THE UNIVERSITY OF ARIZONA

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. Complete this form and submit to Office of Curricular Affairs no later than October 23, 2020 to be considered for inclusion in the 2021-2022 Academic Catalog.

I. **Requested by (College & School/Department):** Public Health Administration, Mel & Enid Zuckerman College of Public Health

II. **Proposer's name, title, email and phone number:**
John Ehiri, PhD
Associate Dean for Academic Affairs, MEZCOPH
jehiri@email.arizona.edu
520-626-8808

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:**
Bachelor of Science in Public Health - PHBLS (main campus and online)
- Pre-Public Health: 535
- Public Health Major Emphasis areas:
  - Environmental and Occupational Health: 38
  - Global Health: 75
  - Health Promotion: 77
  - Health Systems Theory and Practice: 86
  - Public Health Practice: 18
  - Quantitative Methods in Public Health: 13
  - One Health: 0 (approved for fall 2021)

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 proposed changes to the Bachelor of Science with a major in Public Health are listed below, along with a brief description of the rationale.

1. Changing the science requirements for the PHBLS degree.

a. Maintaining the requirement of one smeseter (lecture/lab – 4 units) of biology via completion of MCB 181R/L.

b. Reducing the chemisty requirement from two semesters of chemistry and one lab required (7-8 units) to one semester of chemistry (lecture and lab – 4 units)

i. The Chemistry and Biochemistry Department devleoped a one-semester chemistry lecture and lab course (CHEM 130/130L) that has been created for public health and nursing majors. This course will also be available in both main and online campuses. We provided a letter of support for this course and are excited to incorporate it into our curriculum.

ii. This will allow our public health students to complete four units from the following course options:

1. CHEM 130/130L: Chemistry for Public Health and Allied Health Professions,

2. CHEM 151,
3. CHEM 141/143, or
4. CHEM 161/163.

c. Removing one semester of physiology from our degree requirements – we currently require PSIO 201 or PSIO 380 (4 units), which will still be available to fulfill science requirements with the 'Selective Science' option (see letter 'd' below).

d. Adding a 'Selective Science' option to our degree that will allow students to pick from the following courses.

i. Second semester Chemistry (CHEM 142/144, CHEM 152, OR CHEM 162/164)
ii. Second semester Biology (ECOL 182)
iii. One semester Physiology (PSIO 201 or PSIO 380)
iv. General Microbiology (MIC 205a)
v. Organic Chemistry (CHEM 241a)
vi. Introductory Physics I (PHYS 102)
vii. Introductory Mechanics (PHYS 141)

2. Adding HPS 405 – Biology in Public Health as a required course for all public health majors.

a. This change is in response to the changing field of public health and the skills deemed necessary for future public health practitioners.

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.

	Existing Major Requirements	**Requirements For Modified Major**
Major, emphasis (if applicable) and degree *	BS	BS
CIP Code –lookup here or contact the Office of Curricular Affairs for assistance, if needed	51.0001 (Health and Wellness, General)	51.001 (Health and Wellness, General)
Total units required to complete the degree*	120	120
Upper -division units required to complete the degree	42	42
Total CC transfer units that may apply to this degree*	64	64
Foundation courses		
Math	Moderate Math Strand	Moderate Math Strand
Second Language	Second Semester Proficiency	Second Semester Proficiency
General Education		
Tier I GE Requirements (150, 160, 170)	2- Tier 1 150 (INDV) 2- Tier 1 160 (TRAD)	2- Tier 1 150 (INDV) 2- Tier 1 160 (TRAD)

	0- Tier 1 170 (NATS)	0 - Tier 1 170 (NATS)
Tier II GE Requirements (Arts, HUMS, INDV, NATS)	3 units -Tier II Arts OR Humanities 1- Tier II Individuals and Societies 0-Tier II Natural Sciences	3 units -Tier II Arts OR Humanities 1- Tier II Individuals and Societies 0-Tier II Natural Sciences
Pre-major? (Yes/No)	No The pre-major and GPA admission requirements are in the process of being disestablished. We have replaced the pre-major with an Advanced Standing process outlined below.	No

