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| --- |
| For Academic Affairs and Research Use Only |
| Proposal Number: |  |
| CIP Code:  |  |
| Degree Code: |  |

 **Course Deletion Proposal Form**

**[X] Undergraduate Curriculum Council**

**[ ] Graduate Council**

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| John Hershberger 10/20/2020 | Enter date |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| William Burns  | 9/30/2020 |

**Department Chair** |

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**Head of Unit (if applicable)**   |
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| John Hershberger 10/20/2020 | Enter date |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Lynn Boyd | 10/26/2020 |

**College Dean** |

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**Graduate Curriculum Committee Chair** |
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| David Harding | 4/26/2021 |

**General Education Committee Chair (if applicable)**   |

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| Alan Utter | 4/27/2021 |

**Vice Chancellor for Academic Affairs** |

1. **Course Title, Prefix and Number**

Energy and the Environment, PHSC 1014

1. **Contact Person** (Name, Email Address, Phone Number)

William Burns, wburns@astate.edu , 972-3086

1. **Justification**

The course was created and taught by a faculty member that is no longer employed by A-State. Existing faculty have no desire to teach the course.

1. **Last semester course will be offered**

Spring 2018.

1. No **Does this course appear in your curriculum? (if yes, and this deletion changes the curriculum, a Program Modification Form is required)**

Enter text...

1. No **Is this course dual-listed (undergraduate/graduate)?**

Enter text...

1. No **Is this course cross-listed with a course in another department?**

If yes, which course(s)?

 Enter text...

1. No **Is there currently a course listed in the Bulletin or Banner which is a one-to-one equivalent to this course (please check with the Registrar’s Office if unsure)?**

If yes, which course?

Enter text...

**Bulletin Changes**

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| --- |
| **Instructions**  |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.** **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.**  |

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|  |  |
| --- | --- |
| **Communication:** | **Required Credit Hrs.** |
| ENG 1003, Composition I ENG 1013, Composition II | 6 |
| **Math:***MATH 1043 - Quantitative Reasoning will satisfy the math requirement unless otherwise noted in the"General Education Requirements" section of a degree plan.* | **Required Credit Hrs.** |
| MATH 1043, Quantitative ReasoningMATH 1023, College Algebra (required for Science, Technology, Engineering, and Math majors) Any MATH course that requires MATH 1023 as a prerequisite. | 3 |
| **Science:***Course and Laboratory required* | **Required Credit Hrs.** |
| **Physical Science - *Four (4) hours required***CHEM 1013 **AND** 1011, General Chemistry I and LaboratoryCHEM 1043 **AND** 1041, Fundamental Concepts of Chemistry and Laboratory GEOL 1003 **AND** 1001, Environmental Geology and Laboratory~~PHSC 1014, Energy and the Environment~~PHSC 1203 **AND** 1201, Physical Science and Laboratory PHYS 1103 **AND** 1101, Intro to Space Science and Laboratory PHYS 2034, University Physics IPHYS 2054, General Physics I | 4 |
| **Life Science - *Four (4) hours required***BIOL 1003 **AND** 1001, Biological Science and Laboratory BIOL 1033 **AND** 1001, Biology of Sex and LaboratoryBIOL 1063 **AND** 1001, People & Environment and Laboratory BIO 1503 **AND** 1501, Biology of Plants and LaboratoryBIO 2013 **AND** 2011, Biology of the Cell and LaboratoryBIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory BIO 2203 **AND** 2201, Human Anatomy and Physiology I and Laboratory | 4 |
| **Fine Arts & Humanities:** | **Required Credit Hrs.** |
| **Fine Arts - *Three (3) hours required***ART 2503 Fine Arts – Visual MUS 2503 Fine Arts – Music THEA 2503 Fine Arts - Theatre | 3 |
| **Humanities - *Three (3) hours required***ENG 2003, World Literature to 1660ENG 2013, World Literature Since 1660 PHIL 1103, Introduction to Philosophy | 3 |
| **Social Sciences:***One course must be selected from HIST 2763, HIST 2773 or POSC 2103* | **Required Credit Hrs.** |
| ANTH 2233, Introduction to Cultural Anthropology HIST 2763, United States History to 1876 CMAC 1003, Mass Communications in Modern Society HIST 2773, United States History since 1876 ECON 2313, Principles of Macroeconomics POSC 1003, Introduction to PoliticsECON 2333, Economic Issues & Concepts POSC 2103, Introduction to US Government GEOG 2613, Introduction to Geography PSY 2013, Introduction to PsychologyHIST 1013, World History to 1500 SOC 2213, Introduction to Sociology HIST 1023, World History since 1500 | 9 |
| **Departmental Option:** | **Required Credit Hrs.** |
| *The three (3) optional hours are chosen by the Department for the Degree plan and not the individual student. The three (3) hours will be from either COMS 1203 Oral Communication, Fine Arts & Humanities, or Social Sciences.* | **3** |
| **Total Required Hours:** | **35** |

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GENERAL EDUCATION CURRICULUM

FOR ASSOCIATE OF APPLIED SCIENCE DEGREES

|  |  |
| --- | --- |
| **Composition:** | **Required Credit Hrs.** |
| ENG 1003, Composition I ENG 1013, Composition II | 6 |
| **Natural Sciences and Mathematics:***MATH 1043 - Quantitative Reasoning will satisfy the math requirement unless otherwise noted in the"General Education Requirements" section of a degree plan.* | **Required Credit Hrs.** |
| MATH 1043, Quantitative Reasoning MATH 1023, College AlgebraAny MATH course that requires MATH 1023 as a prerequisite. | 3 |
| **Select one of the following:**BIOL 1003 **AND** 1001, Biological Science and Laboratory BIOL 1033 **AND** 1001, Biology of Sex and LaboratoryBIOL 1063 **AND** 1001, People & Environment and Laboratory BIO 1503 **AND** 1501, Biology of Plants and LaboratoryBIO 2013 **AND** 2011, Biology of the Cell and LaboratoryBIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory BIO 2203 **AND** 2201, Human Anatomy and Physiology I and LaboratoryCHEM 1013 **AND** 1011, General Chemistry I and LaboratoryCHEM 1043 **AND** 1041, Fundamental Concepts of Chemistry and Laboratory GEOL 1003 **AND** 1001, Environmental Geology and Laboratory~~PHSC 1014, Energy and the Environment~~PHSC 1203 **AND** 1201, Physical Science and LaboratoryPHYS 1103 **AND** 1101, Introduction to Space Science and Laboratory PHYS 2034, University Physics IPHYS 2054, General Physics IPHYS 2073 **AND** 2071, Fundamental Physics and Laboratory | 4 |
| **Social Sciences:** | **Required Credit Hrs.** |
| **Select one of the following:**HIST 2763, The United States To 1876 HIST 2773, The United States Since 1876POSC 2103, Introduction to United States Government | 3 |
| **Computer Applications/Fundamentals:** | **Required Credit Hrs.** |
| **Select one of the following:**CIT 1503, Microcomputer Applications CS 1013, Introduction to Computers | 3 |
| **Total Required Hours:** | **19** |

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GENERAL EDUCATION CURRICULUM

FOR ASSOCIATE OF GENERAL STUDIES DEGREES

|  |  |
| --- | --- |
| **Composition:** | **Required Credit Hrs.** |
| ENG 1003, Composition I ENG 1013, Composition II | 6 |
| **Natural Sciences and Mathematics:***MATH 1043 - Quantitative Reasoning will satisfy the math requirement unless otherwise noted in the"General Education Requirements" section of a degree plan.* | **Required Credit Hrs.** |
| MATH 1043, Quantitative Reasoning MATH 1023, College AlgebraAny MATH course that requires MATH 1023 as a prerequisite. | 3 |
| **Select one of the following:**BIOL 1003 **AND** 1001, Biological Science and Laboratory BIOL 1033 **AND** 1001, Biology of Sex and LaboratoryBIOL 1063 **AND** 1001, People & Environment and Laboratory BIO 1503 **AND** 1501, Biology of Plants and LaboratoryBIO 2013 **AND** 2011, Biology of the Cell and LaboratoryBIO 2103 **AND** 2101, Microbiology for Nursing and Allied Health and Laboratory BIO 2203 **AND** 2201, Human Anatomy and Physiology I and LaboratoryCHEM 1013 **AND** 1011, General Chemistry I and LaboratoryCHEM 1043 **AND** 1041, Fundamental Concepts of Chemistry and Laboratory GEOL 1003 **AND** 1001, Environmental Geology and Laboratory~~PHSC 1014, Energy and the Environment~~PHSC 1203 **AND** 1201, Physical Science and LaboratoryPHYS 1103 **AND** 1101, Introduction to Space Science and Laboratory PHYS 2034, University Physics IPHYS 2054, General Physics IPHYS 2073 **AND** 2071, Fundamental Physics and Laboratory | 4 |
| **Arts and Humanities:** | **Required Credit Hrs.** |
| **Select one of the following:**ART 2503, Fine Arts-VisualENG 2003, World Literature to 1660ENG 2013, World Literature Since 1660 MUS 2503, Fine Arts-MusicPHIL 1103, Introduction to Philosophy THEA 2503, Fine Arts-Theatre | 3 |
| **Social Sciences:***One course must be selected from HIST 2763, HIST 2773 or POSC 2103* | **Required Credit Hrs.** |
| ANTH 2233, Introduction to Cultural Anthropology HIST 2763, United States History to 1876 CMAC 1003, Mass Communications in Modern Society HIST 2773, United States History since 1876 ECON 2313, Principles of Macroeconomics POSC 1003, Introduction to PoliticsECON 2333, Economic Issues & Concepts POSC 2103, Introduction to US Government GEOG 2613, Introduction to Geography PSY 2013, Introduction to PsychologyHIST 1013, World History to 1500 SOC 2213, Introduction to Sociology HIST 1023, World History since 1500 | 9 |
| **Total Required Hours:** | **25** |

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**Major in Agricultural Studies**

**Bachelor of Science in Agriculture Emphasis in Agricultural Systems Technology**

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| --- | --- |
| **University Requirements:** |  |
| See University General Requirements for Baccalaureate degrees (p. 42) |  |
| **First Year Making Connections Course** | **Sem. Hrs.** |
| AGRI 1213, Making Connections in Agriculture | **3** |
| **General Education Requirements:** | **Sem. Hrs.** |
| See General Education Curriculum for Baccalaureate degrees (p. 78) |  |

A complete 8-semester degree plan is available at [https://www.astate.edu/info/academics/degrees/](http://www.astate.edu/info/academics/degrees/)

**Students with this major must take the following:**

*CHEM 1013 AND 1011, General Chemistry I and Laboratory* ***OR*** *CHEM 1043 and CHEM 1041, Fundamental Concepts of Chemistry and Laboratory*

*BIOL 1003* ***AND*** *BIOL 1001, Biological Science and Laboratory*

*COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)*

|  |  |
| --- | --- |
| **Agriculture Core Courses:** | **Sem. Hrs.** |
| (See Beginning of Agriculture Section) | **24** |
| **Major Requirements:** | **Sem. Hrs.** |
| See emphasis area below. |  |
| **Emphasis Area (Agricultural Systems Technology):** | **Sem. Hrs** |
| *Select one of the following:*AGEC 3013, Decision Tools for Agribusiness AGST 3503, Geospatial Data Applications | 3 |
| AGRI 4223, Agriculture and the Environment | 3 |
| AGST 3543, Fundamentals of GIS/GPS | 3 |
| AGST 4003, Modern Irrigation Systems | 3 |
| AGST 4022, Irrigation Technology Tools | 2 |
| AGST 4543, Understanding Geographic Information Systems | 3 |
| *Select one of the following:*AGST 4501, Agricultural Decision Analysis **OR**AGST 4511, Unmanned Aircraft Sytems | 1 |
| AGST 4773, Remote Sensing | 3 |
| AGST 4843, Agricultural Systems Technology Capstone | 3 |
| *Select one of the following:*BIO 3023, Principles of Ecology **OR**GEOG 3723, Introduction to Physical Geograph, Weather, and Climate **OR**GEOG 4113, Water Resources Planning **OR**GEOG 4633, Climatology | 3 |
| *Select one of the following:*BIO 1503 AND 1501, Biology of Plants and Laboratory **OR**GEOL 1003 AND 1001, Environmental Geology and Laboratory **OR**~~PHSC 1014, Energy and the Environment~~ **~~OR~~**PHSC 1203 AND 1201, Physical Science and Laboratory **OR**PHYS 1103 AND 1101, Introduction to Space Science and Laboratory **OR**PHYS 2054, General Physics I | 4 |

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**PHIL 4773. Defining Race** Biological, constructivist, and denial theories of race and their moral and political ramifications for racism, affirmative action, and hate crime legislation. Prerequisite, PHIL 1103. Spring, odd.

**PHIL 480V. Readings in Philosophy** Independent readings for advanced students only. Must have consent of department chair. May be repeated for a maximum of 6 hours credit. Fall, Spring.

**PHIL 4883. Special Topics in Philosophy** Advanced study of selected topics in philosophy. Content will vary. May be repeated for a maximum of 9 hours credit. Prerequisite, 9 hours of philosophy. Fall.

**PHIL 4883. Special Topics in Philosophy** Advanced study of selected topics in philosophy. Content will vary. May be repeated for a maximum of 9 hours credit. Prerequisite, 9 hours of philosophy. Fall.

**Physical Science (PHSC)**

**PHSC 1003. Making Connections Chemistry and Physics** Required course for first semes- ter freshmen. Core content includes transition to college, academic performance skills, problem solving, critical thinking, self management, group building skills, and university policies. Content related to the departmental majors is also included. Fall.

**~~PHSC 1014. Energy and the Environment~~** ~~A hybrid lecture and lab course that studies energy. What it is, how it is produced and used, and its effect on the environment. Special atten- tion will be paid to individual energy usage and economical methods by which to reduce usage. Prerequisite, MATH 0013 or ACT Mathematics core of 16. Fall, Spring.~~

**PHSC 1201. Physical Science Laboratory** Two hours per week. Special course fees may apply. Corequisite, PHSC 1203. Fall, Spring, Summer. (ACTS#: PHSC 1004)

**PHSC 1203. Physical Science** The relationship of man to his physical world, content of the course is centered on the development of our modern concepts about matter and energy and how this development is related to the social order of which man is a part. Lecture three hours. This course does not satisfy science certification for secondary school teachers. It is not accepted as a major requirement in any natural science field. Special course fees may apply. Corequisite, PHSC 1201. Prerequisite, MATH 0013 or ACT Mathematics score of 16. Fall, Spring, Summer. (ACTS#: PHSC 1004)

**Physics (PHYS)**

**PHYS 1101. Introduction to Space Science Laboratory** Two hours per week. Special course fees may apply. Corequisite, PHYS 1103. Fall, Spring. (ACTS#: PHSC 1204)

**PHYS 1103. Introduction to Space Science** A survey of the basic principles of science with emphasis on physics through their application to study about our place in the cosmos. Lecture three hours. Corequisite, PHYS 1101. Special course fees may apply. Prerequisite, MATH 0013 or ACT Math score of 16. Fall, Spring. (ACTS#: PHSC 1204)

**PHYS 2034. University Physics I** Basic principles of mechanics, thermodynamics, materials and wave motion utilizing calculus with multimedia computers, at each station, in a unified lecture and lab format. 6 hours per week. Special course fees may apply. This course may be substituted for PHYS 2054. This course will meet the General Education Requirements for Physical Science. Corequisite, MATH 2204. Fall, Spring. (ACTS#: PHYS 2034)

