# 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): [if not working select “COMMents on rollover” in your Word preferences under view] **please read these.**

**N.B. ALL numbered categories in section (A) must be completed. Please do not use highlight to select choices within a category but simply delete the options that do not apply to your proposal (e.g. in A.2 if this is a course revision proposal, just delete the creation and deletion options and the various program ones, so it reads “course revision”) Do not delete any of the numbered categories—if they do not apply leave them blank. If there are no resources impacted, please put “none” in each A. 7 category.**

|  |  |  |
| --- | --- | --- |
| A.1. [Course or program](#Proposal) | **Math Secondary Education B.A** |  |
| [Replacing](#Ifapplicable)  |  |
| A. 1b. Academic unit | **School of Education | Faculty of Arts and Sciences** |  |
| A.2. [Proposal type](#type) | **Program:** [**revision**](#revision) |  |
| A.3. [Originator](#Originator) | **John Burke**  | [Home department](#home_dept) | **Department of Mathematical Sciences/Department of Educational Studies** |
| A.4. [Context and Rationale](#Rationale) Must include additional information listed in smart tip for all [new programs](#type). If **online** course or program, you need to explain what mode(s) you plan to use and why you need that specific delivery.  | **Given the arrival of the Hope Scholarship, the Feinstein School of Education and Human Development has taken on a school-wide investigation into the possibility of revising its undergraduate bachelor’s programs so that the programs can reasonably be completed by an incoming student within 4 years without asking students to take summer courses or carrying over 16 credit hours in a semester. Given the dire need for certified secondary mathematics teachers in the state and region, it is critical that we enact changes that allow students to complete the program in a reasonable fashion while also allowing them the opportunity to take advantage of the Hope Scholarship effectively.** **In conjunction with this investigation, the Department of Mathematical Sciences is proposing a course revision to MATH 461W in a separate proposal. In this document, we propose removing the MATH 458W requirement and replacing it with a MATH 461W requirement (for the Mathematics Secondary Education B.A. program). Unfortunately, Math 458W has had a recent history of being significantly under-enrolled. The proposed revision above would have the cohort of students typically enrolled in MATH 458W enroll in MATH 461W which does not have the same history of being under-enrolled. Additionally, this change would make it so that the Mathematics Secondary Education B.A. program will meet all of the National Council of Teachers of Mathematics (NCTM) Standards for Preparation of Secondary Mathematics Teachers (which it currently does not).** **If both proposals are passed, the effects on the Mathematics Secondary Education B.A. program will be:**1. **A student can complete the program within 8 semesters.**
2. **A student will not have to carry more than 16 credit hours in any semester to complete the program. Currently, they cannot accomplish this.**
3. **A student completing the program within 8 semesters will have one (possibly two) free elective course(s) (One free elective if FNED 246 is not approved as a Connections course and two free electives if FNED 246 is approved as a Connections course). Currently, they have none.**
4. **The total credits needed to complete the program will be 88 (down from 100 credits). [Under proposed changes to the General education program, a student could complete this program and the general education program in 116 credits or less (see box E.6). Currently a student would need to take a minimum of 124 credits to complete this program and the general education program.]**
5. **The program will meet all NCTM Standards for Preparation of Secondary Mathematics Teachers (which it currently does not).**
6. **A student could complete both a Mathematics Secondary Education B.A. and a Mathematics B.A. within 4 years. Given that the required mathematics content courses for both the Mathematics B.A. program and the Mathematics Secondary Education B.A. program would be more closely aligned, with a well-chosen general education natural science course (a physical science general education course which counts as a cognate in the Mathematics B.A. program), a student could potentially use their free elective course(s) to complete a Mathematics B.A. within said time period.**
7. **The ease with which a student in the Mathematics Secondary Education program could pursue Middle-Level certification will be greatly increased.**

**We will now outline the changes in more detail:** ***Removal of the CSCI 157 requirement:* It is no longer the case that teachers of mathematics are the de facto teachers of computer science/computer programming at the secondary level. In fact, the University of Rhode Island is already offering a Computer Science Teacher Endorsement (something RIC might want to consider) which is open to all current or in-preparation certified teachers. Having said that, we will encourage students to take this course. In order to revise the program to meet the qualities detailed above, we are removing the computer science and physics requirements. We believe that this will introduce flexibility into the program which will grant students the ability to more easily pursue double certification, pursue a second degree (with Mathematics), or pursue middle-level certification as well as aid transfer students and leave room for students to retake a course (if necessary) and still stay on track. Lastly, the removal of this course requirement was just recently enacted at the University of Rhode Island for their corresponding program. While some other institutions in the state have not made this change, we expect such changes when they undertake similar revisions (we are only the second state institution to take on such major revisions).** ***Removal of the Phys 101 and Phys 103 requirements:* Rhode Island College is the last of only two institutions in the state to require a specific scientific discipline as part of its Mathematics Secondary Education program. All students will still be required to take a science requirement as part of the general education program. As stated in the previous paragraph, we believe that this will introduce flexibility into the program which will grant students the ability to more easily pursue double certification, pursue a second degree (with Mathematics), or pursue middle-level certification as well as aid transfer students and leave room for students to retake a course (if necessary) and still stay on track. Having said that, we will still strongly encourage students to take a Physical Science course as their natural science general education course. Additionally, any student wishing to complete both the Mathematics Secondary Education B.A. and Mathematics B.A. program within 4 years will have to take a natural science general education course (CHEM 103 or Phys 101).*****Removal of SPED 433/TESL 402:* Currently the Mathematics Secondary Education B.A. program asks students to take either SPED 433 or TESL 402 after having already taken SPED 333 and TESL 401. This requirement is not part of the History/Social Studies Secondary Education programs (and this is not planned to change during this round of revisions). Additionally, there is a proposal to remove this requirement for the BM in Music Education program. The Rhode Island Department of Education does not require a second Special Education or Teaching English as a Second Language course. Most importantly, a student can still choose to complete a SPED/TESL endorsement by using their free elective(s) to take one more course in that subject area.** ***Changing the MATH 458W: History of Mathematics requirement to a MATH 461W: Seminar in Mathematics requirement:* In past editions of the NCTM Standards of Preparation of Secondary Mathematics Teachers there was a specific History of Mathematics Standard which was to be met. This standard is no longer part of the NCTM Standards. (In fact, the corresponding program at the University of Rhode Island has just made a similar curricular change.) Having said that, the NCTM standards for Preparation of Secondary Mathematics Teachers 2020 does contain standard 1a) Essential Concepts in Number which states:** **“Often unstated assumptions of high school mathematics that the real numbers exist and satisfy the same properties of operations as the rational numbers. Teachers need to know how to prove what is unstated in high school in order to avoid false simplifications and to be able to answer questions from students seeking future understanding.”(page 8)** **and****“[Teaching] Candidates engage with properties of number systems and explore the differences in the properties of rational numbers and real numbers. The set of real numbers and its subsets are explored looking at the structures of countable and continuous number systems.”(page8).** **Put very simply, currently our Mathematics Secondary Education B.A. program does not meet this standard. The current mathematics undergraduate course offerings do not contain the content needed to meet this standard. In a separate document, we propose to include this content in a revised version of MATH 461W. These revisions will 1) terminate the need to run an under-enrolled course, 2) allow the Mathematics Secondary Education B.A. program to meet NCTM standards, and 3) allow Mathematics B.A. majors to have an important topic covered in their required courses in their program. Lastly, this will aid in a larger effort to have the Mathematics Secondary Education B.A. and Mathematics B.A. programs more aligned. This in turn will allow for the creation of a 4+1 B.A to M.A.T. program in the future (potentially next year).** ***Change to Program-Specific Admissions Requirements:* There are general admission requirements shared by all secondary education B.A. programs and there are specific admission requirements for the Mathematics Secondary Education B.A. program. One of these program-specific admission requirements is having students complete 12 credits worth of courses from a particular list of mathematics courses (see box E.3). We propose to change this to a more reasonable and simpler to express the requirement of “complete 8 credits of mathematics courses in the program”. This change should allow more students to be admitted to the program while still ensuring students are prepared.** **A shared admission requirement is for students to hold a content grade point average of 2.75 or higher. We proposed to change this requirement to “an average grade of 2.50 or higher in all (completed) mathematics courses in the program”. A similar proposed change is being planned for all Science Secondary Education B.A. programs. Such a revision will also put us in alignment with the same requirements for the corresponding program at the University of Rhode Island. We feel confident that such a reduced GPA requirement will be more than sufficient to ensure that our students have the correct content preparation to be the next generation of excellent secondary mathematics teachers.** ***Change to Program-Specific Retention Requirements:* There are general retention requirements shared by all secondary education B.A. programs We propose to change one of these requirements as it pertains to the Mathematics Secondary Education B.A. program so that it is aligned with the change detailed in the proceeding paragraph. We proposed to change the retention requirement that students maintain a content GPA of 2.75 in content courses to “maintain an average grade of 2.50 or higher in all (completed) mathematics courses in the program”.** |
| A.5. [Student impact](#student_impact)Must include to explain why this change is being made? | **Students in the Mathematics Secondary Education B.A. program will see a decrease of 8 credits needed to complete the program (potentially a decrease of 12 credits if FNED 246 is approved as a Connections course). They will have added flexibility in how they navigate the program. Additionally, it will be possible for students to complete the program in 8 semesters with a load of 16 credits or fewer each semester. Importantly, the program will now meet all NCTM Standards for Preparation of Secondary Mathematics Teachers.** |
| A.6. [Impact on other programs](#impact)  | **CSCI 157 will no longer be a required course. Thus, there may be a decrease in enrollment for that course. Having said that, the number of students in the Mathematics Secondary Education B.A. program may be small enough that the effect will not be significant.****The removal of the Phys 101 and Phys 103 requirements may result in decreased enrollments in those courses. Having said that, Physics is a subject many Mathematics Secondary Education majors have an interest in due to the study of Calculus. Possibly many of these students will still enroll in Phys 101. Additionally, If a student wishes to double major in Mathematics and Mathematics Secondary Education, they will need to take CHEM 103 or PHYS 101.** **SPED 433 and TESL 402 may see a decrease in enrollment numbers. Having said that student may choose to use their free elective(s) to pursue a related endorsement that requires one of these courses****There is the possibility that other natural science general education courses could see a small uptick in enrollment. This could affect the Department of Biology as well as the Department of Physical Sciences.**  |
| A.7. [Resource impact](#Resource) | [*Faculty PT & FT*](#faculty):  | **None** |
| [*Library*:](#library) | **None** |
| *Technology (for in person delivery)*The VP of Information Services should be consulted prior to submission and their acknowledgement signature included. | **None** |
| *Technology: (for online delivery. Must be RIC supported)*The VP of Information Services should be consulted prior to submission and their approval signature included. | **None** |
| [*Facilities*](#facilities): | **None** |
| A.8. [Semester effective](#Semester_effective) | **Fall 2024** | A.9. [Rationale if sooner than next Fall](#Semester_effective) |  |
| A.10. INSTRUCTIONS FOR CATALOG COPY: Use the Word copy versions of the catalog sections found on the UCC Forms and Information page. Cut and paste into a single file **ALL the relevant pages from the college catalog that need to be changed.** Use tracked changes feature to show how the catalog will be revised as you type in the revisions. If totally new copy, indicate where it should go in the catalog. If making related proposals a single catalog copy that includes all changes is preferred. Send catalog copy as a separate single Word file along with this form. |
| A.11. List here (with the relevant urls), any RIC website pages that will need to be updated (to which your department does not have access) if this proposal is approved, with an explanation as to what needs to be revised: |
| A. 12 **Check to see if your proposal will impact any of our** [**transfer** **agreements,**](file:///C%3A%5CUsers%5CSAbbotson%5CDocuments%5CCurriculum%5CManualandWebsite%5Ctransfer%20agreements) **and if it does explain in what way. Please indicate clearly what will need to be updated, including any changes in prefix numbers/titles for TES.** |
| A. 13 Check the section that lists “Possible NECHE considerations” on the UCC Forms and Information page and if any apply, indicate what that might be here and contact Institutional Research for further guidance. |

**E.** [**Program Proposals**](#program_proposals) **For IN-Person or mixed modalities (for fully online programs: see section F):**

### **Complete only what is relevant to your proposal. Delete section E. if not needed. PLease add in the 2020 CIP number for MAJOR revisions or new programs in E 2; these can be found at** [**https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=56**](https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=56) **consult with Institutional research to be sure you select the correct one.**

|  | [Old (for revisions only)](#old_program) | New/revised |
| --- | --- | --- |
| E.1. [Enrollments](#enrollments) Must be completed. | **(From 2022-2023 fact book)****5 (in the program)****17 (intending to major)** | **As of April 2024****7 (in the program)****11 (intending to major)** |
| E. 2. [2020 CIP number](#CIPnumber" \o "THESE CAN BE FOUND AT HTTPS://NCES.ED.GOV/IPEDS/CIPCODE/BROWSE.ASPX?Y=56 CONSULT WITH INSTITUTIONAL RESEARCH TO BE SURE YOU SELECT THE CORRECT ONE.) | **13.1311** | **13.1311** |
| E.3. [Admission requirements](#admissions) | **There are numerous and detailed admission requirements for all secondary education programs. Some of these requirements are shared and some are program-specific. We only list the requirements that are proposed to change.** ***Shared admission requirements for all secondary education programs:*****1)Students must hold a content grade point average of 2.75 or higher*****Program-specific admission requirements:*****2) Complete a minimum of 12 credits of MATH courses listed below:****MATH 212MATH 213MATH 314*MATH 324, 300, or 431 can replace 314 if needed.*** | **We propose to change the first requirement (in the box to the left), only for the Mathematics Secondary Education B.A. program, to** **- an average grade of 2.50 or higher in all (completed) mathematics courses in the program** **We propose to change the second requirement (in the box to the left) to** **- Complete 8 credits of mathematics courses in the program** |
| E.4. [Retention requirements](#retention) | **-A minimum cumulative G.P.A. of 2.75 each semester****-A minimum grade of B- in all teacher education courses****-A content G.P.A. of 2.75 or higher each semester.** **-Positive recommendations from all education instructors based on academic work, fieldwork, and professional behavior.**  | **-A minimum cumulative G.P.A. of 2.75 each semester****-A minimum grade of B- in all teacher education courses****- an average grade of 2.50 or higher in all (completed) mathematics courses in the program****-Positive recommendations from all education instructors based on academic work, fieldwork, and professional behavior.** |
| E.5. [Course requirements](#course_reqs) for each program option. Show the course requirements for the whole program here. | **Secondary Education B.A. Requirements (Take all):** **CEP 215: Introduction to Educational Psychology [4] (Social Behavioral Gen Ed)****FNED 101: Introduction to Teaching and Learning [2]** **FNED 246: Schooling for Social Justice [4]** **SED 201: Introduction to Lesson Planning [2]****SED 202: Introduction to Assessment [2]****SED 301W: Discourses, Literacies, and Technology of Learning [2]****SED 420: Introduction to Student Teaching [credits combined into SED 421 below]****SED 421: Student Teaching in Secondary School [9]****SED 422: Student Teaching Seminar in Secondary Education [3]****SPED 333: Introduction to Special Education [3]****TESL 401: Introduction to Teaching Emergent Bilinguals [4]****Content Courses:** **Secondary Education Mathematics Major (Requirements):*****Secondary Education courses (take all):*****SED 303: Inquiry into STEM [2]****SED 315: Mathematics Teaching in a Diverse Classroom [4]****SED 415: Rethinking Mathematics Teaching and Learning. [4]****[SPED 433: Special Education: Best Practices and Applications OR TESL 402: Applications of Secondary Acquisition] [3]*****Computer Science Courses (take all):*****CSCI 157: Introduction to Algorithmic Thinking in Python [4]*****Mathematics Courses (take all):*****MATH 212: Calculus I [4] (Math Gen Ed)****MATH 213 Calculus II [4] (AQSR Gen Ed)****MATH 240: Statistical Methods [4]****MATH 300W: Bridge to Advanced Mathematics [4]****MATH 314: Calculus III [4]****MATH 315: Linear Algebra [4]****MATH 324: College Geometry [4]****MATH 431: Number Theory [3]****MATH 432: Introduction to Abstract Algebra [4]****MATH 441: Introduction to Probability [4]****MATH 458W: History of Mathematics [4]** ***Physics Courses (take all):*****Phys 101: Physics for Science and Mathematics I [4]****Phys 103: Calculus Applications in Mechanics [1]** | **Secondary Education B.A. Requirements (Take all):** **CEP 215: Introduction to Educational Psychology [4] (Social Behavioral Gen Ed)****FNED 101: Introduction to Teaching and Learning [2]** **FNED 246: Schooling for Social Justice [4]** **SED 201: Introduction to Lesson Planning [2]****SED 202: Introduction to Assessment [2]. [NB #23-24-135]****SED 301W: Discourses, Literacies, and Technology of Learning [2] [NB #23-24-136]****SED 420: Introduction to Student Teaching [credits combined into SED 421 below]****SED 421: Student Teaching in Secondary School [9]****SED 422: Student Teaching Seminar in Secondary Education [3]****SPED 333: Introduction to Special Education [3]****TESL 401: Introduction to Teaching Emergent Bilinguals [4]****Content Courses:** **Secondary Education Mathematics Major (Requirements):*****Secondary Education courses (take all):*****SED 303: Inquiry into STEM [2] [NB #23-24-136]****SED 315: Mathematics Teaching in a Diverse Classroom [4]****SED 415: Rethinking Mathematics Teaching and Learning. [4]*****Mathematics Courses (take all):*****MATH 212: Calculus I [4] (Math Gen Ed)****MATH 213 Calculus II [4] (AQSR Gen Ed)****MATH 240: Statistical Methods [4]****MATH 300W: Bridge to Advanced Mathematics [4]****MATH 314: Calculus III [4]****MATH 315: Linear Algebra [4]****MATH 324: College Geometry [4]****MATH 431: Number Theory [3]****MATH 432: Introduction to Abstract Algebra [4]****MATH 441: Introduction to Probability [4]****MATH 461W: Seminar in Mathematics [4]**  |
| E.6. [Credit count](#credit_count) for each program option | **35 Education****65 Mathematics****100** **(Conn, Lit, Hist, Art, FYW, and FYS needed to complete Gen Ed) (Second Language not included)** | **35 education****53 Mathematics****88** **(Conn, NS, Lit, Hist, Art, FYW, and FYS needed to complete Gen Ed) (Second Language not included)** |
| E.7. Note any needs for program accreditation (if relevant).  |  |  |
| E.8 Program modality. Online percentage of delivery; calculate % within required hybrids and the total for the program cannot go over 49%  | **Fully in-person courses and****Hybrid (up to 49% online) courses.****Percentage of hybrid courses in the program does not exceed 30%.** | **Fully in-person courses and****Hybrid (up to 49% online) courses.****Percentage of hybrid courses in the program does not exceed 30%.** |
| E.9 Will any classes be offered at sites other than RIC campus or the RI Nursing Ed. Center?\* | **NO** | **NO** |
| E. 10. Do these revisions reflect more than 25% change to the [program?\*](file:///C%3A%5CUsers%5Csabbotson%5CDocuments%5CCurriculum%5CProgram%20goals)  | **NO** | **NO** |
| E.11. [Program goals](file:///C%3A%5CUsers%5Csabbotson%5CDocuments%5CCurriculum%5CProgram%20goals)Needed for all new programs |  | **Unchanged** |
| E.12. Other changes if any |  |  |

