minor.

Additional Facilities Required & Anticipated:

N/A

### Other Support

Other Support Currently Available:

We will use existing NSW faculty and support staff to support this Minor.

Other Support Needed over the Next Three Years:

N/a

## Comments During Approval Process

10/9/2024 11:40 AM

KWILUND

Comments
Approved.

10/31/2024 9:05 AM

MELANIECMADDEN

Comments
Uploaded CA Approved Additional Information and Peer Comparison documents to replace draft versions

10/31/2024 9:07 AM

MELANIECMADDEN

Comments
Approved.

10/31/2024 10:41 AM

DHERRING

Comments
Approved.

10/31/2024 12:11 PM

JEH

Comments
Approved.



**New Academic Program – Minor ([Undergraduate](#))  
CURRICULAR INFORMATION**

**I. MINOR DESCRIPTION:**

The Food Science and Fermentation Minor explores the processing, regulation, health, safety, innovation, and marketing of consumer foods and beverages. Classes include delivery of foundational knowledge and hands-on applications through a range of faculty-mentored labs. Focal areas for learning include product development, nutritional analysis and food label development, design of experiments, sensory evaluation, microbiology, and the culinary exploration of novel foods. The Minor can complement and reinforce a range of majors from Chemistry, Biology, Microbiology, Engineering, and Business to provide a valuable window into the science and operational foundations of the food and beverages industry. Internships and Directed Research are highly recommended as part of this Minor.

**II. JUSTIFICATION/NEED FOR THE MINOR:**

The purpose of this Minor is to equip undergraduates with skills to succeed in Food Industry careers. Food Industry careers include, but are not limited to, food and beverage product development, quality assurance and food safety, technical sales and support, production management, sensory testing, and food labeling and regulation. This Minor would also provide undergraduates with the knowledge to advance in Food Science research.

Most of the Land Grant Universities across the country provide a Food Science curriculum. Examples include Ohio State University, the University of Illinois, Rutgers University, Cornell University, Oregon State University, and the University of Minnesota. Arizona is an exception to this. There is currently no Food Science Curriculum at any level provided by the ABOR University system. NIFA's 1890 land-grant institutions programs are intended to "strengthen research, extension and teaching in the food and agricultural sciences." (NIFA n.d.). The food industry in the state of Arizona is a \$23.3 billion industry, employing 162,000 workers (Killian, 2018). Providing students with the tools they need to succeed in this strong and growing field supports job development in the state. This Minor also helps to fulfill the CALES promise of delivering on the state of Arizona land-grant mission.

A Lightcast Q1 2024 Data Set was analyzed by Curricular Affairs in March of 2024. Food Technology and Processing in Arizona showed a projected occupational growth for Food Scientists and Technologists of 34.55% from 2022-2032 with median earnings of \$31.95 per hour (\$66,456 annually). The posting intensity in Arizona for this type of job was noted as being 11:1 (out of every 11 postings there is one posting for this type of job). This was noted as "higher than the posting intensity for all other occupations and companies in the region, indicating that they may be trying harder to hire for this position." (Lightcast, 2024)

Food Industry Professionals who are part of the Cactus Section Institute of Food Technologists completed an interest survey in March/April 2024. The results (n=34) showed a significant interest in the University of Arizona offering a Food Science curriculum. These results show that the interest in a Food Science Minor is high. It should be noted that a major in Food Science is ranked even higher among food industry professionals. The Minor is a 'low barrier of entry' approach to begin a focus on Food Science at the University of Arizona.

This Minor cobbles together a program with existing courses, faculty, and resources. To fully address the needs of the industry the next step will be to develop a Food Science B.S. degree program.

