

## FORM TO REQUEST SUBSTANTIAL CHANGES TO AN EXISTING UNDERGRADUATE MAJOR

A request for substantial changes to an existing program requires approval from the school director/department head (managing administrator), college academic dean, Curricular Affairs, Undergraduate Council (UGC), and College Academic Administrators Council (CAAC). Additional approvals may be required, depending on the requested changes.

- I. **Requested by (College & School/Department):** School of Animal & Comparative Biomedical Sciences/College of Agriculture and Life Sciences
- II. **Proposer's name, title, email and phone number:**  
Margarethe Cooper, Assistant Professor of Practice and Food Safety Program Committee Co-Chair,  
[cooperma@email.arizona.edu](mailto:cooperma@email.arizona.edu), 520-621-3290
- III. **Degree, major and number of students enrolled in the major. If you have emphases (sub-plans), list the number of students enrolled by emphasis:** Food Safety Major, currently 1 student in the major; Food Safety Minor, currently 4 students in the minor

- IV. **Describe proposed changes to the major. Provide a rationale and explanation for making changes to the major and include any relevant supporting data. Are the changes proposed a result of Annual Program Review (APR) and/or a result from the assessment of programmatic outcomes? If you are requesting a name change, please indicate if the subject code (course prefix) will also change. Include requested new prefix code and description.**
- The Food Safety Bachelor of Science Program has not had as high enrollment as expected. In assessing Food Industry needs to prepare students for Food Safety jobs, we found that College Algebra was sufficient, in-line with the Nutritional Sciences Bachelor of Science at UArizona. The Food Safety math requirement of Calculus as the highest math requirement for the major was modeled after the Bachelor of Science in Microbiology. We determined that the intent of most of our Food Safety Majors is to enter the Food Industry, and prospective students reported the more rigorous math requirement was a deterrent to entering the program. In assessing our Food Safety required and elective courses, we determined that Physics, Organic Chemistry Labs, and second semester Organic Chemistry Lecture were not prerequisites. In looking at where our students may be headed in case they have interest in graduate school, they are not listed as requirements for graduate programs in Food Safety and/or Food Science at Michigan State University (<https://foodsafety.msu.edu/masters-program>), Northeastern University (<https://www.northeastern.edu/graduate/program/master-of-science-in-regulatory-affairs-online-18361/>), and Cornell University (<https://foodscience.cals.cornell.edu/graduate/applying/>). Additionally, the Nutritional Sciences Bachelor of Science program at UArizona does not require Physics, Organic Chemistry Labs, and second semester Organic Chemistry. The FOOD courses that we hope to replace them with will strengthen our graduates' understanding of U.S. food economics, food systems and food security, given them a well-rounded understanding about the sociocultural issues surrounding food that complements the science.

- V. **Comparison Chart**—complete the chart below using your existing [academic advisement report](#). You may not need to complete all portions. Highlight row(s) indicating the proposed significant changes. You can find course information to help complete the chart below by using the [UA course catalog](#) or [UAnalytics](#) (Catalog and Schedule Dashboard> “Printable Course Descriptions by Department” On Demand Report; right side of screen). Proposed changes resulting in similar curriculum with other plans (within department, college, or university) may require completion of an additional comparison chart. **Delete Example columns before submitting.**

	Existing Major Requirements	Requirements For Modified Major
Major, emphasis (if applicable) and degree *	Food Safety, BS	Food Safety, BS
CIP Code –lookup <a href="#">here</a> or contact <a href="#">the Office of Curricular Affairs</a> for assistance, if needed	01.1099 (Food Science and Technology)	
Total units required to complete the degree*	120	No change
Upper -division units required to complete the degree	42	No change
Total CC transfer units that may apply to this degree*	64	No change
Foundation courses		
<a href="#">Math</a>	Moderate Math Strand: MATH 113, MATH 122A/B, MATH 125	<b>Include MATH 112</b>
<a href="#">Second Language</a>	Second Semester Proficiency	No change
<a href="#">General Education</a>		
Tier I GE Requirements (150, 160, 170)	2- Tier 1 150 (INDV) 2- Tier 1 160 (TRAD) 0- Tier 1 170 (NATS)	<b>No change</b>
Tier II GE Requirements (Arts, HUMS, INDV, NATS)	3 units -Tier II Arts 1-Tier II Humanities 1- Tier II Individuals and Societies 0-Tier II Natural Sciences	No change
Pre-major? (Yes/No)	No	No change
List any special requirements to declare or gain admission to this major (completion of specific coursework, minimum GPA, interview, application, etc.)	No	No change
Minimum # of units required in the major (units counting towards major units and major GPA)	41	

