| From: | Smith, Randy |
|--------------|--|
| То: | Hu, Wuyang; Parkman, Anna; Osborne, Jeanne |
| Cc: | Sutherland, Sue; Reed, Katie; Smith, Randy; Duffy, Lisa; Hunt, Ryan; Christy, Ann |
| Subject: | Proposal to establish an undergraduate certificate (category 1a) in Sustainable Energy and the Economy |
| Date: | Wednesday, September 18, 2024 4:24:55 PM |
| Attachments: | image001.png |

Anna, Jeanne, and Wuyang:

The proposal from the College of Food, Agricultural, and Environmental Sciences to establish an undergraduate certificate (category 1a) in Sustainable Energy and the Economy program was approved by the Council on Academic Affairs at its meeting on September 18, 2024. Thank you for attending the meeting to respond to questions/comments.

No additional level of internal review/approval is necessary. This action will be included in the Council's next <u>Annual Activities Report</u> to the University Senate (July 2025).

The Office of the University Registrar will work you with any implementation issues.

Please keep a copy of this message for your file on the proposal and I will do the same for the file in the Office of Academic Affairs.

If you have any questions please contact the Chair of the Council, Professor Sue Sutherland (.43), or me.

Randy



W. Randy Smith, Ph.D. Vice Provost for Academic Programs Office of Academic Affairs University Square South, 15 E. 15th Avenue, Columbus, OH 43201 614-292-5881 Office smith.70@osu.edu Assisted by: Katie Reed Executive Assistant (614) 292-5672 reed.901@osu.edu

| From: | Osborne, Jeanne |
|--------------|--|
| То: | Smith, Randy |
| Cc: | Reed, Katie; Violet, Cynthia; Parkman, Anna; Roe, Brian |
| Subject: | Category 1A Certificate: "Sustainable Energy and the Economy" |
| Date: | Thursday, April 11, 2024 12:17:02 PM |
| Attachments: | image001.png |
| | Type 1A UG Academic Certificate in Sustainable Energy Combined Files.pdf |

Dear Dr. Smith,

The College of Food, Agricultural, and Environmental Science (CFAES) is requesting Council on Academic Affairs approval of the attached proposal for a Category 1A Undergraduate Academic Certificate in 'Sustainable Energy and the Economy', proposed by the Department of Agricultural, Environmental and Development Economics.

The proposed stand-alone certificate will provide students with skills to analyze the economics of sustainable energy alternatives, including important economic and business skills to analyze and support the alternative energy sectors. While housed within the College of Food, Agricultural, and Environmental Sciences, it is believed that this certificate will appeal to a broad selection of students who have interest in pursuing careers in and adjacent to the sustainable energy industries.

Included with the proposal are statements of concurrence from the School of Environment and Natural Resources in CFAES, as well as interested units within the College of Arts and Sciences, College of Engineering, College of Law, College of Public Health, the Fisher College of Business, and the Glenn College of Public Affairs.

This Certificate Type 1A proposal was approved by the Academic Affairs Committee of the Department of Agricultural, Environmental and Development Economics as well as the CFAES Committee on Academic Affairs.

Please let me know if any additional information is needed in support of this request.

Thank you,

Jeanne



Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: <u>Osborne.2@osu.edu</u> 'Unexpected kindness is the most powerful, least costly, and most underrated agent of human change' (Bob Kerrey)

Check out KINDNESS AT OHIO STATE at http://kind.osu.edu!

Proposal for Certificate in "Sustainable Energy and the Economy"

Required Information

Name of proposed certificate: Sustainable Energy and the Economy
Certificate Type: Post-secondary undergraduate academic certificate program category 1a: standalone certificate
Delivery: In person (some courses may be taken in hybrid or online format)
Proposed Implementation Date: Spring Semester 2025
Academic units responsible: Agricultural, Environmental, and Development Economics (AEDE)

Rationale

There is widespread discussion in society about an ongoing energy transformation from traditional fossil fuels to sustainable energy sources, including solar, wind, biomass, geothermal and other sources. A key rationale for this transition lies in the concern about the formidable societal challenge that climate change poses for society. Given recent estimates of the potential social cost of carbon, i.e., the damages from climate change, nothing less than a complete transformation of the global energy sector will be necessary to avoid significant planetary change.

Fortunately, this transformation of our energy sector is well underway, domestically, and internationally, with substantial increases in deployment of renewable energy across Europe, the US, China, and developing countries. Yet the identification of what is sustainable is complicated. For example, forest-based biomass energy is considered carbon neutral by Intergovernmental Panel on Climate Change accounting methods, yet is heavily debated by policy makers in the US and Europe. In Ohio, the proposed expansion of wind and solar has raised many questions about land use, community decision-making, and local externalities.

The certificate will provide individuals with skills to analyze the economics of sustainable energy alternatives, including solar, wind, geothermal, nuclear, fossil-based energy with offsets or carbon capture and storage, as well as emerging energy sources like hydrogen. This certificate also will provide individuals in a variety of majors, and ultimately professions, with important economic and business skills to assess within the broader context of the sustainability of various energy sector alternatives.

Likely Sources of Demand and Student Enrolment

We believe this certificate will appeal to a broad selection of students across academic programs at The Ohio State University, including Finance, Marketing, Agribusiness management, Economics, Public Policy (Glenn College), Environmental and Natural Resources, Geography, Geological Sciences, Civil Engineering, Aviation Studies, City and Regional Planning, and others. The required courses focus on providing students with skills in assessing the energy sector and its relationship to the economy, understanding how to evaluate sustainability, and applying sustainability concepts to evaluating existing and emerging technology options in the energy transition. With strategic choices in which courses they take, students in a number of majors within these units can obtain this certificate with only 2 additional courses.

Certificate Learning Outcomes

The certificate in "Sustainable Energy and the Economy" will provide students with an opportunity to understand the emerging sustainable energy sector and to learn skills to evaluate the benefits, costs, and sustainability elements of a range of energy options and choices. By combining the required and elective courses, students will gain critical analytical skills that will help them enter the sustainable energy sector and advance their careers. The sustainable energy sector is composed of renewable power generation, other clean energy generation, fossil energy combined with carbon capture and storage or offsets, energy transmission/grid technology, emerging energy storage technologies, and the market and policy mechanisms that link them together.

Upon completion of the certificate in Sustainable Energy and the Economy, learners will be better prepared to explain sustainable energy and the economic conditions that enable its efficient deployment across time and space.

Students will be better prepared to demonstrate knowledge that allows them

- 1) to analyze market economic, environmental, and social dimensions of sustainable, or renewable, energy projects from the household to the industrial scale.
- 2) to evaluate economic outcomes of policies that affect households and businesses as they consider investments in sustainable, or renewable, energy technologies.
- To obtain the certificate, students must maintain a 2.0 cumulative GPA (C average) in the certificate, no course counted for the certificate can be below C-, and take 100% of the courses in the certificate at The Ohio State University.