When Looking to Fill Openings Would this Minor be of Interest?	How Would you Rate the Need to Have this Minor at U of A?	How do You See Hiring Needs for Students with a FS degree changing over the next 3 years?	How Interested Would You be in Increased FS Support from U of A?	What Level of FS Degree Would be Most Desirable for Your Hiring Needs?
57% Very interested	56% Very Important	70% Increasing	50% Either Very or Moderately Interested	12% FS Minor 50% BS FS 24% MS FS 9% PhD

Some comments from this survey were:

*“The food science space will be in high demand as we see a shift in technology that yields our current “Sick Care” health system to move to a true food as medicine and precision nutrition system. We work with industry players like Mayo Clinic, who is developing algorithms to proactively identify health issues younger in life. Food and beverages like yogurt/kefir and other fermented foods can be “prescribed” to address emerging health issues early in life. Lessening the reliance on pharma and drugs and their major side effects. This is close and real. Further, for the dairy industry alone we are building \$10B of new plants to meet global growth and demand. Cheese and yogurt represent close to \$7B of this investment. The modern plants and companies driving this growth are in critical need of the R&D food science expertise.”*

*“Innovation takes place regionally. We are building a network of dairy expertise with a group of Pacific Coast Coalition from Washington, Oregon, and California that U of A could be a part of. A network for cooperative research and experiences, from internships to custom classes.”*

*“We (have a) [sic] need for more true Food Scientist and fewer social media ‘experts’ when dealing with food and nutrition.”*

Additionally, a survey was conducted in mid-April 2024 among undergraduates. The following results were found with a sample size of 146 respondents. These survey results show a 57.3% response from undergraduate students (55% Nutrition/Dietetics majors) of a moderate or extreme interest in a Food Science and Fermentation Minor. Some comments from this survey were:

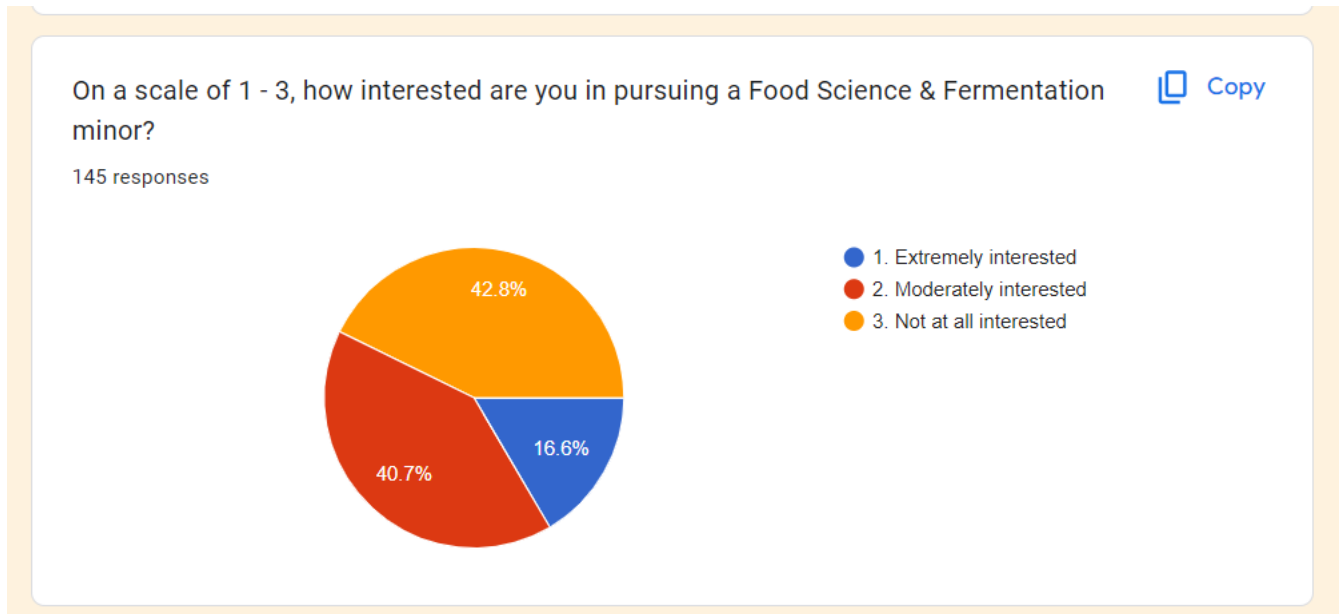
*“I believe that having a minor like this would boost my application for medical school, PA school, and physical therapy school. I also believe that having this minor can open up more opportunities as well.”*

*“If I would choose to pursue this minor, it would be because it combines my love of food and cooking with science.”*

*“Food science is very interesting to me and I think its a field that will keep growing as food can always be evolved, preserved and packaged better.”*

*“Since taking Prof Pihl's Food Science lecture & lab courses last semester, I've fallen in love with the subject. I'm actually taking the Fermented Foods & Beverages lecture elective class right now because I genuinely want to learn more. I hope that this becomes a reality soon as I'm graduating in May 2025 and this is exactly what I want to do.”*

*“I think it would be extremely useful in my degree and helping people learn new ways to preserve and prepare their own foods. Connecting to their foods and making affordable choices is needed.”*



USDA, NIFA, n.d. Retrieved 4/15/2024 doi <https://www.nifa.usda.gov/grants/about-programs/program-operational-areas/1890-land-grant-institutions-programs#:~:text=The%201890%20land%2Dgrant%20system,North%20Carolina%20A%26T%20State%20University%2C>

Killian, M. W., Guide to Arizona Agriculture, 2018, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://agriculture.az.gov/sites/default/files/AZDA\_GuideToAZAg\_2018.pdf

Lightcast Q1 2024 Data Set, March 2024, Program Overview Food Technology and Processing

### III. MINOR REQUIREMENTS:

#### Undergraduate Minor:

Minimum total units required	19
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Minimum upper-division units required	10
Total transfer units that may apply to minor	9
List any special requirements to declare/admission to this minor	<ul style="list-style-type: none"> <li>● Pre-requisites for core courses: None (options exclude the need for prerequisites)</li> </ul>
Minor requirements. List all required minor requirements including core and electives.	<p><u>Core:</u> Complete all 6 courses (16 units):</p> <ul style="list-style-type: none"> <li>● NSC 170C1 (3) Nutrition Food and You (no prerequisite)</li> <li>● NSC 170C2 (3) The Science of Fermentation: When Bad Food Turns Good (no prerequisite)</li> <li>● NSC 371R (3) Fermented Foods and Beverages (prerequisites MIC 205A+MIC 250L, or MIC 285R+ MIC285L, or NSC170C2)</li> <li>● NSC 371L (1) Fermented Foods and Beverages Lab (no prerequisites)</li> <li>● NSC 351R (3) Fundamentals of Food Science (prerequisites NSC 170C1 AND CHEM 152 or CHEM 142) <b>OR</b> NSC 353 (3) (no prerequisite)</li> <li>● ALC 422 (3) Communicating Knowledge in Agriculture and the Life Sciences (no prerequisites) <b>OR</b> NSC 260 (3) Communication and Scientific Literacy (prerequisites NSC170C1, AND either ENGL 102 or ENGL 108 or ENGL 109H)</li> </ul> <p><u>Electives:</u> Complete 3 units electives <b>OR</b> 3 units of applied coursework:</p> <ul style="list-style-type: none"> <li>● MIC 430 (3) Food Microbiology and Biotechnology</li> <li>● MIC/NSC 430L (2) Advanced Food Science and Microbiology Lab</li> <li>● NSC 376 (3) Bioactive Compounds and Food Additives</li> <li>● NSC 351L (1) Food Science Lab</li> <li>● PHYS 200 (3) Science of Good Cooking</li> <li>● RCSC 330 (3) Food Retailing Principles</li> <li>● RCSC 326 (3) Product Development</li> <li>● NSC 361 (3) Culinary Medicine</li> </ul>
Internship, practicum, applied course requirements (Yes/No).	<p><u>Applied Coursework:</u> A maximum of 3 units total from the following options:</p>



If yes, provide description.	<ul style="list-style-type: none"> <li>● NSC393 (1 or 2) Experiential Learning Brewing Internship</li> <li>● NSC392 (1 or 2) Directed Research</li> <li>● NSC399 (1 or 2) Independent Study</li> </ul> these 3 types of structured, mentor driven learning opportunities lead to substantial applied research outcomes requiring strategic thought, research, planning/design, and execution of a study and communicating the results in a public forum within a roughly 3 month timeframe.
Additional requirements	None
Any <a href="#">double-dipping restrictions</a> (Yes/No)? If yes, provide description.	No

**IV. NEW COURSES NEEDED: No New Courses will be added.**

Subject description for new prefix (if requested). Include your requested/preferred prefix, if any: N/A

**V. Learning Outcomes and Curriculum Map -**

**Learning Outcomes**

Learning Outcome #1: Design food research experiments to test out theories from hypotheses to conclusions.
Concepts: The scientific process includes the design of experiments that can be applied to create and optimize food and beverage products.
Competencies: Conduct a literature review by synthesizing peer-reviewed scientific articles and then design an experiment to test out a generated hypothesis.
Learning Outcome #2: Apply effective communication skills to share knowledge, ideas, and recommendations to accomplish goals and build relationships within the food and beverage community.
Concepts: Best practices in developing technical abstracts, posters, and presentations to share with the food community.
Competencies: Present scientific data in a clear, concise way to share information effectively.
Learning Outcome #3: Apply the principles of product development including ingredient selection, food additives, use of FDA regulations, processes, nutritional considerations, sensory and microbial analysis, and project management to create timely results that can be demonstrated, communicated and defended in front of Food Science and Nutrition experts in a public forum
Concepts: The importance of ingredient selection, regulation adherence, process determination and in-process and finished product analysis.
Competencies: Develop food products/product concepts particularly those with a target of improved health benefits with consideration of ingredient selection, nutritional guidelines, process steps, and finished product specifications within a structured product development project and timeline.

*Explanation: **Concepts** are the topics that students will learn in the program. **Competencies** are the skills they will learn. A **learning outcome** is their ability to apply the skills to the topics, or to use the skills and the topics together, in an observable way.*

**Curriculum Map**

	NSC 170C2	NSC 353 or NSC 351R	ALC 422 or NSC 260	NSC 371R	NSC 371L
LO #1: Demonstrate the ability to use design of experiments to test out theories from hypothesis to conclusions.	I		R	M	M
LO #2: Apply effective communication skills to share knowledge, ideas, and recommendations to accomplish goals and build relationships.		I	M	R	R
LO #3: Demonstrate knowledge of food ingredients, food regulations, food processes and analysis.	I	M		R	R

*Explanation: The curriculum map lists the required courses for the program and indicates where each LO will be introduced (I), reinforced (R), and mastered (M). This is important to show that you are including adequate teaching of the skills and concepts to support the LOs. Each row (LO) should have at least one I, R, and M in it. Usually (but not always) there is more than one R. Usually (but not always) there is only one I and one M. Generally, Is come first, followed by Rs, and Ms are last. Each column (class) should have at least one letter in it, but not every box needs to be filled in.*

**VI. REQUIRED SIGNATURES**

Program Director/Main Proposer (print name and title):

Program Director/Main Proposer signature:

Date:

Department Head (print name and title): Ken Wilund, Director, School of Nutritional Sciences & Wellness

Department Head's signature:

Date: 7-2-24 

Associate/Assistant Dean (print name): James E. Hunt

Associate/Assistant Dean's signature:

Date: 10/3/2023

A handwritten signature in blue ink, appearing to be 'JCA', is located in the top left corner of the page.