Minimum # of upper-division units required in the major (upper division units counting towards major GPA)	18	
<a href="#">Minimum # of residency units to be completed in the major</a>	18	
Required supporting coursework (courses that do not count towards major units and major GPA, but are required for the major). Courses listed must include prefix, number, units, and title. Include any limits/restrictions in place/needed (house number limit, etc.). Provide email(s)/letter(s) of support from home department head(s) for courses not owned by your department.	<p>MCB 181R – Introductory Biology I 3__</p> <p>MCB 181L – Introductory Biology I Lab 1__</p> <p>ECOL 182R – Introductory Biology II 3__</p> <p>ECOL 182L – Introductory Biology II Lab 1__</p> <p>Microbiology- Complete one of the following sequences:</p> <p>-MIC 285R – Principles of Microbiology (SP only) 4__</p> <p>-MIC 285L – Principles of Microbiology Lab (SP only) 1__</p> <p>OR</p> <p>-MIC 205A – General Microbiology 3__</p> <p>-MIC 205L – General Microbiology Lab 1__</p> <p>CHEM 151 – General Chemistry I 4__</p> <p>CHEM 152 – General Chemistry II 4__</p> <p>CHEM 241A – Organic Chemistry I 3__</p> <p>CHEM 243A – Organic Chemistry I Lab 1__</p> <p>CHEM 241B – Organic Chemistry II 3__</p> <p><b>REMOVE- CHEM 243B – Organic Chemistry II Lab 1__</b></p> <p>BIOC 384 – Foundations in Biochemistry 3__</p> <p>Communication- Complete one of the following:</p> <p>-COMM 101 – Introduction to the Study of Communication 3__</p> <p>-COMM 119 – Public Speaking 3__</p> <p>-ALC 422 – Communicating Knowledge in Agriculture and Life Sciences (F only) 3__</p>	<p><b>ACBS 195X – Careers in Food Safety 1__</b></p> <p><b>ACBS 302 – Management &amp; Human Side of Org (SP only) 3__</b></p> <p><b>FOOD 101 – Intro to Critical Food Studies (F only) 3__</b></p> <p><b>FOOD 102 – Intro to Food Systems (SP only) 3__</b></p> <p><b>FOOD 302 – Food Practices (F only) 3__</b></p> <p>MCB 181R – Introductory Biology I 3__</p> <p>MCB 181L – Introductory Biology I Lab 1__</p> <p>ECOL 182R – Introductory Biology II 3__</p> <p>ECOL 182L – Introductory Biology II Lab 1__</p> <p>CHEM 151 – General Chemistry I 4__</p> <p>CHEM 152 – General Chemistry II 4__</p> <p>CHEM 241A – Organic Chemistry I 3__</p> <p>BIOC 384 – Foundations in Biochemistry 3__</p> <p>Microbiology- Complete one of the following sequences:</p> <p>-MIC 285R – Principles of Microbiology (SP only) 4__</p> <p>-MIC 285L – Principles of Microbiology Lab (SP only) 1__</p> <p>OR</p> <p>-MIC 205A – General Microbiology 3__</p> <p>-MIC 205L – General Microbiology Lab 1__</p>