Relationship to Other Programs at The Ohio State University

The certificate requires a number of courses from the Environment, Economic, Development and Sustainability (EEDS) major offered through AEDE and ENR. Students taking the certificate program within the major can double count a limited number of courses (2) ensuring that they take at least two courses outside the major requirements, which will supplement their knowledge for the certificate. Students from outside the EEDS major will be exposed to critical sustainability and energy coursework that will supplement their understanding of the ongoing global energy transition.

The certificate could benefit students in several other majors within the School of Environmental and Natural Resources. For example, students in the Environmental Policy and Decision Making (EPDM) major who take this certificate can expect to gain more in-depth knowledge about the energy sector, including specifically how the energy sector relates to the rest of the economy, what the costs and benefits are of various types of sustainable energy, and how alternative approaches to carbon removal may influence continued use of fossil energy.

Students in the Agribusiness and Applied Economics degree in AEDE could benefit from this certificate, which would require many of them to take courses outside the degree in the sustainability area. These courses would provide skills in energy topics, helping them navigate increasingly complex energy-related issues in the agricultural and food sectors. The agricultural sector, for example, provides inputs for the renewable energy in the form of ethanol, renewable diesel, and renewable jet fuels. The food sector competes with the energy sector for these input commodities. Both sectors rely heavily on the energy sector for transportation fuels and other energy needs. Increasingly, the agricultural sector has been relied on to provide land for solar and wind energy production, as well as for carbon offsetting opportunities.

Numerous degrees and specializations in the College of Arts and Sciences are related to this proposed certificate. Earth Sciences BA and BS majors are related programs, and in particular the specializations within the BS: Geological Sciences; Geophysics; and Climate, Water, and the Environment. The proposed certificate can introduce students to critical economic and financial elements of the energy sector, including exposure to methods for evaluating benefits and costs of energy projects, discounting and finance, energy trading concepts, and developing price projections.

The Department of Geography houses several related degrees or specializations, such as the BS Geographical Information Science. Combining skills in cartography with in-depth knowledge of the energy sector through this certificate can provide a powerful skill set for introductory jobs throughout the energy sector, as well as most other industries where energy is an important input. This is particularly true given the growing importance of land resources in producing today's sustainable energy commodities.

The College of Engineering also has several centers, department, and degree offerings that are related. For example, the Center for Aviation Studies and the BS in Aviation are natural partners given the growing importance of sustainability issues in air transportation. Energy is the third largest input into the air transportation sector (behind technology and labor), but varies the most from year to year, causing potentially large impacts on the bottom line for all companies in the sector. Skills learned through the proposed certificate could help individuals in the aviation sector navigate critical energy supply bottlenecks. Other related majors in the College of Engineering include Civil Engineering and Environmental Engineering. The City and Regional Planning degree in the Knowlton School is similarly related, given the importance of planning infrastructure development in the energy sector.

In reviewing the many related programs at The Ohio State University, this certificate will be unique for its emphasis on the economics of energy sector and specifically how economic elements will influence the energy transition through the adoption and uptake of existing and emerging sustainable energy technologies.

Curricular Requirements for Completion

Required credit hours: 13

Required courses (10 total credits):

AEDE/ENR 2501: Introduction to Sustainability (4 cr.) AEDE/IS 4320: Energy, the Environment and the Economy (3 cr.) AEDE 4321: Sustainable Energy (3 cr.) – (Proposed course. Currently offered as 4194) Choose one from (3 total credits): AEDECON 3113 - Commodity Futures and Options Markets (3 cr.) AEDECON 3103 - Principles of Agribusiness Finance (3 cr.) or BUSFIN 3120 - Foundations of Finance (3 cr) AEDECON 4310 – Environmental and Natural Resource Economics (3 cr.) AEDECON 4330 – The Sustainable Economy: Concepts and Methods (3 cr.) AVIATN 3000 – Aviation Management and Marketing (3 cr.) BUSML 4255 – Sustainability Marketing for Consumers, Firms & Society (3 cr.) BUSOBA 4253 – Sustainable Operations (3 cr.) BUSOBA 4254 - Projects in Sustainable Supply Chains (3 cr.) CRPLAN 2000 - Introduction to City and Regional Planning (3 cr.) CRPLAN 3400 - Planning for Sustainable Economic Development (3 cr.) ENVENG 3200 – Fundamentals of Environmental Engineering (3 cr.) ENVENG 5600 – Science, Engineering, and Public Policy (3 cr.) ENR 4450 – Climate Change Policy (3 cr.) ENR 5210 – US Environmental Impact Assessment (3 cr.) ENR 5211 – International Environmental Impact Assessment (3 cr.) GEOG 3900 – Global Climate Change: Causes and Consequences (3 cr.) GEOG 5301 – Sustainable Transportation (3 cr.) HIST 2911 – The Climate Crisis: Mechanisms, Impacts, and Mitigation (4 cr.) PUBAFRS 3000 – Public Policy Analysis (3 cr.)

Notes: Students in the EEDS business, or environmental economics and policy tracks are required to take AEDE/ENR 2501, AEDE 4320, AEDE/IS 4320, AEDE 4330, and AEDE 3103 or BUSFIN 3120. Either AEDE 2001 or ECON 2001 is required for AEDE 4310 and AEDE/IS 4320. These students can only double count two courses for the major and the certificate. EEDS minor students must take AEDE/ENR 2501, and can double count two courses for the minor and the certificate. Students in the Agribusiness and Applied Economics degree can double count AEDECON 3103 or 3113. PUBAFRS 3000 requires ECON 2001.01, 2001.02 or 2001.03, or AEDE 2001, as well as the GE Data Analysis course as a prerequisite. AVIATN 3000 requires AVIATN 2000 and 2100. Students in Aviation can double count AVIATN 3000. ENVENG 3200 requires CHEM 1210 or 1250 and enrollment in the Civil or Environmental Engineering major, or Environmental Engineering minor. BUSML 4255 requires BUSML 3250 or AEDECON 3102. BUSOBA 4253 requires BUSOBA 2320,2321, 3230, AcctMIS 2200, 2300, and BUSMHR 2292. BUSOBA 4254 requires BUSOBA 3230 or BUSML 3380 or AEDECON 3105. CRPLAN 3400 requires Econ 2002.01, .02, or 0.03H, or AEDECON 2001.

Minimum Requirement for Admittance

All Ohio State undergraduate students in good standing may take courses toward this certificate program.

Administrative Program

AEDE will house the certificate and provide administrative support. AEDE has offered the Sustainable Energy (proposed as AEDE 4321) course once as a 4194 course, and is concurrently submitting the paperwork to obtain a permanent course number.

Assessment

1) One approach to assess the learning outcomes will rely on completion of the three required courses and at least one of the electives with a minimum grade of C-, students must maintain a 2.0 cumulative GPA (C average) in the certificate,.

2) The end of course project for AEDE 4321 'Sustainable Energy" will provide students with an opportunity to evaluate a sustainable energy alternative or project and to write a report on its potential economic, environmental, and social sustainability implications. A random selection of 5 of the student reports will be reviewed by the oversight committee annually. The committee will provide curricular suggestions for the course, and for the curriculum, with ideas for additional courses to consider depending on material or concepts that may be more or less well represented in the student reports.

3) We will conduct a survey of OSU graduates who have completed the certificate within 1 year of graduation. The survey will provide former students with an opportunity to reflect on the individual courses they took in the certificate program and on the certificate program in general. The survey will be composed of multiple formats of questions, including open ended questions, Likert-scale, and check boxes.

Program Faculty Review

A committee of three faculty will oversee the certificate, which will include 1 faculty member from AEDE, and 2 faculty members from other units on campus, such as the School of Environmental and Natural Resources or the Glenn College. Appendix A – Advising Sheet

The Ohio State University College of Food, Agricultural, and Environmental Sciences

Sustainable Energy and the Economy Certificate, Type 1a, 1b, and 2

<u>Advising Contact:</u> Kassie Kurzhals, Undergraduate Advisor for AED Economics, <u>Kurzhals.7@osu.edu</u>., 614-292-3040.

Faculty Contact: Brent Sohngen, AED Economics, Sohngen.1@osu.edu.

The Sustainable Energy and the Economy certificate (SEE) provides students with a comprehensive understanding of the emerging sustainable energy sector. Upon completion of this certificate, students will have critical analytical skills that will help them enter the sustainable energy sector and advance their careers.

The SEE certificate requires a minimum of 13 credit hours drawn from core courses in sustainability and energy economics, combined with an elective based on student preferences that will allow tailoring of the certificate to specific fields.

Pre-requisite: AEDECON 2001 or ECON 2001

Core courses. Students are required to take each of the following:

AEDE/ENR 2501: Introduction to Sustainability (4 cr.) AEDE/IS 4320: Energy, the Environment and the Economy (3 cr.) AEDE 4321: Sustainable Energy (3 cr.) – (Proposed course. Currently offered as 4194) (note that either AEDE or ECON 2001 is a prerequisite for AEDE/IS 4320)

Elective courses. Students shall choose one from the following list:

AEDECON 3113 - Commodity Futures and Options Markets (3 cr.)
AEDECON 3103 - Principles of Agribusiness Finance (3 cr.) or BUSFIN 3120 - Foundations of Finance (3 cr)
AEDECON 4310 - Environmental and Natural Resource Economics (3 cr.)
AEDECON 4330 - The Sustainable Economy: Concepts and Methods (3 cr.)
AVIATN 3000 - Aviation Management and Marketing (3 cr.)
CRPLAN 2000 -Introduction to City and Regional Planning (3 cr.)
CRPLAN 3400 - Planning for Sustainable Economic Development (3 cr.)
ENVENG 3200 - Fundamentals of Environmental Engineering (3 cr.)
ENVENG 5600 - Science, Engineering, and Public Policy (3 cr.)
ENR 4450 - Climate Change Policy (3 cr.)
ENR 5210 - US Environmental Impact Assessment (3 cr.)

ENR 5211 – International Environmental Impact Assessment (3 cr.) GEOG 3900: Global Climate Change: Causes and Consequences (3 cr.) HIST 2911: The Climate Crisis: Mechanisms, Impacts, and Mitigation (4 cr.) PUBAFRS 3000 – Public Policy Analysis (3 cr.)

SEE Certificate Program Guidelines

Credit hours required: A minimum of 13

<u>Overlap with degree program</u>: A student is permitted to overlap up to 50% of credit hours between other degree programs (major, minor, other certificates, or GE).

Grades Required:

- Minimum of C- for a course to be counted in the certificate.
- Minium of 2.0 cumulative GPA for all certificate coursework.

<u>Certificate Approval</u>: The certificate may be approved by the student's assigned academic advisor via the Degree Audit Report (DAR). If the certificate is not complete on the DAR, the student must consult with a College of Food, Agricultural, and Environmental advisor.

Consult with Advisor for filing deadlines.

Appendix B: Certificate Completion Sheet

College of Food, Agricultural, and Environmental Sciences Sustainable Energy and the Economy (SEE) Certificate Program

Student Name:

Student OSU Email:

Certificate Advisor Name and Email:

Pre-requisite: AEDECON 2001 or ECON 2001.

Core Courses (3 or 4 credits)

| Course (Hours) | Course | Term |
|--|--------|-----------|
| | Grade | Completed |
| Take each course | | |
| ENR/AEDECON 2501: Introduction to Sustainability (4) | | |
| AEDECON 4320: Energy, the Economy, and the Environment (3) | | |
| AEDECON 4321: Sustainable Energy (3) | | |
| | | |

One course from the electives list (3 or 4 hours)

| Course (Hours) | Course Grade | Term Completed |
|----------------|-----------------|-------------------|
| | | |
| | | |

Total Credits (12-14)_____

Certificate Advisor Signature:

Date:

Appendix C: Semester by semester sample program

Plan to complete in two years

Year 1

Autumn:

- ENR/AEDECON 2501: Introduction to Sustainability **Spring:**
 - Elective

Year 2

Autumn

• AEDECON 4320: Energy, the Environment, and the Economy

Spring

• AEDECON 4321: Sustainable Energy

Appendix D: Assessment Rubric

| | Baseline | Advanced | mastery |
|----------------------|----------------------|---------------------|-----------------------|
| ELO 1: To analyze | Fails to grasp the | Can explain | Offers detailed |
| market economic, | sustainability | components of all | analysis of market |
| environmental, and | elements, namely the | three elements of | elements of |
| social dimensions of | market, | sustainable energy. | sustainability; and |
| sustainable, or | environmental and | | possesses the ability |
| renewable, energy | social elements of | | to explain the other |
| projects from the | "sustainable energy" | | two. |
| household to the | | | |
| industrial scale. | | | |

| | Baseline | Advanced | mastery |
|----------------------|------------------------|-----------------------|------------------------|
| ELO 2: to evaluate | Fails to understand | Can evaluate | Offers detailed |
| economic outcomes of | how economic | economic outcomes | analysis of policy |
| policies that affect | outcomes can be | of various policy | outcomes and is able |
| households and | evaluated (e.g., price | changes (tax | to propose specific |
| businesses as they | changes or trends, | incentives, renewable | changes to policies ot |
| consider investments | discounted cash | energy standards, | meet new |
| in sustainable, or | flows, levelized | etc.) | sustainability |
| renewable, energy | costs). | | objectives. |
| technologies. | | | |

| From: | Pintor, Lauren |
|--------------|---|
| То: | Parkman, Anna |
| Cc: | Osborne, Jeanne; Sohngen, Brent; Markland, Emma |
| Subject: | Re: Update |
| Date: | Thursday, April 4, 2024 3:36:56 PM |
| Attachments: | image001.png |

Dear Anna & Brent,

My apologies. Frankly, I'm just struggling to keep up with all these concurrence requests and need to figure out a better way to handle the workflow of these in SENR. Not an excuse, just an explanation.

SENR is supportive of the certificate and offers its concurrence. Also, thank you for considering a couple of our SENR courses in the certificate as well. We'll work to keep an eye on the enrollment and will work with you to make sure we can accommodate students seeking the certificate and using our courses to do so.

Best, Lauren

> THE OHIO STATE UNIVERSITY COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Lauren M. Pintor, PhD (she/her)

Associate Professor in Aquatic Ecology Associate Director of Undergraduate Education

School of Environment & Natural Resources

2021 Coffey Road, 210 Kottman Hall Columbus, OH 43210 614-292-9803 <u>pintor.6@osu.edu</u>

Pintor Lab: <u>http://u.osu.edu/pintor.6/</u> Faculty Webpage: <u>https://senr.osu.edu/our-people/lauren-m-pintor</u> Twitter: @PintorLabOSU

From: Parkman, Anna <parkman.6@osu.edu> Date: Friday, March 29, 2024 at 10:26 AM To: Pintor, Lauren <pintor.6@osu.edu> **Cc:** Osborne, Jeanne <osborne.2@osu.edu>, Sohngen, Brent <sohngen.1@osu.edu>, Markland, Emma <markland.10@osu.edu> **Subject:** RE: Update

Hi Laurn,

I am following up here as we have not heard anything back on the proposal for the Sustainable Energy course or the Sustainable Energy Certificate. We have concurrences from across the university and would like to move this proposal forward. Were you able to discuss this in your meetings?

Best,

Anna

Anna W. Parkman, PhD

Pronouns (she/her) <u>What are pronouns?</u> Professional Practice Professor of Agribusiness & Applied Economics Undergraduate Program Leader Department of Agricultural, Environmental, and Development Economics Internship & Study Abroad Coordinator

332 Agricultural Administration Bldg, 2120 Fyffe Rd., Columbus, OH 43210 614-292-9746 Office parkman.6@osu.edu

From: Parkman, Anna
Sent: Tuesday, February 13, 2024 5:35 PM
To: Pintor, Lauren <pintor.6@osu.edu>
Cc: Osborne, Jeanne <osborne.2@osu.edu>; Sohngen, Brent <sohngen.1@osu.edu>; Markland, Emma <markland.10@osu.edu>
Subject: Update

Hi Lauren,

Last week(2.7.24) I sent you an update on AEDE 4194 Sustainable Energy and our work in moving the course through the approval process for an 'official' course number. I am writing today sharing another piece of our curriculum work in AEDE this semester. Attached you will find a copy of a proposal for a certificate in Sustainable Energy. This proposal was approved by the AEDE faculty on Friday, Feb. 13th. We will be working with Jeanne Osborne to move the proposal through the appropriate processes to seek concurrence, but wanted to be sure it came your way first. If you have any questions or would like more information please reach out to Brent Sohngen (cc'd here also) as he has developed the proposal.

Anna

Anna W. Parkman, PhD

Pronouns (she/her) <u>What are pronouns?</u> Professional Practice Professor of Agribusiness & Applied Economics Undergraduate Program Leader Department of Agricultural, Environmental, and Development Economics Internship & Study Abroad Coordinator

332 Agricultural Administration Bldg, 2120 Fyffe Rd., Columbus, OH 43210 614-292-9746 Office parkman.6@osu.edu

| From: | Martin, Andrew |
|--------------|---|
| To: | Osborne, Jeanne |
| Cc: | Parkman, Anna; Vankeerbergen, Bernadette |
| Subject: | RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Tuesday, March 5, 2024 1:17:11 PM |
| Attachments: | image001.png |
| | image002.png |

Forgot to mention that Microbiology also offers concurrence (and you saw the concurrence from Statistics)

Best

Andrew

THE OHIO STATE UNIVERSITY

Andrew W. Martin

Associate Dean for Undergraduate Education Professor of Sociology 114 University Hall, 230 North Oval Mall Columbus, OH 43210 614-247-6641 Office martin.1026@osu.edu

From: Osborne, Jeanne <osborne.2@osu.edu>
Sent: Tuesday, March 5, 2024 1:02 PM
To: Martin, Andrew <martin.1026@osu.edu>
Cc: Parkman, Anna <parkman.6@osu.edu>; Vankeerbergen, Bernadette
<vankeerbergen.1@osu.edu>
Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Thank you, and Anna Parkman is included on this message so she is aware of the suggestion of adding the options from Geography.

Take care,

Jeanne

From: Martin, Andrew <<u>martin.1026@osu.edu</u>>

Sent: Tuesday, March 5, 2024 1:01 PM

To: Osborne, Jeanne <<u>osborne.2@osu.edu</u>>

Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>; Vankeerbergen, Bernadette

<<u>vankeerbergen.1@osu.edu</u>>

Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Hi Jeanne

We've also heard back from CLSE and Geography, both of whom offer concurrence for this. I'll let

you know if we hear anything else by Friday.

I would say Geography asked if the following courses could be considered as electives:

GEOG 2800 - Our Global Environment https://geography.osu.edu/sites/default/files/2023-01/sp23 geog columbus 2800 syllabus mazzocco49.pdf GEOG 3597.03 - Environmental Citizenship https://geography.osu.edu/sites/default/files/2022-08/au22 geog 3597 03 syllabus wainwright.pdf GEOG 5301 - Sustainable Transportation https://geography.osu.edu/sites/default/files/2024-01/SP 24 GEOG Columbus 5301 Syllabus Miller.pdf

I'll leave it up to you to decide, but Geography is very engaged in this work and I think they would make excellent additions.

Best

Andrew



THE OHIO STATE UNIVERSITY

Andrew W. Martin Associate Dean for Undergraduate Education Professor of Sociology 114 University Hall, 230 North Oval Mall Columbus, OH 43210 614-247-6641 Office martin.1026@osu.edu

From: Osborne, Jeanne <<u>osborne.2@osu.edu</u>> Sent: Wednesday, February 21, 2024 12:26 PM To: Martin, Andrew <<u>martin.1026@osu.edu</u>> **Cc:** Parkman, Anna <<u>parkman.6@osu.edu</u>>; Vankeerbergen, Bernadette <vankeerbergen.1@osu.edu> Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Thank you for the catch! Moving through things just a touch too quickly!

Take care.

Jeanne

From: Martin, Andrew <<u>martin.1026@osu.edu</u>> Sent: Wednesday, February 21, 2024 12:25 PM To: Osborne, Jeanne <<u>osborne.2@osu.edu</u>> **Cc:** Parkman, Anna <<u>parkman.6@osu.edu</u>>; Vankeerbergen, Bernadette <vankeerbergen.1@osu.edu>

Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Thanks!



THE OHIO STATE UNIVERSITY

Andrew W. Martin

Associate Dean for Undergraduate Education Professor of Sociology 114 University Hall, 230 North Oval Mall Columbus, OH 43210 614-247-6641 Office martin.1026@osu.edu

From: Osborne, Jeanne <<u>osborne.2@osu.edu</u>>
Sent: Wednesday, February 21, 2024 12:21 PM
To: Martin, Andrew <<u>martin.1026@osu.edu</u>>
Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>; Vankeerbergen, Bernadette
<<u>vankeerbergen.1@osu.edu</u>>
Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the
Economy

Apologies – proposal attached.

From: Osborne, Jeanne
Sent: Wednesday, February 21, 2024 12:15 PM
To: Martin, Andrew <<u>martin.1026@osu.edu</u>>
Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>; Vankeerbergen, Bernadette
<<u>vankeerbergen.1@osu.edu</u>>
Subject: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the
Economy

Dear Dr. Martin,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

We would appreciate concurrence from the College of Arts and Sciences. Would you please forward the attached Certificate proposal to the appropriate units within your college? We would appreciate

feedback by Friday, March 8, 2024.

Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne



Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: Osborne.2@osu.edu

| From: | Osborne, Jeanne |
|--------------|---|
| To: | Parkman, Anna |
| Cc: | Roe, Brian |
| Subject: | FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Friday, February 23, 2024 3:44:42 PM |
| Attachments: | Certificate in Sustainable Energy V6.docx |
| | image001.png |
| | image002.png |

Dear Anna,

Another concurrence – this one out of one of the units in the College of Engineering (you were copied on the response from the College of Public Health). Note the suggestion of possible courses to include.

Take care, Jeanne

From: Clark, Jennifer J. <clark.3550@osu.edu>
Sent: Friday, February 23, 2024 3:06 PM
To: Osborne, Jeanne <osborne.2@osu.edu>
Cc: Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu>
Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Jeanne,

This all looks fine from CRP.

We do have a couple more Sustainability courses you might want to list: CRPLAN 2210 Sustainable Urbanism CRPLAN 3210 Sustainable Urban Planning and Policy

Best, Jennifer



Jennifer Clark, PhD Knowlton School Distinguished Professor Head, City and Regional Planning Section The Knowlton School College of Engineering Editor-in-Chief, *Regional Studies* 200E Knowlton Hall 275 West Woodruff Avenue Columbus, OH 43210-1138 614.292.1790 Office From: Quinzon-Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>
Date: Wednesday, February 21, 2024 at 5:08 PM
To: Srinivasan, Manoj <<u>srinivasan.88@osu.edu</u>>, Anderson, Betty Lise
<<u>anderson.67@osu.edu</u>>, Brunelli, Nick <<u>brunelli.2@osu.edu</u>>, Lenhart, John
<<u>lenhart.49@osu.edu</u>>, Morrison, Shannon <<u>morrison.413@osu.edu</u>>, Clark, Jennifer J.
<<u>clark.3550@osu.edu</u>>

Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Good afternoon,

Jean Osborne, Assistant Dean for Academic Affairs in CFAES, is seeking concurrence for attached *Certificate in Sustainable Energy and the Economy* proposal.

Please respond to this email with your program's decision and any feedback by **Friday, March 8, 2024**.

Thank you, Rosie

From: Osborne, Jeanne
Sent: Wednesday, February 21, 2024 12:17 PM
To: Tomasko, David <<u>tomasko.1@osu.edu</u>>
Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>; Quinzon-Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>
Subject: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Dear Dr. Tomasko,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

We would appreciate concurrence from the College of Engineering. Would you please forward the attached Certificate proposal to the appropriate units within your college? We would appreciate

feedback by Friday, March 8, 2024.

Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne



Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: Osborne.2@osu.edu

| From: | Osborne, Jeanne |
|--------------|---|
| То: | Parkman, Anna; Roe, Brian |
| Subject: | FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Wednesday, February 28, 2024 1:28:43 PM |
| Attachments: | image001.png |
| | image002.png |
| | image003.png |

Another concurrence.

Take care,

Jeanne

From: Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu>
Sent: Wednesday, February 28, 2024 1:25 PM
To: Osborne, Jeanne <osborne.2@osu.edu>
Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Hello Jeanne,

Chemical and Biomedical Engineering grant concurrence.

Thanks, Rosie

From: Chalmers, Jeffrey <<u>chalmers.1@osu.edu</u>>

Sent: Wednesday, February 28, 2024 12:33 PM
To: Endres, Brian <<u>endres.10@osu.edu</u>>; Wyslouzil, Barbara <<u>wyslouzil.1@osu.edu</u>>; Quinzon-

Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>

Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Rosie, We (CBE) grant concurrence.

From: Endres, Brian <<u>endres.10@osu.edu</u>>
Sent: Wednesday, February 28, 2024 12:31 PM
To: Chalmers, Jeffrey <<u>chalmers.1@osu.edu</u>>; Wyslouzil, Barbara <<u>wyslouzil.1@osu.edu</u>>
Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the
Economy

Hi Barbara,

If you also agree with granting concurrence, can you send a quick message to Rosie?

Thanks! Brian

THE OHIO STATE UNIVERSITY

Brian Endres, M.Ed Manager, Academic Advising William G. Lowrie Department of Chemical and Biomolecular Engineering 616 Koffolt Laboratories (CBEC), 151 W. Woodruff Ave., Columbus, OH 43210 endres.10@osu.edu; cbe.osu.edu SCHEDULE ADVISING APPT My ZOOM meeting room

From: Chalmers, Jeffrey <<u>chalmers.1@osu.edu</u>>
Sent: Tuesday, February 27, 2024 2:32 PM
To: Endres, Brian <<u>endres.10@osu.edu</u>>; Wyslouzil, Barbara <<u>wyslouzil.1@osu.edu</u>>
Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the
Economy

l agree

From: Endres, Brian <<u>endres.10@osu.edu</u>>
Sent: Tuesday, February 27, 2024 1:38 PM
To: Wyslouzil, Barbara <<u>wyslouzil.1@osu.edu</u>>; Chalmers, Jeffrey <<u>chalmers.1@osu.edu</u>>
Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the
Economy

Barbara and Jeff,

I don't have any issues with this, and believe concurrence can be granted in my opinion. I believe some of our students will find the certificate to be of interest as well.

Thanks, Brian

THE OHIO STATE UNIVERSITY

Brian Endres, M.Ed Manager, Academic Advising William G. Lowrie Department of Chemical and Biomolecular Engineering 616 Koffolt Laboratories (CBEC), 151 W. Woodruff Ave., Columbus, OH 43210 endres.10@osu.edu; cbe.osu.edu SCHEDULE ADVISING APPT My ZOOM meeting room

From: Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu>

Sent: Thursday, February 22, 2024 9:38 AM

To: Endres, Brian <<u>endres.10@osu.edu</u>>

Cc: Brunelli, Nick <<u>brunelli.2@osu.edu</u>>

Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Hello Brian,

Here you go ...

RQB

From: Quinzon-Bonello, Rosario

Sent: Wednesday, February 21, 2024 5:08 PM

To: Srinivasan, Manoj <<u>srinivasan.88@osu.edu</u>>; Anderson, Betty Lise <<u>anderson.67@osu.edu</u>>; Brunelli, Nick <<u>brunelli.2@osu.edu</u>>; Lenhart, John <<u>lenhart.49@osu.edu</u>>; Morrison, Shannon <<u>morrison.413@osu.edu</u>>; Clark, Jennifer J. <<u>clark.3550@osu.edu</u>>

Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Good afternoon,

Jean Osborne, Assistant Dean for Academic Affairs in CFAES, is seeking concurrence for attached *Certificate in Sustainable Energy and the Economy* proposal.

Please respond to this email with your program's decision and any feedback by **Friday, March 8, 2024**.

Thank you, Rosie

From: Osborne, Jeanne
Sent: Wednesday, February 21, 2024 12:17 PM
To: Tomasko, David <<u>tomasko.1@osu.edu</u>>
Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>; Quinzon-Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>
Subject: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Dear Dr. Tomasko,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate

program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

We would appreciate concurrence from the College of Engineering. Would you please forward the attached Certificate proposal to the appropriate units within your college? We would appreciate feedback by Friday, March 8, 2024.

Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne



THE OHIO STATE UNIVERSITY

Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: <u>Osborne.2@osu.edu</u>

| From: | Osborne, Jeanne |
|--------------|---|
| To: | Parkman, Anna |
| Cc: | Roe, Brian |
| Subject: | FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Wednesday, March 6, 2024 12:43:40 PM |
| Attachments: | image002.png |
| | image003.png |

More concurrence from College of Engineering – see the comments from Mechanical and Aerospace Engineering, especially with regard to AEDECON 4321.

From: Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu>
Sent: Wednesday, March 6, 2024 11:21 AM
To: Osborne, Jeanne <osborne.2@osu.edu>
Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Responses from Aviation as well as Mechanical and Aerospace Engineering.

From: Morrison, Shannon <morrison.413@osu.edu>
Sent: Wednesday, March 6, 2024 8:14 AM
To: Srinivasan, Manoj <srinivasan.88@osu.edu>; Quinzon-Bonello, Rosario <quinzonbonello.1@osu.edu>; Anderson, Betty Lise <anderson.67@osu.edu>; Brunelli, Nick
<brunelli.2@osu.edu>; Lenhart, John <lenhart.49@osu.edu>; Clark, Jennifer J.
<clark.3550@osu.edu>

Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Hey Rosie,

Aviation also gives concurrence, although I am interested in knowing what the potential enrollment might be because our classes are getting pretty full. There is also another class we are developing that is related to aviation sustainability that might be helpful as well. Shannon



Shannon McLoughlin Morrison, Ph.D.

Assistant Director, Academics and Program Assessment Center for Aviation Studies 242 Bolz Hall, 2036 Neil Avenue, Columbus, OH 43210-1110 614-292-8028 Office morrison.413@osu.edu Pronouns: she/they / Honorific: Dr.

Land Acknowledgment The Ohio State University occupies land that is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria, Seneca, Wyandotte, Ojibwe and Cherokee peoples. The university resides on land ceded in the 1795 Treaty of Greeneville and the forced removal of tribes through the Indian Removal Act of 1830.

The Ohio State University is a land grant institution. Land grants nationwide received funding through the 1862

Morrill Act, which gave so-called 'public' land taken from tribal nations to states to seed institutions of higher education. The Ohio State University was funded through the sale of 630,000 acres of 'public' land, carefully documented at <u>https://www.landgrabu.org/universities</u>

From: Srinivasan, Manoj <<u>srinivasan.88@osu.edu</u>>
Sent: Wednesday, March 6, 2024 1:19 AM
To: Quinzon-Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>; Anderson, Betty Lise
<<u>anderson.67@osu.edu</u>>; Brunelli, Nick <<u>brunelli.2@osu.edu</u>>; Lenhart, John
<<u>lenhart.49@osu.edu</u>>; Morrison, Shannon <<u>morrison.413@osu.edu</u>>; Clark, Jennifer J.
<<u>clark.3550@osu.edu</u>>

Subject: Re: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Hi Rosie

I consulted with the '<mark>energy thermal fluids' folks in MAE</mark>. Here is the summary of their thoughts:

1) Jos Heremans, Jung-Hyun Kim, and Shang Zhai of MAE are currently running a course ME5194 "Renewable Energy," and have interest in the overall area of the engineering of sustainable and renewable energy. The certificate proposal includes a course called "Sustainable Energy," currently AEDE4194 and proposed to be AEDE4321. It does seem like the MAE course and the AEDE courses will have distinct topics: MAE covering the engineering and physical aspects with thermos as a pre-requisite and AEDE covering the societal, policy, economics perspective. The suggestion is to have the two parties proposing the courses to talk and potentially disambiguate the two course names (and topics if necessary), as well as agree to provide concurrence to these two threads.

2) Aside from the overlapping name in the courses as mentioned above, the MAE faculty provide concurrence. This proposal is doing something different from what the MAE faculty focus on. They did not feel that their course ME5194 needs to belong in this certificate as the certificate is aimed at students that have completed high school, and the MAE course will require at least an engineering thermodynamics class as a pre-requisite and the related pre-requisite chain. (if they think it makes sense to add it as an option in the 'choose one from' courses, that would be fine.)

Best Manoj

From: Quinzon-Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>
Date: Wednesday, February 21, 2024 at 5:08 PM
To: Srinivasan, Manoj <<u>srinivasan.88@osu.edu</u>>, Anderson, Betty Lise
sinivasan.88@osu.edu>, Anderson, Betty Lise
sinivasan.88@osu.edu>, Anderson, Betty Lise
sinivasan.88@osu.edu>, Anderson, Betty Lise

<<u>lenhart.49@osu.edu</u>>, Morrison, Shannon <<u>morrison.413@osu.edu</u>>, Clark, Jennifer J. <<u>clark.3550@osu.edu</u>>

Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Good afternoon,

Jean Osborne, Assistant Dean for Academic Affairs in CFAES, is seeking concurrence for attached *Certificate in Sustainable Energy and the Economy* proposal.