Dean (print name):

Dean's signature:

Date:



**New Academic Program  
PEER COMPARISON**

Program name, degree, and institution	Proposed UA Program	Utah State University, Food Science Minor	Oregon State University, Food Science Minor
Current number of students enrolled		47 Food Science Major 5 Food Science Minors	90-100 Food Science Majors 1 Food Science Minor 3 Fermentation Minor*
Program Description	The Food Science and Fermentation Minor explores the processing, regulation, health, safety, innovation, and marketing of consumer foods and beverages. Classes include delivery of foundational knowledge and hands-on applications through a range of faculty-mentored labs. Focal areas for learning include product development, nutritional analysis and food label development, design of experiments, sensory evaluation, microbiology, and the culinary exploration of novel foods. The Minor can complement and reinforce a range of majors from Chemistry, Biology, Microbiology, Engineering, and Business to	The Food Science minor at Utah State University's College of Agriculture and Applied Sciences provides a foundation in food science, including food safety, food processing, and the relationship between food, technology, and health. <a href="https://www.usu.edu/degrees-majors/food-science-minor">https://www.usu.edu/degrees-majors/food-science-minor</a>	Food science and technology concerns the chemistry and engineering necessary to deliver safe, convenient food products from the farm gate to the food marketer. The academic program integrates principles and concepts in the physical, biological, and engineering sciences, and applies them to the scientific and technological aspects of food and beverage processing. The role of the food scientist is to successfully integrate these disciplines to assure an abundant, high quality, and nutritious food supply. <a href="https://agsci.oregonstate.edu/degree/food-science-minor">https://agsci.oregonstate.edu/degree/food-science-minor</a>

	provide a valuable window into the science and operational foundations of the food and beverages industry. Internships and Directed Research are highly recommended as part of this Minor.		
Target Careers	The purpose of this Minor is to equip undergraduates with skills to succeed in Food Industry careers. Food Industry careers include but are not limited to food and beverage product development, quality assurance and food safety, technical sales and support, production management, sensory testing, and food labeling and regulation. This Minor would also provide undergraduates with the knowledge to advance in Food Science research.	Completion of the Food Science minor will provide an understanding of how raw materials are processed into safe and nutritious foods while expanding the range of employment opportunities available to students upon graduation within the US food industry.	Typical jobs in the field would include product development and design, production management, quality assurance and control, technical sales, regulatory affairs, research support, teaching, distribution of food aid commodities in developing countries, high pressure processing, food labeling, consulting, production flow, analytical testing, packaging, sanitation and crop rotation. Business related degree holders with technical Minors in Food Science have an advantage over other employees for positions and promotion in Food Industry management and technical sales.
Emphases? (Yes/No) List, if applicable	No	No	No

Minimum # of units required semester hours	19	15	18 (27 quarter hours)
Special requirements to declare/gain admission? (i.e. pre-requisites, GPA, application, etc.)	A minimum GPA of 2.0 is required	A minimum GPA of 2.5 is required in minor courses	Generally, need to maintain a minimum GPA of 2.0 is required
Internship, practicum, or applied/experiential requirements? If yes, describe.	Yes, 3 units of electives OR applied coursework are required. Applied Coursework options include internships, directed research and independent study.	No	No

\*Due to a strong background in science needed

Additional questions:

1. How does the proposed program align with peer programs? Briefly summarize the similarities between the proposed program and peers, which could include curriculum, overall themes, faculty expertise, intended audience, etc.

The proposed program aligns with the two peer programs in the table above. All three programs focus on fundamental food science courses in food microbiology, food processing, food regulations, product development, and application of these principles in the lab. All three programs target students from nutrition, microbiology, chemistry, and business. The OSU program heavily relies on emphasis on food chemistry and food sustainability. OSU is targeted to favor enrollment of students with strong subject matter coursework in the life sciences, chemistry and biochemistry that would have been required or pre-requisite as a part of the student's STEM major.