	<p>REMOVE- PHYS 102 – Introductory Physics I 3__</p> <p>REMOVE- PHYS 181 – Introductory Physics I Lab 1__</p> <p>REMOVE- PHYS 103 – Introductory Physics II 3__</p> <p>REMOVE- PHYS 182 – Introductory Physics II Lab 1__</p> <p>Statistics: Complete one of the following:</p> <p>-AREC 239 – Introduction to Statistics and Data Analysis 4__</p> <p>-MATH 263 – Introduction to Statistics and Biostatistics 3__</p> <p>-PSY 230 – Psychological Measurements and Statistics 3__</p> <p>-SBS 200 – Introduction to Statistics for the Social Sciences 3__</p>	<p>Communication- Complete one of the following:</p> <p>-COMM 101 – Introduction to the Study of Communication 3__</p> <p>-COMM 119 – Public Speaking 3__</p> <p>-ALC 422 – Communicating Knowledge in Agriculture and Life Sciences (F only) 3__</p> <p>Statistics: Complete one of the following:</p> <p>-AREC 239 – Introduction to Statistics and Data Analysis 4__</p> <p>-MATH 263 – Introduction to Statistics and Biostatistics 3__</p> <p>-PSY 230 – Psychological Measurements and Statistics 3__</p> <p>-SBS 200 – Introduction to Statistics for the Social Sciences 3__</p>
<p>Major requirements. List all major requirements including core and electives. If applicable, list the emphasis^ requirements. Courses listed count towards major units and major GPA. Courses listed must include prefix, number, units, and title. Mark new coursework (New). Include any limits/restrictions in place/needed (house number limit, etc.). Provide email(s)/letter(s) of support from home department head(s) for courses being added and are not owned by your department. Recommend ordering requirements in the same order as your advisement report.</p>	<p>ACBS 355 – Intro. to Food Processing &amp; Food Safety Preventive Controls (F only) 3__</p> <p>ACBS 380R - Food Safety &amp; Microbiology (F only) 3__</p> <p>ACBS 380L - Food Safety &amp; Microbiology Lab (F only) 1__</p> <p>ACBS 377 - Food Toxicology (F only) 3__</p> <p>ACBS 437 - Food Safety Laws &amp; Legal Policies (F only) 3__</p> <p>ACBS 471 - Risk Assessment, Mgmt. &amp; Comm. (SP only) 3__</p> <p>MIC 430 - Food Microbiology and Biotechnology (SP only) 3__</p> <p>MIC 430L – Adv. Food Sci. &amp; Microbiology Lab (SP only) 2__</p> <p>NSC 351R - Fundamentals of Food Science (F/Sum. only) 3__</p> <p>NSC 351L - Food Studies Lab 1__</p> <p>ACBS Electives ___ out of 8</p>	<p>No change</p>

Internship, practicum, applied course requirements. (Yes/No). If yes, provide description.	No	No change
Senior thesis or senior project required (Yes/No). If yes, provide description.	No	No change
Additional requirements (provide description)	N/A	N/A
Minor (optional or required)	N/A	N/A

\*May require Arizona Board of Regents (ABOR) approval

^Emphases are officially recognized sub-specializations within the discipline. [ABOR Policy 2-221 c. Academic Degree Programs Subspecializations](#) requires all undergraduate emphases within a major to share at least 40% curricular commonality across emphases (known as “major core”). Total units required for each emphasis must be equal.

**VI. Peer institution comparison-** describe how your modified major requirements are similar and different from major requirements of two peer institutions. Select peers from (in order of priority) [ABOR approved institutions](#), [AAU members](#), and/or other relevant institutions recognized in the field.

There are actually no other Food Safety Bachelor of Science programs, however the Food Technology Concentration in the Food Science Major at the University of Arkansas and the Iowa State University Culinary Food Science Program both have as there highest Math requirements College Algebra (<https://bumperscollege.uark.edu/resources/pdf/-checksheets-degree-plans/2020-2021/20-21-fdscbs-fdtn.pdf> and <https://iastate.app.box.com/s/jhg8dntsw6awwdxkheaj2rdse8eg3rg9> respectively). Additionally, the University of Arizona School of Nutritional Sciences offers a Bachelor of Science in Nutrition and Food Systems with the highest Math requirement of College Algebra (<https://nutrition.cals.arizona.edu/sites/nutrition.cals.arizona.edu/files/Fillable%20-%202020-2021%20Nutrition%20%26%20Food%20Systems%20Checklist.pdf>).