List any special requirements to declare or gain admission to this major (completion of specific coursework, minimum GPA, interview, application, etc.)	The pre-major and GPA admission requirements are in the process of being disestablished. We are implementing an advanced standing process that consists of:
	
	Completion of prerequisite coursework with grades of C or higher:
	
	- ENGL 101 (3)
	- ENGL 102 (3)
	- Second language (second semester or higher) (0-8)
	- College Algebra MATH 112 or higher (3)
	- HPS 178 (3) Personal Health and Wellness
	- HPS 200 (3) Introduction to Public Health
	- NSC 101 (3) Introduction to Nutrition
	- Two semesters of chemistry (lecture and lab) (7-8 units); can choose from following courses:
	  ○ CHEM 101A and CHEM 101B/102 (7)
	  ○ CHEM 151 General Chemistry I and CHEM 152 General Chemistry II (8)
	  ○ CHEM 141/143 General Chemistry I and CHEM 142/144 General Chemistry II (8)
	  ○ CHEM 161/163 Honors General Chemistry I and CHEM 162/164 Honors General Chemistry II (8)
		We propose changing the current advanced standing process to eliminate one semester of Chemistry and introduce one semester of Selective Science. It will consist of:
		
		Completion of prerequisite coursework with grades of C or higher:
		
		- ENGL 101 (3)
		- ENGL 102 (3)
		- Second language (second semester or higher) (0-8)
		- College Algebra MATH 112 or higher (3)
		- HPS 178 (3) Personal Health and Wellness
		- HPS 200 (3) Introduction to Public Health
		- NSC 101 (3) Introduction to Nutrition
		- One semester of chemistry (lecture and lab) (4 units); can choose from following courses:
		  ○ CHEM 130/130L (4) – Chemistry for Public Health and Allied Health Professions (new course developed Fall 2021)
		  ○ CHEM 151 (4) General Chemistry I
		  ○ CHEM 141/143 (4) General Chemistry I
		  ○ CHEM 161/163 (4) Honors General Chemistry
		- MCB 181R and MCB 181L (4): Introductory Biology

	- MCB 181R and MCB 181L (4): Introductory Biology Completion of advanced standing application, consisting of: ○ Complete prerequisite coursework with a C or higher ○ Have a 2.0 or higher cumulative UA GPA ○ Submit application for advanced standing.	- One semester lecture (lab not required) of selective science (3). Students can choose from: ○ Second semester Chemistry (CHEM 142/144, CHEM 152, OR CHEM 162/164) ○ Second semester Biology (ECOL 182R) ○ One semester Physiology (PSIO 201 or PSIO 380) ○ General Microbiology (MIC 205a) ○ Organic Chemistry (CHEM 241a) ○ Introductory Physics (PHYS 102) ○ Introductory Mechancis (PHYS 141) - Completion of advanced standing application: ○ Complete prerequisite coursework with a C or higher ○ Have a 2.0 or higher cumulative UA GPA ○ Submit application for advanced standing.
Minimum # of units required in the major (units counting towards major units and major GPA)	58	57
Minimum # of upper-division units required in the major (upper division units counting towards major GPA)	54	54
Minimum # of residency units to be completed in the major	18	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.	-N/A – all courses either fall into major requirements, foundational requiremnts, or general education requirements. There are no courses that would fit into 'required supporting coursework' as defined here.	-N/A – all courses either fall into major requirements, foundational requirements, or general education requirements. There are no courses that would fit into 'required supporting coursework' as defined here.
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	Public Health Core One (25): • PSIO 201 (4) Anatomy and Physiology I or PSIO 380 (4) Principles of Anatomy and Physiology	Public Health Core One (21): • ENGL 307 (3) Buisness Writing or ENGL 308 (3) Technical Writing or HPS 307 (3) Public Health Narratives

