# http://www.ric.edu/webcommunications/images/SealWithText_Small_Black.pngUNDERGRADUATE CURRICULUM COMMITTEE (UCC)PROPOSAL FORM

## Cover page scroll over blue text to see further important [instructions](#instructions): please read.

**N.B. DO NOT USE HIGHLIGHT, please DELETE THE WORDS THAT DO NOT APPLY TO YOUR PROPOSAL**

**ALL numbers in section (A) need to be completed, including the impact ones.**

|  |  |  |
| --- | --- | --- |
| A.1. [Course or program](#Proposal) | **PHYs 120: The extraordinary physics of ordinary things** |  |
| [Replacing](#Ifapplicable)  |  |
| A.2. [Proposal type](#type) | **Course: creation**  |
| A.3. [Originator](#Originator) |  | [Home department](#home_dept) |  |
| A.4. [Context and Rationale](#Rationale)  | **There is a college wide need for more AQSR courses that are open to a wide variety of students. This new course PHYS 120: The Extraordinary Physics of Ordinary Things will help fill that need.** |
| A.5. [Student impact](#student_impact) | **Students would have an additional AQSR option.** |
| A.6. [Impact on other programs](#impact)  | **None** |
| A.7. [Resource impact](#Resource) | [*Faculty PT & FT*](#faculty):  | **We have the faculty to teach this** |
| [*Library*:](#library) | **none** |
| [*Technology*](#technology) | **none** |
| [*Facilities*](#facilities): | **none** |
| A.8. [Semester effective](#Semester_effective) | **Fall, 2018** | A.9. [Rationale if sooner than next Fall](#Semester_effective) |  |
| A.10. INSTRUCTIONS FOR CATALOG COPY: This single file copy must include ALL relevant pages from the college catalog, and show how the catalog will be revised. (1) Go to the “Forms and Information” page on the UCC website. Scroll down until you see the Word files for the current catalog. (2) Download ALL catalog sections relevant for this proposal, including course descriptions and/or other affected programs. (3) Place ALL relevant catalog copy into a single file. Put page breaks between sections and delete any catalog pages not relevant for this proposal. (4) Using the track changes function, revise the catalog pages to demonstrate what the information should look like in next year’s catalog. (5) Check the revised catalog pages against the proposal form, especially making sure that program totals are correct if adding/deleting course credits. If new copy, indicate where it should go in the catalog. If making related proposals a single catalog copy that includes all is acceptable. Send as a separate file along with this form. |

B. [NEW OR REVISED COURSES](#delete_if)  **DO NOT use highlight. Delete this whole page if the proposal does not include a new or revised course.**

|  | Old ([for revisions only](#Revisions))Only include information that is being revised, otherwise leave blank (delete provided examples that do not apply) | NewExamples are provided for guidance, delete the ones that do not apply |
| --- | --- | --- |
| B.1. [Course prefix and number](#cours_title)  |  | **PHYS 120** |
| B.2. Cross listing number if any |  |  |
| B.3. [Course title](#title)  |  | **The Extraordinary Physics of Ordinary Things** |
| B.4. [Course description](#description)  |  | **Students will learn about physical principles governing everyday applications and phenomena such as sports, musical instruments, computers, etc. Students will see how various physical principles work together in these technologies.** |
| B.5. [Prerequisite(s)](#prereqs) |  | **Completion of any mathematics general education distribution.** |
| B.6. [Offered](#Offered) | **Fall | Spring | Summer |****Even years | Odd years | Annually**[**Alternate Years**](file:///C%3A/Users/jfuentes_4972/Downloads/Alternate%20Years)  **|** [**As needed**](#As_needed) | **Spring**  |
| B.7. [Contact hours](#contacthours)  |  | **4** |
| B.8. [Credit hours](#credits) |  | **4** |
| B.9. [Justify differences if any](#differences) |  |
| B.10. [Grading system](#grading)  | **Letter grade | Pass/Fail | CR/NCR** | **Letter grade**  |
| B.11. [Instructional methods](#instr_methods) | **Fieldwork | Internship | Laboratory | Lecture | Practicum | Seminar | Small group | Individual | Studio | Distance Learning** | **Lecture | Small group**  |
| B.12.[Categories](#required) | **Required for major/minor |Restricted elective for major/minor | Free elective | Required for Certification**  | **Free elective**  |
| B.13. Is this an Honors course? | **YES | NO** | **NO** |
| B.14. [General Education](#ge)N.B. Connections must include at least 50% Standard Classroom instruction. | **YES | NO |****category:** | **YES |** **category: Advanced Quantitative and Scientific Reasoning** |
| B.15. [How will student performance be evaluated?](#performance) | **Attendance | Class participation | Exams | Presentations | Papers |** **Class Work | Interviews | Quizzes |****Performance Protocols | Projects |** **| Reports of outside supervisor**  | **Attendance | Class participation | Exams | Class Work | Quizzes |Projects |**  |
| B.16. [Redundancy statement](#competing) |  | **This course is not similar to others offered at the college** |
| B. 17. Other changes, if any |  |

| B.18**.** [**Course learning outcomes**](#outcomes)**: List each one in a separate row** | [**Professional Org.Standard(s)**](#standards)**, if relevant** | [**How will each outcome be measured**](#measured)**?** |
| --- | --- | --- |
| 1. Students will learn basic physics principles in the areas of mechanics, thermodynamics and electricity and magnetism. |  | Problem sets, labs, quizzes, exams |
| 2. Students will be able to apply these basic principles to explain a variety of natural phenomena and technological applications. |  | Low stakes writing assignments |
| 3. Students will learn how physics concepts interconnect in more complicated technological applications. |  | Low stakes writing assignments |
| 4. Students can collect, analyze and interpret scientific data. |  | In-class activities, problem sets |

| B.19. [**Topical outline**](#outline)**: Do NOT insert whole syllabus, we just need a two-tier outline** |
| --- |
| 1. Newton’s laws of Motion
	1. Force
	2. Acceleration
	3. Newton’s Laws
	4. Applications
		1. Pitching a baseball
		2. Muscles and bones
2. Conservation of energy
	1. Kinetic energy
	2. Potential energy
	3. Conservation of energy
	4. Applications
		1. Roller coaster
		2. Hydroelectric power generation
3. Rotational motion
	1. Angles,
	2. Angular velocity and acceleration
	3. Applications
		1. Clocks
		2. Merry go round
4. Fluids
	1. Density
	2. Buoyancy
	3. Applications
		1. Lava lamps
		2. Floating ships
5. Waves and vibrations
	1. Waves,
	2. Wavelength, and frequency
	3. Standing waves
	4. Applications
		1. Echolocation: bats and dolphins
		2. Musical instruments
6. Sound
	1. Propagation of sound
	2. Doppler effect
		1. Ultrasound sonography
		2. Headphones
7. Thermodynamics
	1. Thermal expansion,
	2. Thermal conductivity
	3. Applications
		1. Home insulation
		2. Expanding bridges
8. Energy, environment and technology
	1. Technological solutions to energy problems
	2. Applications
		1. Solar cells
		2. Wind turbines
9. Optics
	1. Reflection,
	2. Curved mirrors
	3. Applications
		1. Kaleidoscopes
		2. Fun house mirrors
10. Nuclear physics
	1. Atomic and nuclear structure
	2. Radioactive decay
	3. Applications
		1. Radiation therapy
		2. Power generation
 |

## D. Signatures

* Changes that affect General Education in any way MUST be approved by ALL Deans and COGE Chair.
* Changes that directly impact more than one department/program MUST have the signatures of all relevant department chairs, program directors, and relevant dean (e.g. when creating/revising a program using courses from other departments/programs). Check UCC manual 4.2 for further guidelines on whether the signatures need to be approval or acknowledgement.
* Proposals that do not have appropriate approval signatures will not be considered.
* Type in name of person signing and their position/affiliation.
* Send electronic files of this proposal and accompanying catalog copy to curriculum@ric.edu and a printed or electronic signature copy of this form to the current Chair of UCC. Check UCC website for due dates.

##### D.1. Approvals: required from programs/departments/deans who originate the proposal. may include multiple departments, e.g., for joint/interdisciplinary prposals.

| Name | Position/affiliation | [Signature](#_Signature" \o "Insert electronic signature, if available, in this column) | Date |
| --- | --- | --- | --- |
| Sarah Knowlton | Chair of Physical Sciences |  |  |
| James Magyar | Chair of COGE |  |  |
| Earl Simson | Dean of Arts and Sciences |  |  |
| Gerri August | Dean of Feinstein School of Education and Human Development |  |  |
| Julie Horwitz | Dean of Feinstein School of Education and Human Development |  |  |
| Jeffrey Mello | Dean of the School of Business |  |  |
| Jane Williams | Dean of the School of Nursing |  |  |
| Sue Pearlmutter | Dean of the School of Social Work |  |  |