Please respond to this email with your program's decision and any feedback by **Friday, March 8, 2024**.

Thank you, Rosie

From: Osborne, Jeanne
Sent: Wednesday, February 21, 2024 12:17 PM
To: Tomasko, David <<u>tomasko.1@osu.edu</u>>
Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>; Quinzon-Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>
Subject: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Dear Dr. Tomasko,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

We would appreciate concurrence from the College of Engineering. Would you please forward the attached Certificate proposal to the appropriate units within your college? We would appreciate feedback by Friday, March 8, 2024.

Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne



THE OHIO STATE UNIVERSITY

Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: <u>Osborne.2@osu.edu</u>

| From: | Osborne, Jeanne |
|--------------|---|
| То: | Parkman, Anna; Roe, Brian |
| Subject: | FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Thursday, March 7, 2024 12:21:55 PM |
| Attachments: | image002.png |
| | image003.png |

Dear Anna and Brian,

Another concurrence with recommended course changes for the certificate.

Take care, Jeanne

From: Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu> Sent: Thursday, March 7, 2024 12:12 PM

To: Osborne, Jeanne <osborne.2@osu.edu>

Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Hello Jeanne,

Response from Civil and Environmental Engineering. Please see the additional comments, that I have highlighted below.

Thanks, Rosie

From: Lenhart, John <<u>lenhart.49@osu.edu</u>>

Sent: Thursday, March 7, 2024 12:05 PM

To: Quinzon-Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>; Srinivasan, Manoj <<u>srinivasan.88@osu.edu</u>>; Anderson, Betty Lise <<u>anderson.67@osu.edu</u>>; Brunelli, Nick <<u>brunelli.2@osu.edu</u>>; Morrison, Shannon <<u>morrison.413@osu.edu</u>>; Clark, Jennifer J. <<u>clark.3550@osu.edu</u>>

Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Hello Rosie,

I had those within CEGE that are involved in the energy space review the certificate proposal. Based on their review, we are able to provide concurrence. We would recommend removing ENVENG 3200 as it does not have significant content related to this certificate. In its place, we suggest adding the following courses to the listing of additional courses.

ENVENG 3600 – Technology Innovation for Society (new course that satisfies the GE Sustainability Theme)

ENVENG 5170 – Sustainability and the Circular Economy

Regards,

John



THE OHIO STATE UNIVERSITY

John J. Lenhart, Ph.D. Professor and Associate Chair Co-Director, Ohio Water Resources Center Department of Civil, Environmental and Geodetic Engineering The Ohio State University 470 Hitchcock Hall, 2070 Neil Avenue, Columbus, OH 43210

Phone: 614/688-8157 Email: <u>lenhart.49@osu.edu</u> Web: <u>https://envsurfchem.engineering.osu.edu/</u> and <u>http://wrc.osu.edu/</u>

From: Quinzon-Bonello, Rosario <quinzon-bonello.1@osu.edu>

Sent: Wednesday, February 21, 2024 5:08 PM

To: Srinivasan, Manoj <<u>srinivasan.88@osu.edu</u>>; Anderson, Betty Lise <<u>anderson.67@osu.edu</u>>; Brunelli, Nick <<u>brunelli.2@osu.edu</u>>; Lenhart, John <<u>lenhart.49@osu.edu</u>>; Morrison, Shannon <<u>morrison.413@osu.edu</u>>; Clark, Jennifer J. <<u>clark.3550@osu.edu</u>>

Subject: FW: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Good afternoon,

Jean Osborne, Assistant Dean for Academic Affairs in CFAES, is seeking concurrence for attached *Certificate in Sustainable Energy and the Economy* proposal.

Please respond to this email with your program's decision and any feedback by **Friday, March 8, 2024**.

Thank you, Rosie To: Tomasko, David <<u>tomasko.1@osu.edu</u>>

Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>; Quinzon-Bonello, Rosario <<u>quinzon-bonello.1@osu.edu</u>>; **Subject:** Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Dear Dr. Tomasko,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

We would appreciate concurrence from the College of Engineering. Would you please forward the attached Certificate proposal to the appropriate units within your college? We would appreciate feedback by Friday, March 8, 2024.

Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne

THE OHIO STATE UNIVERSITY

Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: <u>Osborne.2@osu.edu</u>

| From: | Ralph, Anne E. |
|--------------|---|
| То: | Osborne, Jeanne |
| Cc: | Parkman, Anna |
| Subject: | Re: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Monday, February 26, 2024 5:14:45 PM |
| Attachments: | image001.png |
| | image002.png |

Dear Jeanne,

Thanks for your email. The College of Law is pleased to grant concurrence. Please let me know if the College of Law can help in any other way. This looks like an exciting addition. Very best,

Anne



Anne E. Ralph Morgan E. Shipman Professor in Law & Associate Dean for Academic Affairs Michael E. Moritz College of Law 55 West 12th Avenue | Columbus, OH 43210 614-247-4797 Office | ralph.52@osu.edu Pronouns: she/her/hers

From: Osborne, Jeanne <osborne.2@osu.edu>
Date: Wednesday, February 21, 2024 at 12:21 PM
To: Ralph, Anne E. <ralph.52@osu.edu>
Cc: Parkman, Anna <parkman.6@osu.edu>
Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable
Energy and the Economy

Apologies – proposal attached.

From: Osborne, Jeanne
Sent: Wednesday, February 21, 2024 12:18 PM
To: Ralph, Anne E. <ralph.52@osu.edu>
Cc: Parkman, Anna <parkman.6@osu.edu>
Subject: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Dear Dr. Ralph,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

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Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne



THE OHIO STATE UNIVERSITY

Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: <u>Osborne.2@osu.edu</u>

| From: | Osborne, Jeanne |
|--------------|---|
| То: | Bisesi, Michael |
| Cc: | <u>Parkman, Anna; Kaye, Gail; Dobalian, Aram</u> |
| Subject: | Re: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Wednesday, February 21, 2024 3:26:25 PM |
| Attachments: | image002.png |
| | image003.png |

Thank you very much for the quick review!

Best regards

Jeanne

Get Outlook for iOS

From: Bisesi, Michael <bisesi.12@osu.edu>

Sent: Wednesday, February 21, 2024 3:13 PM

To: Osborne, Jeanne <osborne.2@osu.edu>

Cc: Parkman, Anna <parkman.6@osu.edu>; Kaye, Gail <kaye.3@osu.edu>; Dobalian, Aram <dobalian.1@osu.edu>

Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Dr. Osborne,

Thank you for sharing your proposal with the College of Public Health for developing an undergraduate-level Certificate in *Sustainable Energy and the Economy*. On behalf of the College, we support the development and offering of this proposed certificate program. The program does not presently nor will likely ever conflict with any programs developed or offered by the College of Public Health.

