

MEMORANDUM TO: Ogden College of Science and Engineering Curriculum Committee

Dr. Melanie Autin
Dr. Simran Banga
Dr. Royhan Gani
Dr. Ting-Hui Lee
Dr. Andy Mienaltowski

Dr. Hope Marchionda
Dr. Todd Willian
Dr. Zhonghang Xia
Dr. Bangbo Yan

FROM: Dr. Stuart Burris, Chair

SUBJECT: Agenda for Thursday, September 4, 2025

A. OLD BUSINESS:

- I. Consideration of the minutes of the May 2025 meeting.

B. NEW BUSINESS:

Type of item	Description of Item & Contact Information
Informational	<u>The following items were sent through the expedited process:</u> Ref. 738: Molecular Biotechnology, Bachelor of Science (Program Suspension)
Action	Proposal to Create a New Course BDAS 321: Art, Business, and Science of Distilling, Brewing, and Winemaking Contact: Kristina Arnold, Kristina.arnold@wku.edu , 270-745-6566
Action	Proposal to Revise a Program Ref. 329: Biophysics Minor Contact: Ali Er, ali.er@wku.edu , 270-745-6202

C. OTHER BUSINESS

Minutes – OCSE Curriculum Committee

May 2025

Members Present: Meeting held via email.

FROM: Dr. Stuart Burris, Chair

The agenda was officially open for discussion on April 28th.
A clear majority vote of 'yes' was reached on May 1st.

NEW BUSINESS:

Action Agenda:

Hort 307: Autin/Gani; Approved

Other Business:

None

Course Change Request

New Course Proposal

Date Submitted: 08/20/25 9:36 am

Viewing: **BDAS 321 : Art, Business, and Science of Distilling, Brewing, and Winemaking**

Last revision: 08/20/25 9:36 am

Changes proposed by: gyd42678

In Workflow

1. 99SC Approval

2. SC Dean

3. SC Curriculum Committee

4. Undergraduate Curriculum Committee

5. University Senate

6. Provost

7. Course Inventory

Approval Path

1. 08/20/25 10:40 am
Stuart Burris
(stuart.burris):
Approved for 99SC
Approval

Proposed Action

Active

Contact(s)

Name	E-mail	Phone
Kristina Arnold	kristina.arnold@wku.edu	2707456566

Term for implementation Spring 2026

Academic Level Undergraduate

Course prefix (subject area) BDAS - Brewing & Distilling Arts & Sciences Course number 321

Department OCSE Interdisciplinary Programs

College Science and Engineering

Course title
Art, Business, and Science of Distilling, Brewing, and Winemaking

Abbreviated course title DISTILL & BREW: ART, BUS, SCI

Course description

This course is a survey of the art, business, and science of the craft beverage industry. The course will take students through the journey of an alcoholic beverage including raw ingredient sourcing, fermentation, distillation, quality control, packaging, marketing, and legal compliance. Throughout the course students will be exposed to the cultural and historical significance of various types of distilled spirits, beer, and wine, as well as the next frontier RTD (ready to drink) and seltzers.

Credit hours 3

Repeatable

Yes

Number of repeats 2

For maximum credits 3

Default grade type Standard Letter Alternate grade type(s)

Is this course intended to span more than one term?

No

Schedule type

Applied Learning

CIP Code 410101 - Biology/Biotechnology
Technology/Technician.

Does this course have prerequisites

No

Corequisites

Equivalent Courses

Restrictions:

College restriction? No

Field of study
restriction/major? No

Classification
restriction? No

Departmental

Restrictions

Due to the sensory analysis and production components of this course, students must be 21 years of age before the first day of class.

Reason for
developing the
proposed course

This course is being developed to support the WKU Brewing & Distilling Arts & Sciences undergraduate certificate. As a hands-on course introducing students to all aspects of the industries, we anticipate the class will be popular and help recruit students in to the program. The class will also provide students from multiple disciplines with an overview of and connection to growing industries in our region.

Is this related to
other courses at
WKU?