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.	• ENGL 307 (3) Buisness Writing or ENGL 308 (3) Technical Writing or HPS 307 (3) Public Health Narratives • EPID 309 (3) Introduction to Epidemiology • PHPM 310 (3) Healthcare in the US • HPS 350 (3) Principles of Health Education and Health Promotion • EHS 375 (3) Introduction to Enviornmental and Occupational Health • BIOS 376 (3) Introduction to Biostatistics • HPS 387 (3) Health Disparities and Minority Health Public Health Core Two (6): • HPS 433 (3) Global Health • HPS 478 (3) Public Health Nutrition Required Public Health internship (6): • HPS 493A (6) Public Health Internship Emphasis coursework (12): • 12 units required; six different emphases to choose from. Public Health Electives (9): • 9 upper division units required	• EPID 309 (3) Introduction to Epidemiology • PHPM 310 (3) Healthcare in the US • HPS 350 (3) Principles of Health Education and Health Promotion • EHS 375 (3) Introduction to Enviornmental and Occupational Health • BIOS 376 (3) Introduction to Biostatistics • HPS 387 (3) Health Disparities and Minority Health Public Health Core Two (9): • HPS 405 (3) Biology in Public Health • HPS 433 (3) Global Health • HPS 478 (3) Public Health Nutrition Required Public Health internship: • HPS 493A (6) Public Health Internship **Emphasis coursework (12):** • 12 units required; six different emphases to choose from. Updates requested to BS in Public Health, Health Systems Theory and Practice Emphasis **(UBPLH_PHLBS_HSTP) subplan**. Details below: BS in Public Health, Health Systems Theory and Practice Emphasis (UBPLH_PHLBS_HSTP) Subplan Update: • Removing HPS 405 from subplan course options Public Health Electives (9): • 9 upper division units required
Internship, practicum, applied course requirements. (Yes/No). If yes, provide description.	Yes – complete 6 units of internship in related field (HPS 493A units)	Yes – complete 6 units of internship in related field (HPS 493A units)
Senior thesis or senior project required (Yes/No). If yes, provide description.	No	No

Additional requirements (provide description)	None	None
Minor (optional or required)	Optional	Optional

*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.

We chose to compare our changes with our Health Sciences counterparts at the UA. The College of Pharmacy and the College of Medicine have a similar Advanced Standing process and GPA requirement as compared to our proposal, with a slightly higher major GPA for the Physiology and Medical Sciences major. Both majors listed below require two semesters of Chemistry with labs, which is important for students wishing to pursue careers in pharmaceutical science or physiology. Public Health students have more flexibility in their career options, therefore one semester of chemistry is sufficient. Students interested in public health careers where additional chemistry knowledge is beneficial, such as Environmental and Occupational Health, would have the option to take a second semester chemistry course as a selective science.

College of Pharmacy – Bachelor of Science in Pharmaceutical Science

GPA requirements: Cumulative UA GPA of 2.0 or higher
Advanced standing process:

- Completion of the following science and math courses, with a GPA of 2.0 or higher
    a. Two semesters of General Chemistry with labs (CHEM 151+152 or equivalent courses)
    b. Two semesters of Organic Chemistry with labs (CHEM 241A/243A + 241B/243B)
    c. General Biology with lab (MCB 181/181L)
    d. Anatomy & Physiology I with lab (PSIO 201) or PSIO 380
    e. Foundations of Calculus (MATH 113) or higher-level calculus course
    f. Completion of English Composition requirement (ENGL 101 + 102 OR ENGL 109H).

College of Medicine – Bachelor of Sicence in Health Science - major in Physiology and Medical Sciences

GPA requirements:

- Cumulative GPA of 2.25 in major coursework
- Overall UA GPA of at least 2.0.

Advanced standing process:

- Completion of the following courses
    a. ENGL 101, First-year Composition OR ENGL 109H First-year Composition (3 credits)
    b. ENGL 102, First-year Composition OR ENGL 109H First-year composition (3 credits)
    c. Math 122A and Math 122B, OR Math 119A OR Math 125 (3-5 credits)
    d. CHEM 151 General Chemistry I OR CHEM 141/143 (4 credits)
    e. CHEM 152 General Chemistry II OR CHEM 142/144 (4 credits)
    f. PSIO 201 Anatomy & Physiology I (4 credits)
    g. PSIO 202 Anatomy & Physiology II (4 credits)

VII. **Faculty impact**– indicate if new faculty hires will be required to deliver the proposed modified/new curriculum.
No new faculty hires will be necessary to deliver the proposed curriculum. The major courses are already offered annually and the majority of changes are associated with the pre-major foundational science and general education curriculum.