**VII. Faculty impact-** indicate if new faculty hires will be required to deliver the proposed modified/new curriculum.


No new faculty hires

**VIII. Budgetary impact-** indicate new resources needed and source of funding to implement the proposed changes. If reallocating resources, indicate where resources will be taken from and the impact this will have on students/faculty/program/unit.

No new resources

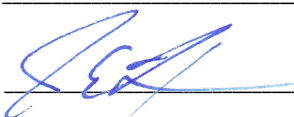
**IX. Required signatures**

Managing unit administrator (print name and title): Director S. Patricia Stock

Managing administrator's signature: 

Date: 11/23/2020

Dean (print name): James E Hunt

Dean's signature: 

Date: 12/3/2020

Dean (print name): \_\_\_\_\_

Dean's signature: \_\_\_\_\_

Date: \_\_\_\_\_

Note: In some situations, signatures of more than one unit head and/or college dean may be required.

For use by Curricular Affairs:

Committee	Approval date
Academic Programs Subcommittee	
Undergraduate Council	
College Academic Administrators Council	
Arizona Board of Regents (if applicable)	

- Notify proposers of approval
- Upload proposal documents to relevant UAccess tables
- Notify ADVIP team and proposers

**If ABOR approval required :**

- If applicable, create approval memo
- Send memo to college/dept and acad\_org listserv.
- If applicable, create new plan code (secondary too)
- If applicable, update emphases
- If applicable, add last admit term to prior plan code(s)
- Upload proposal docs to relevant UAccess table values
- Notify ADVIP team and proposers

**Subject:** Re: Approval for FOOD courses for Food Safety Catalog 2021

**Date:** Sunday, November 22, 2020 at 3:19:56 PM Mountain Standard Time

**From:** Bellante, Laurel E - (bellante)

**To:** Cooper, Margarethe A - (cooperma), Liverman, Diana M - (liverman)

**CC:** Liverman, Diana M - (liverman), Going, Scott B - (going), Stock, S. Patricia - (spstock), Trujillo, Dari - (kdtrujil), Ewing-Cooper, Allison R - (arewing)

Dear Margarethe,

The executive committee that oversees the food studies and nutrition and food systems degrees agrees to allow the food safety degree to include the following courses in the core curriculum: food 101, 102, and 302.

Per or meeting, CALS agrees to provide graders and/or TAs to support this growth in these classes as we move forward (approved by associate dean Mike Staten).

Thank you for your patience and we are very glad to be able to meet your request. We look forward to welcoming food safety students to these classes.

Best,  
Laurel

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**From:** Liverman, Diana M - (liverman) <liverman@arizona.edu>

**Sent:** Sunday, November 22, 2020 10:34:39 AM

**To:** Cooper, Margarethe A - (cooperma) <cooperma@arizona.edu>

**Cc:** Liverman, Diana M - (liverman) <liverman@arizona.edu>; Going, Scott B - (going) <going@arizona.edu>; Stock, S. Patricia - (spstock) <spstock@arizona.edu>; Bellante, Laurel E - (bellante) <bellante@arizona.edu>; Trujillo, Dari - (kdtrujil) <kdtrujil@arizona.edu>; Ewing-Cooper, Allison R - (arewing) <arewing@arizona.edu>

**Subject:** Re: Approval for FOOD courses for Food Safety Catalog 2021

Laurel

Did you let Margarethe know the result of our discussion?

Diana Liverman

Regents Professor and Director of the School of Geography, Development, and Environment  
University of Arizona  
[liverman@u.arizona.edu](mailto:liverman@u.arizona.edu)

On Nov 5, 2020, at 1:28 PM, Cooper, Margarethe A - (cooperma) <[cooperma@arizona.edu](mailto:cooperma@arizona.edu)> wrote:

Dear Director Liverman,

Thank you for the clarification and I appreciate the suggestion to include a Memo. I have attached a draft of a Memo that includes the relevant information. The signed PDF of the Request for Curricular Changes form is also attached. I apologize for the rush and very much appreciate your forwarding this to Director Bellante.

At this time our enrollment in the Food Safety major is just one student on Main campus. We have quite a few more students in the pipeline at the Yuma Distance campus, which is probably where we will have the highest enrollment, but Yuma students would not be taking FOOD classes since they transfer in with different Food Safety-related coursework from their local community colleges. We are hopeful the major will grow on Main campus, but we anticipate the growth will be slow.

Anticipated enrollment of Main campus students in the Food Safety Program is:

- 5 for 2021-2022
- 10 for 2022-2023
- 15-20 for 2023-2024

We completely understand that Food Studies students would have to have priority in taking the FOOD coursework, and that Food Safety students could only enroll if there is room in the course.

Please do not hesitate to reach out in case you have more questions or need more information.

Best wishes for good health and safety,  
Margarethe Cooper  
Food Safety Major Committee Co-Chair  
520-621-3290

**Margarethe A. Cooper, Ph.D.**

*Assistant Professor of Practice*

*Victor P. Smith Endowed Chair in Food Safety Education*

1177 E. 4<sup>th</sup> St. | Shantz Rm. 233 | Tucson, AZ 85721

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[cooperma@email.arizona.edu](mailto:cooperma@email.arizona.edu)

[cooper.faculty.arizona.edu/](http://cooper.faculty.arizona.edu/)

***En Español:*** [cooper.faculty.arizona.edu/es/2](http://cooper.faculty.arizona.edu/es/2)

<[image001.png](#)>

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**From:** "Liverman, Diana M - (liverman)" <[liverman@arizona.edu](mailto:liverman@arizona.edu)>

**Date:** Thursday, November 5, 2020 at 12:18 PM

**To:** "Going, Scott B - (going)" <[going@arizona.edu](mailto:going@arizona.edu)>, "Cooper, Margarethe A - (cooperma)" <[cooperma@arizona.edu](mailto:cooperma@arizona.edu)>, "Stock, S. Patricia - (spstock)" <[spstock@arizona.edu](mailto:spstock@arizona.edu)>, "Bellante, Laurel E - (bellante)" <[bellante@arizona.edu](mailto:bellante@arizona.edu)>

**Subject:** Fwd: Approval for FOOD courses for Food Safety Catalog 2021



I need to get the approval from Laurel Bellante who is the Director of the Food Studies major in SGDE. This may not be possible by the end of today (Thursday) because you have not given us time to think about it. Some of the food studies classes are offered from Nutrition in CALS and I need to check which those are. Can you let us know what numbers you anticipate enrolling in the Food classes as most of the Food Studies classes are full and we cannot open them up too much without having funding for a TA and we are anticipating a serious cut to the temp teaching budget for the next 2 years.

Also, the department requesting the approval usually sends us a draft memo we can complete with the courses listed. Can you do that please?

I will try to get hold of Laurel ASAP but I am teaching and in meetings for most of today

Sorry I cannot just say yes, but I want to respect the instructors of the courses and not overload them.

Diana Liverman

Regents Professor and Director of the School of Geography, Development, and Environment  
University of Arizona  
[liverman@u.arizona.edu](mailto:liverman@u.arizona.edu)

Begin forwarded message:

**From:** "Cooper, Margarethe A - (cooperma)" <[cooperma@arizona.edu](mailto:cooperma@arizona.edu)>  
**Subject:** **Approval for FOOD courses for Food Safety Catalog 2021**  
**Date:** November 4, 2020 at 4:21:35 PM MST  
**To:** "Liverman, Diana M - (liverman)" <[liverman@arizona.edu](mailto:liverman@arizona.edu)>  
**Cc:** "Stock, S. Patricia - (spstock)" <[spstock@arizona.edu](mailto:spstock@arizona.edu)>, "Going, Scott B - (going)" <[going@arizona.edu](mailto:going@arizona.edu)>

