**GT Pathways Curriculum**

**COURSE SUBMITTAL FORM & INSTITUTIONAL VERIFICATION**

**CONTENT AREA: MATHEMATICS (GT-MA1)**

**SUBCATEGORY: None.**

Date:

Institution:

**SECTION I. MATHEMATICS CONTENT CRITERIA – GT-MA1.**

**The following required** [**GT-MA1 content criteria**](http://highered.colorado.gov/Academics/Transfers/gtPathways/Criteria/content.html) **shall be either: 1) *copied and pasted verbatim* into each instructor’s syllabus, OR 2) *mapped* to the institution’s own content criteria in each instructor’s syllabus.**

1. Demonstrate good problem-solving habits, including:
* Estimating solutions and recognizing unreasonable results.
* Considering a variety of approaches to a given problem, and selecting one that is appropriate.
* Interpreting solutions correctly.
1. Generate and interpret symbolic, graphical, numerical, and verbal (written or oral) representations of mathematical ideas.
2. Communicate mathematical ideas in written and/or oral form using appropriate mathematical language, notation, and style.
3. Apply mathematical concepts, procedures, and techniques appropriate to the course.
4. Recognize and apply patterns or mathematical structure.
5. Utilize and integrate appropriate technology.

**SECTION II. COMPETENCIES & STUDENT LEARNING OUTCOMES FOR GT-MA1.**

**The following Student Learning Outcomes (SLOs) for the required GT-MA1 competency, *Quantitative Literacy*, shall be either: 1) *copied and pasted verbatim* into each instructor’s syllabus, OR 2) *mapped* to the institution’s own competencies and SLOs in each instructor’s syllabus.**

## [*Quantitative Literacy*](http://highered.colorado.gov/Academics/Transfers/gtPathways/Criteria/competency.html)*:*

1. **Interpret Information**
2. Explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).
3. **Represent Information**
	1. Convert information into and between various mathematical forms (e.g., equations, graphs, diagrams, tables, words).
4. **Perform Calculations**
5. Solve problems or equations at the appropriate course level.
6. Use appropriate mathematical notation.
7. Solve a variety of different problem types that involve a multi-step solution and address the validity of the results.
8. **Apply and Analyze Information**
9. Make use of graphical objects (such as graphs of equations in two or three variables, histograms, scatterplots of bivariate data, geometrical figures, etc.) to supplement a solution to a typical problem at the appropriate level.
10. Formulate, organize, and articulate solutions to theoretical and application problems at the appropriate course level.
11. Make judgments based on mathematical analysis appropriate to the course level.
12. **Communicate Using Mathematical Forms**
13. Express mathematical analysis symbolically, graphically, and in written language that clarifies/justifies/summarizes reasoning (may also include oral communication).
14. **Address Assumptions (*required of Statistics courses only*)**
15. Describe and support assumptions in estimation, modeling, and data analysis, used as appropriate for the course.

**SECTION III. GT-MA1 COURSES TO INCLUDE IN GT PATHWAYS CURRICULUM.**

Add additional rows as needed.

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| --- | --- | --- | --- |
| **Course Prefix & Number** | **Course Title** | **Number of Credits** | **Is this course a NEW submission?** |
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**SECTION IV. INSTITUTIONAL PROCESS TO VERIFY GT PATHWAYS COMPLIANCE.**

Brief description of the on-campus process(es) used to ensure that, going forward, instructors are uniformly and consistently communicated to regarding the following expectations: (1) either copy and paste verbatim the required GT Pathways content criteria, competencies, and SLOs into their syllabi, or (2) map the required GT Pathways content criteria, competencies, and SLOs to the institution’s own content criteria, competencies, and SLOs. (Provide a link, add additional rows or attach a document, if necessary.):

**SECTION V. INSTITUTIONAL VERIFICATION.**

1. I verify that the courses listed above are part of our institution’s general education core.
2. I verify that the courses listed above are offered at least once every two years (for CCCS, offered at a campus in the system).
3. I verify that course instructors are uniformly and consistently directed to include the required GT Pathways content criteria and competencies/Student Learning Outcomes, and that our institution will make a good faith effort to ensure faculty have the necessary resources to teach these content criteria and competencies.
4. I verify that instructors of these courses will be/have been directed to include the following statement in their course syllabi:

The Colorado Commission on Higher Education has approved [course prefix & number] for inclusion in the Guaranteed Transfer (GT) Pathways program in the [GT-@@#] category. For transferring students, successful completion with a minimum C- grade guarantees transfer and application of credit in this GT Pathways category. For more information on the GT Pathways program, go to <http://highered.colorado.gov/Academics/Transfers/gtPathways/curriculum.html>.

Chief Academic Officer:

 Printed Name

 Signature

Date: