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

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

**N.B. DO NOT USE HIGHLIGHT, JUST 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) | **BA Physics (Secondary Education)** | | | |  |
| A.2. [Proposal type](#type) | **Program:** [**revision**](#revision) | | | |  |
| A.3. [Originator](#Originator) | **Paul Tiskus** | [Home department](#home_dept) | **Educational Studies** | | |
| A.4. [Rationale](#Rationale) | **Three theoretical / mathematical physics courses (PHYS 401 Advanced Electricity and Magnetism, 403 Intermediate Mechanics and 407 Quantum Mechanics II) are being taken out of the program in order to allow for a laboratory-based elective that will provide greater breadth in laboratory skills that may be applicable to teaching secondary physics.**  **Mathematics 416: Ordinary Differential Equations has been eliminated since the other two theoretical / mathematical courses have been eliminated in the program, and it is no longer necessary.**  **Several PHYS courses are being increased in credits, but we will only be keeping two of these, PHYS 307 and 311 in the program.**  **The proposed changes decrease the degree total from 102 credits to a far more manageable 95 credits.** | | | | |
| A.5. [Date submitted](#date_submitted) | **31 March, 2017** | A.6. [Semester effective](#Semester_effective) | | **Fall, 2017** | |
| A.7. [Resource impact](#Resource) | *[Faculty PT & FT](#faculty" \o "Need to hire new full-time or part-time faculty? This is where you indicate if this proposal will be affecting FLH in your department/program.)*: | **None.** | | | |
|  | [*Library*:](#library) | **None.** | | | |
|  | [*Technology*](#technology) | **None.** | | | |
|  | [*Facilities*](#facilities): | **None.** | | | |
| A.8. [Program impact](#prog_impact) | **Provides a greater emphasis on laboratory / experimental coursework.** | | | | |
| A.9. [Student impact](#student_impact) | **Reduces the total number of credits (including the education courses) from 102 to 95. 12 of the 40 Gen Ed. credits will double-count.** | | | | |
| A.10. The following screen tips are for information on what to do about catalog copy until the new CMS is in place; check the “Forms and Information” page for updates. [Catalog page.](#catalog)  [Where are the catalog pages](#catalog)? [Several related proposals](#catalog)? Do **not** list catalog pages here. **All** catalog copy for a proposal must be contained within a **single** file; put page breaks between sections. Make sure affected program totals are correct if adding/deleting course credits. | | | | | |

### C. [Program Proposals](#program_proposals) **complete only what is relevant to your proposal Delete this whole page if the proposal is not revising, creating, deleting or suspending any progam.**

|  | [Old (for revisions only)](#old_program) | New/revised |
| --- | --- | --- |
| C.1. [Context](#summary) | **Designed for secondary education physics majors that leads to RI certification in physics and general science. Program is accredited by NSTA (National Science Teachers Association).** | **No changes in certification or accreditation.** |
| C.2. [Enrollments](#enrollments) | **2 students in past 10 years** |  |
| C.3. [Admission requirements](#admissions) | **N/A** | **N/A** |
| C.4. [Retention requirements](#retention) | **Minimum GPA of 2.5 in major coursework and no grade below C.** | **Minimum GPA of 2.5 in major coursework and no grade below C.** |
| C.5. [Course requirements](#course_reqs) for each program option | **See below.** | |
| C.6. [Credit count](#credit_count) | **See below.** |  |

|  |  |
| --- | --- |
| **Current BA SED Physics Program** | **Proposed BA Physics Program** |
| **Required Physics Courses ( 33 Credits )** | **Required Physics Courses ( 26 Credits )** |
| 200 Mechanics 4 | 200 Mechanics 4 |
| 201 Electricity and Magnetism 4 | 201 Electricity and Magnetism 4 |
| 307 Quantum Mechanics I 3 | 307 Quantum Mechanics I 4 |
| 311 Thermodynamics 3 | 311 Thermodynamics 4 |
| 312 Mathematical Methods in Physics 3 | 312 Mathematical Methods in Physics 3 |
| 313 Junior Laboratory 3 | 313 Junior Laboratory 3 |
| 401 Advanced Electricity and Magnetism 3 | 413 Senior Laboratory 3 |
| 403 Intermediate Mechanics 3 | 491 Research in Physics 1 |
| 407 Quantum Mechanics II 3 |  |
| 413 Senior Laboratory 3 |  |
| 491 Research in Physics 1 |  |
| **Elective Physics Courses ( 4 Credits )**  **Choose One of the Following** |
| 309 Nanoscience & Nanotechnology 4 |
| 315 Optics 4 |
| 320 Analog Electronics 4 |
| 321 Digital Electronics 4 |
| **Cognates ( 35 Credits )** | **Cognates ( 31 Credits )** |
| 111 Introductory Biology I 4 | 111 Introductory Biology I 4 |
| 103 General Chemistry I 4 | 103 General Chemistry I 4 |
| 104 General Chemistry II 4 | 104 General Chemistry II 4 |
| 212 Geology 4 | 212 Geology 4 |
| 357 Historical & Contemporary 3  Contexts of Science | 357 Historical & Contemporary 3  Contexts of Science |
| 212 Calculus I 4 | 212 Calculus I 4 |
| 213 Calculus I 4 | 213 Calculus I 4 |
| 314 Calculus III 4 | 314 Calculus III 4 |
| 416 Ordinary Differential Equations 4 |  |
| **Program Total ( 68 Credits )** | **Program Total ( 61 Credits )** |

## D. Signatures

##### D.1. Approvals

* 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](mailto: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.

| Name | Position/affiliation | [Signature](#_Signature" \o "Insert electronic signature, if available, in this column) | Date |
| --- | --- | --- | --- |
| Peter Meyer | Chair of Physical Sciences |  |  |
| Earl Simson | Dean of Arts and Sciences |  |  |
| Gerri August | Chair of Educational Studies |  |  |
| Don Halquist | Dean of FSEHD |  |  |

##### D.2. [Acknowledgements](#acknowledge)

| Name | Position/affiliation | [Signature](#Signature_2) | Date |
| --- | --- | --- | --- |
| Chris Teixeira | Chair of Mathematics |  |  |