# 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) |  **Math 120 Intermediate Alegebra** |  |
|  |  |
| A.2. [Proposal type](#type) | **Course: revision**  |
| A.3. [Originator](#Originator) | **John Burke** | [Home department](#home_dept) | **Math and Computer Science** |
| A.4. [Context and Rationale](#Rationale)  | **MATH 120 (Intermediate Algebra) is moving from a 3 credit course to a 4 credit course. The Mathematics and Computer Science Department has voted to increase the number of credit hours for MATH 120 given an increase in the number of admitted student to the college who are in need of more extensive learning and/or strengthening of their foundational algebraic skills. This increase in instruction hours will allow for more vital foundational algebraic topics to be covered along with the important topics that were covered in the 3 credit iteration. Additionally, the student population for which this course is designed will benefit from an increase in face to face instruction time. We are also going to start offering this in summer.** |
| A.5. [Student impact](#student_impact) | **As stated above, we believe that these changes will have the positive effect of better preparing a subset of the student population (those pursuing natural science and mathematics majors, education majors with concentrations/focusses in the natural science and mathematics, and majors in the school of business) for the courses they will have to take for their majors. We foresee no major negative effects. The only major changes are the increase in credit hours and an increase in the material covered, but we emphatically believe this will only better prepare the students taking the course to succeed in future courses.**  |
| A.6. [Impact on other programs](#impact)  | **Technology Education BS concentration in teaching uses the course and this will add one credit to that program, raising it from 80 to 81.** |
| A.7. [Resource impact](#Resource) | [*Faculty PT & FT*](#faculty):  | **The same faculty as before will teach the course. No impact.**  |
| [*Library*:](#library) | **No increase in library usage.**  |
| [*Technology*](#technology) | **No increase or decrease in technology usage.** |
| [*Facilities*](#facilities): | **No change in facilities used.**  |
| A.8. [Semester effective](#Semester_effective) | **Fall 2018** | A.9. [Rationale if sooner than next Fall](#Semester_effective) |  |

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)  | **MATH 120** | **MATH 120** |
| B.2. Cross listing number if any |  |  |
| B.3. [Course title](#title)  | **Intermediate Algebra** | **Intermediate Algebra** |
| B.4. [Course description](#description)  | **Intended for students needing intermediate algebra skills, especially for MATH 177, 209, 238, or 247, this course includes absolute value, inequalities, exponents and radicals, algebraic fractions, quadratic and exponential functions.**  | **Intended for students needing intermediate algebra skills, especially for MATH 177 and 209. Topics include linear and quadratic equations; inequalities; exponents; radicals; algebraic fractions; and quadratic, logarithmic, and exponential functions.**  |
| B.5. [Prerequisite(s)](#prereqs) | **MATH 010 or equivalent and consent of department chair.** | **MATH 010 or appropriate score on the placement exam.** |
| B.6. [Offered](#Offered) | **Fall | Spring |** | **Fall | Spring |Summer** |
| B.7. [Contact hours](#contacthours)  | **3 hours** | **4 hours** |
| B.8. [Credit hours](#credits) | **3 credit hours** | **4 credit hours** |
| B.9. [Justify differences if any](#differences) | **N/A**  |
| B.10. [Grading system](#grading)  | **Letter grade**  | **Letter grade** |
| B.11. [Instructional methods](#instr_methods) | **Lecture**  | **Lecture or Hybrid** |
| B.12.[Categories](#required) | **Free elective**  | **Free elective** |
| B.13. Is this an Honors course? | **NO** | **NO** |
| B.14. [General Education](#ge)-N.B. Connections must include at least 50% Standard Classroom instruction. | **NO**  | **NO**  |
| B.15. [How will student performance be evaluated?](#performance) | **Attendance | Class participation | Exams |** **Class Work | Quizzes**  | **Attendance | Class participation | Exams | Presentations |** **Class Work | Quizzes |** |
| B.16. [Redundancy statement](#competing) | **N/A** |  |
| B. 17. Other changes, if any | N/A |

| 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)**?** |
| --- | --- | --- |
| See B.19 |  | Homework Assignments, Quizzes, and Exams |

| B.19. [**Topical outline**](#outline)**: Do NOT insert whole syllabus, we just need a two-tier outline** |
| --- |
| 1. **Review of the Real Number System**
	1. **Basic Concepts**
	2. **Operations on Real Numbers**
	3. **Exponents, Roots, and Order of Operations**
	4. **Properties of Real Numbers**
2. **Linear Equations, Inequalities, and Applications**
	1. **Linear Equations in One Variable**
	2. **b)Formulas and Percent**
	3. **Applications of Linear Equations**
	4. **Further Applications of Linear Equations**
	5. **Linear Inequalities in One Variable**
	6. **f ) Absolute Value Equations and Inequalities**
3. **Graphs, Linear Equations, and Functions**
	1. **Linear Equations in Two Variables**
	2. **The Slope of a Line**
	3. **Writing Equations of Lines**
	4. **Linear Inequalities in Two Variables**
	5. **Introduction to Relations and Functions**

**f ) Function Notation and Linear Functions**1. **Systems of Linear Equations**
	1. **Systems of Linear Equations in Two Variables**
	2. **Applications of Systems of Linear Equations**
2. **Exponents, Polynomials, and Polynomial Functions**
	1. **Integer Exponents and Scientific Notation**
	2. **Adding and Subtracting Polynomials**
	3. **Polynomial Functions, Graphs, and Composition**
	4. **Multiplying Polynomials**
	5. **Dividing Polynomials**
3. **Factoring**
	1. **Greatest Common Factors and Factoring by Grouping**
	2. **Factoring Trinomials**

**c) Special Factoring****d) A General Approach to Factoring****e) Solving Equations by the Zero-Factor Property**1. **Rational Expressions and Functions**
	1. **Rational Expressions and Functions; Multiplying and Dividing**
	2. **Adding and Subtracting Rational Expressions**
	3. **Complex Fractions**
	4. **Equations with Rational Expressions and Graphs**
	5. **Applications of Rational Expressions**
	6. **Variation**

1. **Roots, Radicals, and Root Functions**
	1. **Radical Expressions and Graphs**
	2. **Rational Exponents**
	3. **Simplifying Radical Expressions**
	4. **Solving Equations with Radicals**
2. **Quadratic Equations, Inequalities, and Functions**
	1. **The Square Root Property and Completing the Square**
	2. **The Quadratic Formula**
	3. **Equations Quadratic in Form**
	4. **Formulas and Further Applications**
	5. **Graphs of Quadratic Functions**
	6. **More about Parabolas and Their Applications**
3. **Inverse, Exponential, and Logarithmic Functions**
	1. **Exponential Functions**
	2. **Logarithmic Functions**
	3. **Properties of Logarithms**
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## 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 |
| --- | --- | --- | --- |
| Stephanie Costa | Chair of Mathematics and Computer Science |  |  |
| Earl Simson | Dean of Faculty of Arts and Science |  |  |

##### D.2. [Acknowledgements](#acknowledge): REQUIRED from OTHER PROGRAMS/DEPARTMENTS 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

| Name | Position/affiliation | [Signature](#Signature_2) | Date |
| --- | --- | --- | --- |
| Charles McLaughlin | Program Coordinator of Tech Ed. |  |  |
| Lesley Bogad | Chair Ed. Studies |  |  |
| Gerri August/Julie Horwitz | Interim Co-Deans FSEHD |  |  |