**PHYS 2044. University Physics II** Continuation of PHYS 2034 covering the basic principles of electricity, magnetism, waves, optics and topics from modern physics utilizing calculus with mul- timedia computers, at each station, in a unified lecture and lab format. 6 hours per week. Special course fees may apply. Special course fees may apply. Prerequisite, Physics 2034 or 2054. This course may be substituted for PHYS 2064 or for PHYS 2083 and 2081. Corequisite, MATH 2214. Fall, Spring. (ACTS#: PHYS 2044)

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**REI 4423. Real Estate Finance** Instruments, techniques, and institutions of real estate finance, sources of funds, mortgage risk analysis, emphasis on typical policies and procedures used in financing of residential, industrial, and commercial properties. Spring.

**REI 4433. Real Estate Appraising** Factors influencing real property values, application of three

approaches in determining the value of residential, commercial, and industrial properties. Fall.

**REI 4443. Appraising and Investment** Application of techniques used in analyzing potential return from income properties to arrive at investment decisions and estimates of real estate values. Prerequisite, REI 4433 or instructor permission. Irregular.

**REI 4513. Property and Liability Insurance** Analysis of risk theory, property and liability risks, and the economic functions of property insurance. The course treats traditional and modern theories of risk, property and liability coverages, and functional insurance areas. Spring.

**REI 4543. Life Insurance** Analysis of the economic functions of life insurance. Attention is centered on the human life value concept and the basic forms of life insurance and annuities. Legal aspects, contractual provisions and health and other specialized forms of human life value insurance are studied. Fall.

**REI 459V. Special Problems in Real Estate and Insurance** Individual problems in real estate and insurance arranged in consultation with the instructor. Must be approved by department chair. Fall, Spring, Summer.

**REI 460V. Internship in Real Estate and Insurance** Practical training in real estate or insurance within appropriate companies or agencies. To earn intern credit, each student will be expected to spend two hours with the firm per week per credit hour awarded. Prerequisites, REI 3413, for real estate, or REI 3513, for insurance, and instructor permission. These prerequisite courses permit an individual to hold a valid license to practice in each respective field after passing the proper licensing examination. Internship requires a Junior classification or above. Irregular.

**Renewable Energy Technology (RET)**

**RET 3113. Fundamentals and Applications of Renewable Energy** Fundamentalprinciples and applications related to biofuels, wind, solar, hydrogen and other emerging alternative energy technologies along with their applications. Prerequisites, MATH 1023, CHEM 1013 and CHEM 1011 or PHSC 1203 and PHSC 1201, or ~~PHSC 1014~~. Fall.

**RET 4013. Process Technology for Agricultural Products** Study of processing principles and applications in bio-energy industry: process parameters, properties of materials, transport processes, fluid flow, pumps, material handling, drying, extraction, fermentation, bioreactor, sanita- tion and process economics. Prerequisites, MATH 1023, CHEM 1013, and CHEM 1011. Process instrumentation or equivalent course as approved by instructor also required. Spring.

**RET 4023. Advanced Bioenergy** A study of processes and developments in the biofuels and other emerging technology for biobased energy products. Prerequisites, MATH 1023, CHEM 1013, CHEM 1011 and RET 3113, or instructor permission. Fall.

**RET 4113. Advanced Renewable Energy Systems** A study of renewable energy systems including technologies for solar, hydrogen, fuel cell, biomass and wind. Prerequisites MATH 1023, CHEM 1013, CHEM 1011 and RET 3113, or instructor permission. Spring.

**RET 4123. Energy Conservation and Efficiency** A study of energy and power measurement techniques to analyze energy use, and methods to conserve energy in residential and industrial sectors. Prerequisites, PHYS 2054 and CS 1013, or RET 3113; or instructor permission. Fall.

**RET 4313. Wind Energy Technology** A study of wind energy fundamentals and processes for converting wind power with emphasis on turbines and the wind power systems. Prerequisites, PHYS 2054 or RET 3113; or instructor permission. Spring.