A key difference between our proposed program and these two peer program Minors is that both OSU and Utah State have successful and well-defined Food Science BS and MS programs that cover the key elements of Food Science in depth. Since they have the resources to support their current Food Science degrees, there is a more substantial investment in science and

technology components that include learning laboratories, food processing and basic and advanced food chemistry, and food analysis in their course offerings. Our proposed program incorporates a more recent emphasis on communication, data science, fermentation and marketing.

2. How does the proposed program stand out or differ from peer programs? Briefly summarize the differences between the proposed program and peers, which could include curriculum, overall themes, faculty expertise, intended audience, etc.

The proposed program is different from the above in the focus on fermentation principles, an emphasis on communication skills and taking food science to market. Utah State has an emphasis on chocolate and Oregon State has an emphasis on fermented beverages and sustainability. Oregon State is in the process of modifying its Food Science major to a Food Science and Sustainability major (due to a major investment from the state funding).

3. How do these differences make this program more applicable to the target student population and/or a better fit for the University of Arizona?

This program is a blend of courses from CALES departments: Nutritional Sciences, Plant Sciences, Animal & Comparative Biomedical Sciences, and Retailing and Consumer Science. Due to the presence of an active viticultural and craft brewing community, students have a chance to apply the principles of this minor in local internships. There is no food science program offered in the state of Arizona. This program would help to meet the needs of the state food industry. This minor is open to a variety of majors including business, engineering, chemistry etc. Food Science careers are varied from sales and marketing to research. This minor complements these other majors.



**BUDGET PROJECTION FORM**

**Name of Proposed Program or Unit: Food Science and Fermentation Minor**

Budget Contact Person: Darren Shevchuk	Projected		
	1st Year 2025 - 2026	2nd Year 2026-2027	3rd Year 2027 - 2028
<b>METRICS</b>			
Net increase in annual college enrollment UG	10	20	30
Net increase in college SCH UG	190	380	570
Net increase in annual college enrollment Grad	-	-	-
Net increase in college SCH Grad	-	-	-
Number of enrollments being charged a Program Fee	5	10	15
New Sponsored Activity (MTDC)	-	-	-
Number of Faculty FTE	0.25	0.25	0.25
<b>FUNDING SOURCES</b>			
<b>Continuing Sources</b>			
UG AIB Revenue	35,150	70,300	105,450
Grad AIB Revenue	-	-	-
Program Fee Revenue (net of revenue sharing)	-	-	-
F and A AIB Revenues	-	-	-
Reallocation from existing College funds (attach description)	-	-	-
Other Items (attach description)	-	-	-
<b>Total Continuing</b>	\$ 35,150	\$ 70,300	\$ 105,450
<b>One-time Sources</b>			
College fund balances	-	-	-
Institutional Strategic Investment	-	-	-
Gift Funding	-	-	-
Other Items (attach description)	-	-	-
<b>Total One-time</b>	\$ -	\$ -	\$ -
<b>TOTAL SOURCES</b>	\$ 35,150	\$ 70,300	\$ 105,450
<b>EXPENDITURE ITEMS</b>			
<b>Continuing Expenditures</b>			
Faculty	22,500	22,500	22,500
Other Personnel	-	-	-
Employee Related Expense	7,200	7,200	7,200
Graduate Assistantships	-	-	-
Other Graduate Aid	-	-	-
Operations (materials, supplies, phones, etc.)	-	-	-
Additional Space Cost	-	-	-
Other Items (attach description)	-	-	-
<b>Total Continuing</b>	\$ 29,700	\$ 29,700	\$ 29,700
<b>One-time Expenditures</b>			
Construction or Renovation	-	-	-
Start-up Equipment	-	-	-
Replace Equipment	-	-	-
Library Resources	-	-	-
Other Items (attach description)	-	-	-
<b>Total One-time</b>	\$ -	\$ -	\$ -
<b>TOTAL EXPENDITURES</b>	\$ 29,700	\$ 29,700	\$ 29,700
<b>Net Projected Fiscal Effect</b>	\$ 5,450	\$ 40,600	\$ 75,750





## Course Use/Collaboration/Concern Form

Please use this form to notify other colleges that your proposed new program intends to use course(s) under their ownership; has identified potential avenues for interdisciplinary collaboration; and/or wants to hear their concerns about the creation of this program.