THE OHIO STATE UNIVERSITY

Michael S. Bisesi, PhD Vice Dean, Academic Affairs & Academic Administration Professor & Chair, Environmental Health Sciences College of Public Health Senior Strategic Advisor, OSU Global One Health initiative (GOHi) Administrative Chair, Sustainability Education and Learning Committee Fellow AIHA Phone: (614) 247-8290 Email: <u>bisesi.12@osu.edu</u> (Administrative Assistants Samantha Hicks (614) 688-3822 <u>hicks.598@osu.edu</u> or Mindy Freed <u>freed.28@osu.edu</u>)

From: Osborne, Jeanne <osborne.2@osu.edu> Sent: Wednesday, February 21, 2024 12:17 PM To: Bisesi, Michael <bisesi.12@osu.edu> Cc: Parkman, Anna <parkman.6@osu.edu>Subject: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Dear Dr. Bisesi,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

We would appreciate concurrence from the College of Public Health. Would you please forward the attached Certificate proposal to the appropriate units within your college? We would appreciate feedback by Friday, March 8, 2024.

Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne

THE OHIO STATE UNIVERSITY

Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: <u>Osborne.2@osu.edu</u>

| From: | Osborne, Jeanne |
|--------------|---|
| То: | Croxton, Keely |
| Cc: | Parkman, Anna |
| Subject: | RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Tuesday, March 5, 2024 3:38:51 PM |
| Attachments: | image002.png |
| | image003.png |
| | image004.png |

Thank you, Keely! I will pass these along to Dr. Parkman (also copied on this message) for consideration as possible elective options.

I appreciate the feedback!

Best regards,

Jeanne

From: Croxton, Keely <croxton.4@osu.edu>
Sent: Tuesday, March 5, 2024 3:32 PM
To: Osborne, Jeanne <osborne.2@osu.edu>
Cc: Parkman, Anna <parkman.6@osu.edu>
Subject: Re: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the
Economy

Jeanne,

Thank you for the reminder! My primary comment was that we offer some sustainability courses at Fisher that I think would be good electives for the certificate. Some have pre-req structures that would practically only make them open to business students, but others have an AEDEcon course as a pre-req so could have broader enrollment. Specifically, I'm thinking of our courses in Sustainability Marketing (BUSML 4255), Sustainable Supply Chains (BUSML 4385) and Sustainable Operations (BUSOBA 42253). We also have a projects course (Projects in Sustainable Supply Chains - BUSOBA 4254) that might be a good option too.

Adding these courses would not only expose non-business students to our courses, but also possibly make the certificate more attractive to business students as they might already be taking these business courses.

Please let me know if you are open to including these courses in your elective list.

Thank you!

Keely



THE OHIO STATE UNIVERSITY

Keely L. Croxton, PhD Prof. of Logistics Associate Dean of Undergraduate Programs Fisher College of Business croxton.4@osu.edu



From: Osborne, Jeanne <<u>osborne.2@osu.edu</u>>
Date: Tuesday, March 5, 2024 at 1:25 PM
To: Croxton, Keely <<u>croxton.4@osu.edu</u>>
Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>
Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable
Energy and the Economy

Dear Dr. Croxton,

I just wanted to check back in on this request. We are hoping to have responses gathered by this Friday, March 8.

Please let me know if you have any questions or need additional information.

Take care,

Jeanne

From: Osborne, Jeanne
Sent: Wednesday, February 21, 2024 12:14 PM
To: Croxton, Keely <<u>croxton.4@osu.edu</u>>
Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>
Subject: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the
Economy

Dear Dr. Croxton,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

We would appreciate concurrence from the Fisher College of Business. Would you please forward the attached Certificate proposal to the appropriate units within your college? We would appreciate feedback by Friday, March 8, 2024.

Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne

THE OHIO STATE UNIVERSITY

Jeanne M. Osborne | Pronouns: She, Her, Hers Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: Osborne.2@osu.edu

| From: | Greenbaum, Rob |
|--------------|---|
| То: | Osborne, Jeanne |
| Cc: | Parkman, Anna; Adams, Christopher; Clark, Jill |
| Subject: | RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy |
| Date: | Monday, February 26, 2024 2:10:32 PM |
| Attachments: | image002.png |
| | image003.png |

Hi Jeanne,

The Glenn College is pleased to provide concurrence for the proposed new certificate in Sustainable Energy and the Economy.

All the best,

Rob



THE OHIO STATE UNIVERSITY

Robert T. Greenbaum Associate Vice Provost for Academic Programs Office of Academic Affairs Professor, Associate Dean for Curriculum John Glenn College of Public Affairs 350E Page Hall, 1810 College Road, Columbus, OH 43210 614-292-9578 Office / 614-292-2548 Fax https://glenn.osu.edu/rob-greenbaum Pronouns: he/him/his

From: Osborne, Jeanne <osborne.2@osu.edu>
Sent: Wednesday, February 21, 2024 12:22 PM
To: Greenbaum, Rob <greenbaum.3@osu.edu>
Cc: Parkman, Anna <parkman.6@osu.edu>
Subject: RE: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Apologies - proposal attached.

From: Osborne, Jeanne

Sent: Wednesday, February 21, 2024 12:19 PM

To: Greenbaum, Rob <<u>greenbaum.3@osu.edu</u>>

Cc: Parkman, Anna <<u>parkman.6@osu.edu</u>>

Subject: Concurrence Request: UG Academic Certificate, type 1a: Sustainable Energy and the Economy

Dear Dr. Greenbaum,

I hope you are doing well as we approach spring!

Attached please find a proposal for a new Undergraduate Academic Certificate (type 1a) titled 'Sustainable Energy and the Economy' presented by the Department of Agricultural, Environmental and Development Economics in CFAES. The certificate is focused on the economics associated with sustainable energy alternatives, and endeavors to provide individuals completing this certificate program with the knowledge and skills needed to assess the economics and sustainability of various energy sector alternatives.

We would appreciate concurrence from the John Glenn College of Public Affairs. Would you please forward the attached Certificate proposal to the appropriate units within your college? We would appreciate feedback by Friday, March 8, 2024.

Please let me know if you have any questions or need additional information.

Take care and have a great week!

Jeanne

THE OHIO STATE UNIVERSITY

Jeanne M. Osborne | Pronouns: She, Her, Hers

Assistant Dean for Academic Affairs College of Food, Agricultural, and Environmental Sciences 100E Agricultural Administration, 2120 Fyffe Rd. Columbus, OH 43210 Tel: 614-292-1734 Fax: 614-292-1218 e-mail: Osborne.2@osu.edu