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 additional resources will be need to implement the proposed changes.

IX. Required signatures

Managing unit administrator (print name and title): John Ehiri, PhD, Associate Dean of Academic Affairs

Managing administrator's signature: _____ Date: 6/7/2021

Managing unit administrator (print name and title): _____

Managing administrator's signature: _____ Date: _____

Dean (print name): Iman Hakim, PhD, Dean, Mel & Enid Zuckerman College of Public Health

Dean's signature: Iman Hakim Date: 6/30/2021

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

THE UNIVERSITY OF ARIZONA
COLLEGE OF SCIENCE
COLLEGE OF MEDICINE TUCSON
Chemistry
& Biochemistry

Craig Aspinwall, Ph.D.
Professor and Department Head
Chemistry & Biochemistry (CBC)
CBC-DeptHeadOffice@email.arizona.edu

1306 East University Blvd.
Old Chemistry (OC) 221B
Tucson, AZ 85721-0041
Tel: (520) 621-5672

February 1, 2021

Dr. John Ehiri,

The Department of Chemistry and Biochemistry in the College of Science and College of Medicine – Tucson is pleased to support the addition of the following course to the Bachelor of Science with a Major in Public Health's curriculum:

- CHEM 241A – Lectures in Organic Chemistry

As we understand from the proposed changes to the curriculum, students will select one of several courses toward satisfying their required 'selective science' coursework for your Bachelor of Science degree. This will be in addition to a required one semester of chemistry lecture and lab (CHEM 130, CHEM 151, CHEM 141/143, or CHEM 161/163) and one semester of biology lecture and lab (MCB 181R/L) for the degree.

Sincerely,

Craig Aspinwall, Ph.D.
Interim Department Head

THE UNIVERSITY OF ARIZONA

Ecology & Evolutionary Biology
College of Science
University of Arizona

P.O. Box 210088
Tucson, Arizona 85721-0088
(520) 621-1588
FAX: (520) 621-9190
http://eebweb.arizona.edu

January 21, 2021

Dr. John Ehiri,

The Ecology and Evolutionary Biology Department in the College of Science is pleased to support the addition of the following course to the Bachelor of Science with a Major in Public Health's curriculum:

- ECOL 182R/L Introductory Biology II

As we understand from the proposed changes to the curriculum, students will select one of several courses toward satisfying their required 'selective science' coursework for your Bachelor of Science degree. This will be in addition to a required one semester of chemistry lecture and lab (CHEM 130, CHEM 151, CHEM 141/143, or CHEM 161/163) and one semester of biology lecture and lab (MCB 181R/L) for the degree.

Sincerely,

Dr. Michael Worobey
Department Head, Ecology and Evolutionary Biology
Louise Foucar Marshall Science Research Professor
College of Science
(520) 626-3456
worobey@email.arizona.edu

Subject: Re: Inclusion of MIC 205A in BS Public Health Degree
Date: Monday, February 1, 2021 at 9:42:33 AM Mountain Standard Time
From: Stock, S. Patricia - (spstock)
To: Embry, Danielle M - (dembry)
Attachments: Outlook-mibm2124.png, Outlook-4445tj2u.png

Dear Danielle:
We will be glad to have MIC 205A, General Microbiology as a selective science option in the BS in Public Health degree. PLease let me know if you need further information.
Cheers,

Patricia

Dr. S. Patricia Stock
Director and Professor, School of Animal and Comparative Biomedical Sciences
Carl Weiler and Patricia Weiler Endowed Chair for Excellence in Agriculture and Life Sciences
The University of Arizona
1117 E. Lowell St. P.O. Box 210090 Tucson, AZ 85721
Office: +1-520-621-0868 Fax:+1- 520-626-5602
e-mail: spstock@email.arizona.edu
URL: https://pstock.lab.arizona.edu/

Additional Appointments:
Joint Professor, Department of Entomology
Professor, Honors College

Lab address: Marley Bldg. Room 718/720/724
1145 E. 4th Street, Tucson AZ 85721
Lab Phone (+1-520) 621-1317

From: Embry, Danielle M - (dembry) <dembry@arizona.edu>
Sent: Thursday, January 28, 2021 8:59 AM
To: Staten, Michael E - (statenm) <statenm@arizona.edu>
Cc: Stock, S. Patricia - (spstock) <spstock@arizona.edu>
Subject: Re: Inclusion of MIC 205A in BS Public Health Degree

Hi Dr. Staten.