Dear Director Liverman,

We are in the process of replacing some of our courses in the Food Safety Major with FOOD courses (please see attached), and are hoping that you would be able to approve use of several FOOD courses (FOOD 101, FOOD 102, FOOD 302) in the Food Safety Major (effective for the Fall 2021 catalog). We are excited about using these courses pending your approval as we improve the curriculum. We know this is a short timeline, but we just found out **this approval is due by COB Thursday, November 5.**

I initially contacted Dr. Going, and he mentioned that from his end our using the FOOD courses was not an issue, but ultimately approval for these courses is under the auspices of SBS. Would you be open to our using these courses in the Food Safety Major, and if so, would you be able reply back to this email indicating your

approval?

Please do not hesitate to reach out in case you have any questions or need more information, and on behalf of ACBS and the Food Safety Program, we thank you in advance.

Best wishes for good health and safety,  
Margarethe Cooper  
Food Safety Major Committee Co-Chair

**Margarethe A. Cooper, Ph.D.**

*Assistant Professor of Practice*

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[cooper.faculty.arizona.edu/](http://cooper.faculty.arizona.edu/)

*En Español:* [cooper.faculty.arizona.edu/es/2](http://cooper.faculty.arizona.edu/es/2)

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<Request for Curricular Changes Form- Majors\_for 2021\_Food\_Safety[7] (1).pdf>

<Memo\_FOOD\_courses\_for\_Food\_Safety\_catalog\_2021.docx>

**Subject:** Re: Approval for FOOD courses for Food Safety Catalog 2021  
**Date:** Wednesday, November 4, 2020 at 3:43:22 PM Mountain Standard Time  
**From:** Thompson, Gary D - (gdthomps)  
**To:** Cooper, Margarethe A - (cooperma)  
**CC:** Stock, S. Patricia - (spstock)  
**Attachments:** image001.png, image002.png

Dear Dr. Cooper,

We are more than happy to have AREC150C (and AREC239) included in your Food Safety Major. If you need a more formal response--say, a memo--I can write one for you. Best of luck with your new major. There is certainly high demand in the fresh produce industry in California and Arizona for food safety personnel.

Kind regards,

Gary

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Gary Thompson  
Professor and Head  
Department of Agricultural & Resource Economics  
McClelland Park 304C  
650 N. Park Ave.  
Tucson, AZ 85719  
Tel. 520.621.6242  
Cell. 520.275.2015  
<https://cals.arizona.edu/arec/faculty/gary-thompson>  
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**From:** Cooper, Margarethe A - (cooperma) <cooperma@arizona.edu>  
**Sent:** Wednesday, November 4, 2020 1:00 PM  
**To:** Thompson, Gary D - (gdthomps) <GaryT@ag.arizona.edu>  
**Cc:** Stock, S. Patricia - (spstock) <spstock@arizona.edu>  
**Subject:** Approval for FOOD courses for Food Safety Catalog 2021

Dear Dr. Thompson,

We are in the process of replacing one of our courses in the Food Safety Major with an AREC course (AREC 150C3 Sustaining Life: Global Economy of Food, please see attached), and were hoping that you would be able to approve our use of this AREC course in the Food Safety Major (effective for the Fall 2021 catalog). We are excited about using this course pending your approval as we improve the curriculum. We know this is a short timeline, but we just found out **this approval is due on Thursday, November 5.**

Would you be able to reply back to this email indicating your approval of our using this course for the Food Safety Major?

Please do not hesitate to reach out in case you have questions, and on behalf of ACBS and the Food Safety Program, we thank you in advance.

Best wishes for good health and safety,  
Margarethe Cooper  
Food Safety Major Committee Co-Chair

**Margarethe A. Cooper, Ph.D.**

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THE UNIVERSITY OF ARIZONA  
COLLEGE OF AGRICULTURE & LIFE SCIENCES  
**Animal & Comparative  
Biomedical Sciences**  
Food Safety



**SaferFoodCats**