*Note: Requesting college should provide this request to leadership in unit who owns courses. Responding unit should respond within 10 business days from receipt. Lack of response after the 10 business days is presumed approval.*

### FOR REQUESTING COLLEGE:

- I. **Initiating College:** CALES School of Nutritional Sciences and Wellness
- II. **Representative(s) making the request:** Tedley Pihl
- III. **Planned proposed program:** Food Science and Fermentation Minor
- IV. **Planned program start date:** Fall 2025
- V. **Courses planned to be included, belonging to college / departments:** MIC 430 and MIC/NSC 430L

### FOR REVIEWING COLLEGE:

- 1. Course #1 MIC 430                      **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 2. Course #2 MIC/NSC 430L            **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 3. Course #3                                **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 4. Course #4                                **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 5. Course #5                                **Yes**     **No**     **Conditionally** : *Under what conditions?*

### VI. Parameters of Use (add rows as necessary):

Undergraduate/Graduate

Course #	Units	Description of use (i.e., gen ed, major core, emphasis, elective/selective)
<i>Ex: GEOS170C</i>	3	<i>Gen ed</i>
MIC 430	3	Elective
MIC/NSC 430L	2	Elective



## Course Use/Collaboration/Concern Form

VII. **Expected Yearly Enrollment (add rows as necessary):**

Course #	Units	Exp Enrollment for Yr 1	Exp Enrollment for Yr 2	Exp Enrollment for Yr 3
MIC 430	3	5	10	15
MIC/NSC 430L	2	5	10	15

VIII. **Opportunities for Interdisciplinary Collaboration (leave blank if none):**

IX. **Concerns about Proposed Program (leave blank if none):**

X. **Representative(s) reviewing request:** Who is representative reviewing the request? (Should be Associate Dean / Dean)

Signature: D. Scott Merrell

Date: 9/18/24



## Course Use/Collaboration/Concern Form

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- V. **Courses planned to be included, belonging to college / departments:** ALC422

### FOR REVIEWING COLLEGE:

- 1. Course #1 ALC422                      **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 2. Course #2                              **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 3. Course #3                              **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 4. Course #4                              **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 5. Course #5                              **Yes**     **No**     **Conditionally** : *Under what conditions?*

### VI. Parameters of Use (add rows as necessary):

Undergraduate/Graduate

Course #	Units	Description of use (i.e., gen ed, major core, emphasis, elective/selective)
<i>Ex: GEOS170C</i>	<i>3</i>	<i>Gen ed</i>
ALC422	3	Elective

### VII. Expected Yearly Enrollment (add rows as necessary):



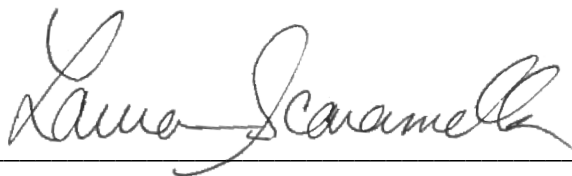
### Course Use/Collaboration/Concern Form

Course #	Units	Exp Enrollment for Yr 1	Exp Enrollment for Yr 2	Exp Enrollment for Yr 3
ALC422	3	5	10	15

VIII. **Opportunities for Interdisciplinary Collaboration (leave blank if none):**

IX. **Concerns about Proposed Program (leave blank if none):**

X. **Representative(s) reviewing request:** Who is representative reviewing the request? (Should be Associate Dean / Dean)