I just wanted to loop back on this to see if you've had a chance to consider our request to include MIC 205A – General Microbiology as a selective science option in the BS in Public Health degree? We are happy to answer any questions you may have.

Thanks for your time.
Best,
Danielle

Danielle Embry, MEd | she/her/hers
Coordinator, Academic Curriculum - Faculty Affairs
University of Arizona Mel and Enid Zuckerman College of Public Health
Office of the Associate Dean for Academic Affairs

Drachman Hall A325 | (520) 626-8808

Mel & Enid Zuckerman College of Public Health

From: "Embry, Danielle M - (dembry)" <dembry@arizona.edu>
Date: Wednesday, January 20, 2021 at 2:18 PM
To: "Staten, Michael E - (statenm)" <statenm@arizona.edu>
Cc: "Ehiri, John E - (jehiri)" <jehiri@arizona.edu>, "Fleck, Melanie - (mfleck)" <mfleck@arizona.edu>
Subject: Inclusion of MIC 205A in BS Public Health Degree

Dear Dr. Staten,

My name is Danielle Embry and I coordinate curriculum for the College of Public Health. We are in the process of proposing some changes to our current BS in Public Health and would like to consider including your course, MIC 205A – General Microbiology, as an option toward the "Selective Science" requirement. The requirement your course would help meet would also be met with various other courses (see list below), so we do not anticipate a high burden for seats.

Adding a 'Selective Science' option to our degree will allow students to pick from the following courses:

- Second semester Chemistry (CHEM 142/144, CHEM 152, OR CHEM 162/164)
- Second semester Biology (ECOL 182)
- One semester Physiology (PSIO 201 or PSIO 380)
- General Microbiology (MIC 205a)
- Organic Chemistry (CHEM 241a)
- Introductory Physics I (PHYS 102)
- Introductory Mechanics (PHYS 141)

Would you support us including this course in our undergraduate degree program? If you agree, I am happy to draft a formal letter of support with these details.

I've copied my colleagues, Dr. John Ehiri, Associate Dean of Academic Affairs and Ms. Melanie Fleck, Coordinator of Undergraduate Programs, here to help answer any questions you may have.

Thanks in advance and we look forward to hearing from you.
Danielle

Danielle Embry, MEd | she/her/hers
Coordinator, Academic Curriculum - Faculty Affairs
University of Arizona Mel and Enid Zuckerman College of Public Health
Office of the Associate Dean for Academic Affairs
Drachman Hall A325 | (520) 626-8808

Mel & Enid Zuckerman College of Public Health

THE UNIVERSITY OF ARIZONA

Department of Physics
College of Science

1118 E. Fourth Street
P.O. Box 210081
Tucson, Arizona 85721
Tel: (520) 621-6820
Fax: (520) 621-4721
www.physics.arizona.edu

January 21, 2021

Dr. John Ehiri,

The Physics Department in the College of Science is pleased to support the addition of the following courses to the Bachelor of Science with a Major in Public Health's curriculum:

- Introductory Physics I (PHYS 102)
- Introductory Mechanics (PHYS 141)

As we understand from the proposed changes to the curriculum, students will select one of several courses toward satisfying their required 'selective science' coursework for your Bachelor of Science degree. This will be in addition to a required one semester of chemistry lecture and lab (CHEM 130, CHEM 151, CHEM 141/143, or CHEM 161/163) and one semester of biology lecture and lab (MCB 181R/L) for the degree.

Sincerely,

Sumit Mazumdar
Professor and Head
Department of Physics
College of Science
(520) 621-6803
sumit@physics.arizona.edu