Yes

Related courses

BDAS 300 - The Science of Fermentation in Brewing and Distilling

BDAS 310M1 - Brewhouse Distillery Process Modular 2

BDAS 310M2 - Brewhouse Distillery Process Mod 2

BDAS 495 - Internship in Brewing/Distilling

BDAS 500 - The Science of Fermentation in Brewing and Distilling

BDAS 595 - Brewing/Distilling Internship

BDAS 310 - Brewhouse Distillery Processes

What departments/programs have been consulted concerning potential impact (e.g. to possible duplication or conflict, changed corequisite or prerequisite for equivalent courses, etc.)? Please provide names and dates for individuals consulted.

BDAS is co-coordinated by three Colleges: PCAL, Ogden, and GCFB. I've consulted collaborating partners:

Me (PCAL); Dean Terrance Brown, PCAL

GCFB: Whitney Peake; Vitale Professor of Entrepreneurship; Chair and Professor, Department of Management - communicated October 5, 2023 via email

Ogden: Cate Webb, Professor, Associate Dean for Research, Ogden College of Science & Engineering, Director, ARTP - communicated Oct 25, 2023 in person

How many sections
of this course per
academic year will
be offered?

1

How many students
per section are
expected to enroll in
this proposed
course?

15

How many students
per academic year

are expected to enroll?
15

How were these projections calculated? Explain any supporting evidence/data you have for arriving at these projections:

Based on interest in the related BDAS 300 course and classroom size limitations

How are these related?
courses are related based on inclusion in the BDAS program and covering slightly overlapping content in different formats

Is this course part of a program that leads to teacher certificate? No

Are you seeking Colonnade approval for this course? No

Student Learning Outcomes

#	Student Learning Outcomes
1	Describe the historical and cultural significance of craft beverage manufacturing
2	Explain the 3 Tier System of Distribution and the implication on business practices
3	Identify types of distilled spirits, beer/malt products, and wine
4	Explain the steps of production necessary to craft beverage production
5	Identify equipment and processes necessary for manufacturing
6	Describe the marketing and distribution strategies used by large brands, craft makers, and nano producers.

Content outline

#	Topic
1	Overview of the Craft Beverage Industry
2	An abridged history of fermentation and United States Alcohol Laws
3	Water and Yeast

#	Topic
4	Fruit Wine and Spirits
5	Wines
6	Grain-Based Beer and Spirits
7	Beer
8	Other Fermentable Products
9	Botanicals and Hops
10	Distilled Spirits Production
11	Legal Compliance and Regulatory Agencies/ Reporting
12	Industry Marketing and Branding
13	Business Operations/Supply Chain
14	Creating and Training a Sensory Panel/ Serving Your Product

Student
expectations and
requirements

With the collaboration of classmates and instructor, create a product from recipe to supply chain, fermentation, marketing, and distribution.

Participation during lab class meetings. Includes participating fully in production and sensory analysis (sampling), engaging with guest presenters, and providing an explanation of experience

weekly readings, weekly assignments, and Class Room participation

Tentative texts and
course materials

Resources provided by the instructor and WKU Libraries

Special equipment,
materials, or library
resources needed

special equipment to be provided by host departments

Additional
information

While there is some overlap in content with ART 395: The Cultural History of Alcohol, this is more of a "hands on" course that trains students to brew and distill. We plan to offer it as an elective option for for our BDAS Certificate so that our students have an additional avenue to complete their coursework for the program, in part because the status of GEOG 386 (Potent Potables) as an elective choice in the program is currently unclear. Also, we want this to be BDAS 321--identical to the temporary course currently on the books, but the system refuses to allow us

to use the same number. If we can use BDAS 320, we prefer that--if we are required to change it, we are okay with BDAS 321.

Supporting
documentation

[BDAS 320 WKU Brewing Distilling_.pdf](#)

Reviewer Comments

Program Change Request

Date Submitted: 05/21/25 3:01 pm

Viewing: **329 : Biophysics, Minor**

Last edit: 05/21/25 3:01 pm

Changes proposed by: ala36355

Catalog Pages
Using this Program
[Biophysics, Minor \(329\)](#)

In Workflow

- 1. PHYA Approval
- 2. SC Dean
- 3. SC Curriculum Committee
- 4. Undergraduate Curriculum Committee
- 5. University Senate
- 6. Provost
- 7. Program Inventory