\* If answered YES to either of these questions will need to inform Institutional Research and get their acknowledgement on the signature page.

## **G. 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 their 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 to the current Chair of UCC. Check UCC website for due dates. **Do NOT convert to a .pdf.**

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

| Name | Position/affiliation | [Signature](#_Signature" \o "Insert electronic signature, if available, in this column) | Date |
| --- | --- | --- | --- |
| Dr. Carol Cummings | Dean of the Feinstein School of Education and Human Development | \*approved by email | 4/26/2024 |
| Dr. Charles McLaughlin | Chair of the Department of Educational Studies | \*approved by email | 4/25/2024 |
| Dr. Quenby Hughes | Dean of the Faculty of Arts and Sciences  | \*approved by email | 4/25/2024 |
| Dr. Rebecca Sparks | Chair of the Department of Mathematical Sciences | \*approved by email | 4/25/2024 |

##### G.2. [Acknowledgements](#acknowledge): REQUIRED from OTHER PROGRAMS/DEPARTMENTS (and their relevant deans if not already included above) that are IMPACTED BY THE PROPOSAL. SIGNATURE DOES NOT INDICATE APPROVAL, ONLY AWARENESS THAT THE PROPOSAL IS BEING SUBMITTED. CONCERNS SHOULD BE BROUGHT TO THE UCC COMMITTEE MEETING FOR DISCUSSION; all faculty are welcome to attend.

| Name | Position/affiliation | [Signature](#Signature_2) | Date |
| --- | --- | --- | --- |
| Dr. Suzanne Mello-Stark | Chair of the Computer Science and Information Systems | \*Acknowledged by email | 4/15/2024 |
| Dr. Andrea Del Vecchio | Chair of the Department of Physical Sciences | \*Acknowledged by email | 4/25/2024 |
| Dr. Dana Kolibachuk | Chair of the Department of Biology | \*Acknowledged by email | 4/15/2024 |
| Dr. Paul LaCava | Chair of the Department of Special Education | \*Acknowledged by email | 4/15/2024 |