

## 2015-2016 PETITION/PROGRAM SHEET

**Minor: Mathematics** 

**About This Minor...**A minor in mathematics is a natural enhancement to many majors outside mathematics where an understanding of mathematics is needed (e.g. physics, engineering, computer science, chemistry, biology, geology). A minor in mathematics enables non-mathematics majors to complete a focused course of study in mathematics on a smaller scale.

All CMU graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

- construct multi-step problem-solving strategies, and communicate solutions effectively in written form. (Specialized Knowledge/ Quantitative Fluency)
- 2. use mathematical software (including calculators) to aid in problem-solving and investigation, and understand its limitations.(Applied Learning)

## **POLICIES:**

- 1. Please see the catalog for a complete list of graduation requirements.
- 2. This program sheet must be submitted with your graduation planning sheet to your advisor during the semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates. You must turn in your "Intent to Graduate" form to the Registrar's Office by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.
- 3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
- 4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
- 5. NOTE: During your senior year, you will be required to take a capstone exit assessment/project (e.g., Major Field Achievement Test)

| NAME: STUDENT ID #:  |  |                               |  |  |  |  |  |  |
|--|--|-------------------------------|--|--|--|--|--|--|
| LOCAL ADDRESS AND PHONE NUMBER:                              |  |                               |  |  |  |  |  |  |
|  | ( )  |                               |  |  |  |  |  |  |
| on the Program Sheet. I further certify that the grade liste | , hereby certify that I have completed (or will completed for those courses is the final course grade received except semester. I have indicated the semester in which I will complete | for the courses in which I am |  |  |  |  |  |  |
| Signature of Mathematics Advisor                             |  | 20                            |  |  |  |  |  |  |
|  |  |                               |  |  |  |  |  |  |
|  |  | 20                            |  |  |  |  |  |  |
| Signature of Department Head                                 | Date   |                               |  |  |  |  |  |  |
|  |  | 20                            |  |  |  |  |  |  |
| Signature of Registrar                                       | Date   |                               |  |  |  |  |  |  |

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration. See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

## MINOR REQUIREMENTS:

- At least 33 percent of the credit hours required for the minor must be courses numbered 300 or above.
- 2.00 cumulative GPA or higher in the minor is required
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- The number of minors a student may receive at Colorado Mesa University shall not exceed two.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.

| REQUIRED COURSES (20-24 Semester Hours) See the current catalog for a list of courses that fulfill the requirements below. |                            |          | Course No Title |      | Sem.hrs    | Grade                         | Term |  |  |
|--|----------------------------|----------|-----------------|------|------------|-------------------------------|------|--|--|
|  |                            |          |                 |      | MATH 352   | Advanced Calculus             | 3    |  |  |
| Course No Title  |                            | Sem.hrs  | Grade           | Term | MATH 360   | Methods of Applied Math       | 3    |  |  |
|  |                            |          |                 |      | MATH 361   | Numerical Analysis            | 4    |  |  |
| MATH 152   | Calculus II                | 5        |                 |      | MATH 362   | Fourier Analysis              | 3    |  |  |
|  | <u>OR</u>                  |          |                 |      | MATH 365   | Mathematical Modeling         | 3    |  |  |
| <b>MATH 136</b>  | Engineering Calculus II    | 4        |                 |      | MATH 369   | Discrete Structures I         | 3    |  |  |
|  |                            |          |                 |      | MATH 370   | Discrete Structures II        | 3    |  |  |
| Two of the following courses   |                            | MATH 386 | Geometries      | 4    |            |                               |      |  |  |
| MATH 240   | Introduction to Advanced   |          |                 |      | MATH 420   | Topology                      | 3    |  |  |
|  | Mathematics                | 4        |                 |      | MATH 430   | Mathematical Logic            | 3    |  |  |
| MATH 253   | Calculus III               | 4        |                 |      | MATH 450   | Complex Variables             | 3    |  |  |
|  |                            |          |                 |      | MATH 452   | Introduction to Real Analysis | I 3  |  |  |
| MATH 260   | Differential Equations     |          |                 |      | MATH 453   | Introduction to Real Analysis | II 3 |  |  |
|  | <u>OR</u>                  | 3 or 4   |                 |      | MATH 460   | Linear Algebra II             | 3    |  |  |
| MATH 236   | Differential Equations and |          |                 |      | MATH 490   | Abstract Algebra I            | 3    |  |  |
|  | Linear Algebra             |          |                 |      | MATH 491   | Abstract Algebra II           | 3    |  |  |
|  |                            |          |                 |      | MATH 396   | Topics                        | 3    |  |  |
| Three of the following courses:  |                            | <u>(</u> | <u>OR</u>       |      |            |                               |      |  |  |
| MATH 310   | Number Theory              | 3        |                 |      | MATH 496 7 | Topics                        | 3    |  |  |
| <b>MATH 325</b>  | Linear Algebra I           | 3        |                 |      |            | _                             |      |  |  |
|  | -                          |          |                 |      |            |                               |      |  |  |