Proposed Action

Approval Path

- 1. 04/09/25 4:00 pm
Michael Carini
(mike.carini):
Rollback to Initiator
- 2. 05/21/25 3:02 pm
Michael Carini
(mike.carini):
Approved for PHYA Approval
- 3. 09/02/25 3:25 pm
Stuart Burris
(stuart.burris):
Approved for SC Dean

Active

Contact Person

Name	Email	Phone
Ali Oguz Er	ali.er@wku.edu	2707456202

Term of Implementation 2025-2026

Program Reference Number 329

Review Type Full Review

Academic Level Undergraduate

Program Type	Minor
Department	Physics & Astronomy
College	Science and Engineering
Program Name (eg. Biology)	Biophysics, Minor
CIP Code	<u>26.0203 - Biophysics.</u>
Will this program lead to teacher certification?	<u>No</u>

Does the proposed program contain 25% or more new content not previously taught in another course at WKU? If yes, contact the Office of the Provost for additional SACSCOC proposal requirements

Catalog Content

Curriculum Requirements (Catalog field: Program Requirements)

Program Requirements (18 hours)

The minor in biophysics requires a minimum of 18 semester hours. This course sequence is intended to serve students of the life sciences, that is, students of biology, pre-medicine and pre-dental, agriculture, environmental health, psychology, science teaching, environmental engineering, pre-veterinary, pre-pharmacy and pre-optometry. In general, this curriculum treats the physics of life processes and various applications of physics to biology and medicine. (See the Biophysics section in this catalog.)

[1. Students must complete two semesters of either Introductory Biophysics \(PHYS 231 and PHYS 332\) or University Physics \(PHYS 255 and PHYS 265\).](#)

<u>PHYS 231</u>	Introduction to Physics and Biophysics I	4
& <u>PHYS 232</u>	and Laboratory for Physics and Biophysics I	

<u>PHYS 332</u>	Introduction to Physics and Biophysics II	4
& <u>PHYS 233</u>	and Laboratory for Physics and Biophysics II	

<u>PHYS 255</u>	<u>University Physics I</u>	<u>5</u>
& <u>PHYS 256</u>	<u>and University Physics I Lab</u>	

<u>PHYS 265</u>	<u>University Physics II</u>	<u>5</u>
& <u>PHYS 266</u>	<u>and University Physics II Laboratory</u>	

2. Choose at least one of the following courses:	4
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<u>PHYS 335</u>	General Biophysics
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<u>PHYS 337</u>	Medical Imaging
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<u>PHYS 431</u>	Radiation Biophysics
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<u>PHYS 359</u>	Clinical Optics	
<u>PHYS 379</u>	Nanotechnology in Biophysics and Medicine	
Select at least 6 hours of upper division electives selected from appropriate physics and/or biology courses approved by a biophysics advisor		6
<u>PHYS 441</u> & <u>PHYS 404</u>	<u>Optics</u> and <u>Optics Laboratory</u>	<u>4</u>
<u>3. Select additional related courses from the list below as needed to fulfill the minimum requirement of 18 credit hours for the Biophysics minor. (Substitutions to the courses below must be approved ahead of time by the Biophysics advisor.)</u>		
<u>ASTR 305</u>	<u>Introduction to Astrobiology</u>	<u>3</u>
<u>BIOL 312</u>	<u>Bioinformatics</u>	<u>4</u>
<u>BIOL 319</u>	<u>Introduction to Molecular and Cell Biology</u>	<u>3</u>
<u>BIOL 335</u>	<u>Neurobiology</u>	<u>3</u>
<u>BIOL 377</u>	<u>Animal Form and Function</u>	<u>3</u>
<u>BIOL 399</u>	<u>Research in the Biological Sciences (Research topics must be biophysics-related and approved in advance by the program coordinator)</u>	<u>1-3</u>
<u>BIOL 404</u>	<u>Techniques and Theory of Electron Microscopy</u>	<u>4</u>
<u>BIOL 411</u>	<u>Cell Biology</u>	<u>3</u>
<u>CHEM 320</u> & <u>CHEM 451</u>	<u>Inorganic Chemistry I</u> and <u>Physical Chemistry I Laboratory</u>	<u>5</u>
<u>CHEM 399</u>	<u>Research Problems in Chemistry (Research topics must be biophysics-related and approved in advance by the program coordinator)</u>	<u>1-3</u>
<u>CHEM 450</u> & <u>CHEM 451</u>	<u>Physical Chemistry I</u> and <u>Physical Chemistry I Laboratory</u>	<u>5</u>
<u>EXS 310</u>	<u>Kinesiology</u>	<u>3</u>
<u>EXS 446</u>	<u>Biomechanics</u>	<u>3</u>
<u>PHYS 399</u>	<u>Research Problems in Physics and Astronomy (Research topics must be biophysics-related and approved in advance by the program coordinator)</u>	<u>1-3</u>
Total Hours		68- 74