Signature:  Date: 9/18/24



## Course Use/Collaboration/Concern Form

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- IV. **Planned program start date:** Fall 2025
- V. **Courses planned to be included, belonging to college / departments:** PHYS200

### FOR REVIEWING COLLEGE:

- 1. Course #1 PHYS200      **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 2. Course #2              **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 3. Course #3              **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 4. Course #4              **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 5. Course #5              **Yes**     **No**     **Conditionally** : *Under what conditions?*

### VI. Parameters of Use (add rows as necessary):

Undergraduate/Graduate

Course #	Units	Description of use (i.e., gen ed, major core, emphasis, elective/selective)
<i>Ex: GEOS170C</i>	3	<i>Gen ed</i>
PHYS200	3	Elective

### VII. Expected Yearly Enrollment (add rows as necessary):



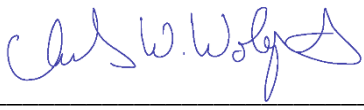
### Course Use/Collaboration/Concern Form

Course #	Units	Exp Enrollment for Yr 1	Exp Enrollment for Yr 2	Exp Enrollment for Yr 3
PHYS200	3	5	10	15

VIII. **Opportunities for Interdisciplinary Collaboration (leave blank if none):**

IX. **Concerns about Proposed Program (leave blank if none):**

X. **Representative(s) reviewing request:** Who is representative reviewing the request? (Should be Associate Dean / Dean)

Signature:  Date: 09/11/2024



## Course Use/Collaboration/Concern Form

Please use this form to notify other colleges that your proposed new program intends to use course(s) under their ownership; has identified potential avenues for interdisciplinary collaboration; and/or wants to hear their concerns about the creation of this program.

*Note: Requesting college should provide this request to leadership in unit who owns courses. Responding unit should respond within 10 business days from receipt. Lack of response after the 10 business days is presumed approval.*

### FOR REQUESTING COLLEGE:

- I. **Initiating College:** CALES School of Nutritional Sciences and Wellness
- II. **Representative(s) making the request:** Tedley Pihl
- III. **Planned proposed program:** Food Science and Fermentation Minor
- IV. **Planned program start date:** Fall 2025
- V. **Courses planned to be included, belonging to college / departments:** RCSC330 and RCSC326

### FOR REVIEWING COLLEGE:

- 1. Course #1 RCSC330      **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 2. Course #2 RCSC326    **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 3. Course #3                **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 4. Course #4                **Yes**     **No**     **Conditionally** : *Under what conditions?*
- 5. Course #5                **Yes**     **No**     **Conditionally** : *Under what conditions?*

### VI. Parameters of Use (add rows as necessary):

Undergraduate/Graduate

Course #	Units	Description of use (i.e., gen ed, major core, emphasis, elective/selective)
<i>Ex: GEOS170C</i>	<i>3</i>	<i>Gen ed</i>
RCSC330	3	Elective
RCSC326	3	Elective



## Course Use/Collaboration/Concern Form

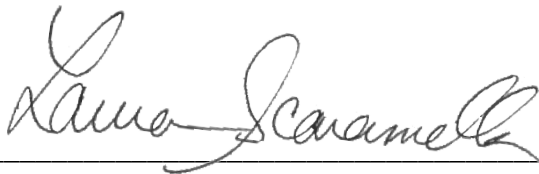
VII. **Expected Yearly Enrollment (add rows as necessary):**

Course #	Units	Exp Enrollment for Yr 1	Exp Enrollment for Yr 2	Exp Enrollment for Yr 3
RCSC330	3	5	10	15
RCSC326	3	5	10	15

VIII. **Opportunities for Interdisciplinary Collaboration (leave blank if none):**

IX. **Concerns about Proposed Program (leave blank if none):**

X. **Representative(s) reviewing request:** Who is representative reviewing the request? (Should be Associate Dean / Dean)

Signature:  Date: 9/13/24