Will this program be managed or owned by more than one department?

No

Does this program include courses from outside your department?

No

Please insert one Learning Outcome per box. Click green plus sign for additional LO boxes

Learning Outcomes
and Measurement
Plan

	List all student learning outcomes of the program.	Measurement Plan
<u>SLO 1</u>	<u>Demonstrate foundational knowledge of physical principles and how they apply to biological systems, including mechanics, thermodynamics, electromagnetism, and optics in living organisms.</u>	<u>targeted exam questions will be embedded in core physics courses s. These questions will evaluate students' ability to apply concepts such as mechanics, Electric fields, Optics, and electromagnetism to biological phenomena. Success will be defined as at least 70% of students scoring 75% or higher on these questions.</u>
<u>SLO 2</u>	<u>Integrate concepts from biology, chemistry, and physics to explain complex physiological and molecular processes from a quantitative perspective.</u>	<u>interdisciplinary final projects or capstone assignments will be assessed in upper-level elective courses. These projects will be graded using a standardized rubric focusing on interdisciplinary synthesis and conceptual understanding. A benchmark of 80% of students scoring at a "Proficient" level or higher will be used to indicate success.</u>

Library Resources

Attach library
resources

Rationale for the program proposal?

Rationale for Biophysics Minor Program Proposal Change

The proposed revisions to the Biophysics minor are intended to streamline the curriculum and expand elective options to enhance accessibility and flexibility for students. This update responds to recurring feedback from students and advisors, as well as a practical need to align the program more effectively with the interdisciplinary nature of biophysics and the course offerings available at WKU.

1. Streamlining the Curriculum

The current structure of the Biophysics minor, while rigorous, has proven to be overly restrictive in its course progression. Students often face scheduling difficulties due to the sequencing of core courses and the limited selection of approved electives. These barriers have, in some cases, discouraged students from completing the minor or delayed their graduation. The proposed changes will simplify course pathways and ensure a clearer, more consistent route to program completion, particularly for students majoring in Biology, Chemistry, or Physics.

2. Expanding the Elective Pool

Currently, students pursuing the Biophysics minor often must submit Degree Exception Forms due to a lack of available approved electives. This administrative workaround is inefficient and reflects a deeper structural issue: the existing elective list is too narrow to accommodate students' diverse interests and schedules. The revised program expands the elective pool to include relevant upper-division courses in physics, biology, chemistry, and related interdisciplinary fields. This change not only reduces the need for exceptions but also better supports students preparing for careers in medicine, biotechnology, health sciences, and research.

3. Improved Accessibility and Interdisciplinary Integration

By incorporating a wider range of electives and allowing more flexibility in course selection, the program becomes more accessible to students across multiple STEM majors. This is particularly important for students pursuing pre-professional tracks (e.g., pre-med, pre-dental, pre-pharmacy), who already face demanding course loads. A more accessible and integrative Biophysics minor will encourage greater participation and support WKU's commitment to interdisciplinary education and student success.

Conclusion

The proposed changes aim to make the Biophysics minor more efficient, inclusive, and aligned with the academic and professional goals of our student population. We believe these revisions will increase enrollment, reduce administrative burdens, and strengthen the program's contribution to WKU's broader mission of providing high-quality, student-centered education in the sciences.

Additional
Attachments

[Biophysics_Minor_proposed_changes_0409.pdf](#)

Additional information or attachments

Reviewer Comments

Michael Carini (mike.carini) (04/09/25 4:00 pm): Rollback: Accidental submission

