2014-2015 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Mathematics

About This Major . . .

Mathematics majors get jobs in a wide variety of areas. Our graduates have worked for local businesses, have run their own businesses and have worked for scientific companies. Other graduates have continued their educations by attending graduate school (in mathematics, computer science and engineering), law school, medical school and veterinary school.

For more information on what you can do with this major, go to http://www.coloradomesa.edu/career/whatmajor.html and/or http://www.coloradomesa.edu/mathstat/links.html .

All CMU baccalaureate 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:

1. 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)
3. Prove propositions deductively from definitions and theorems, using clear and precise prose. (Critical Thinking)
4. Learn an area of mathematics deeply and deliver substantial written and oral presentations of this area. (Specialized Knowledge/Communication Fluency)

NAME: _____ **STUDENT ID #** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **( )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____ 20____
Signature of Advisor Date

_____ _____ 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.

Degree Requirements:

- 120 semester hours total (Students must complete a minimum of 30 of the last 60 hours of credit at CMU, with at least 15 semester hours in major discipline courses numbered 300 or higher).
- 40 upper division credits (A minimum of 15 taken at the 300-400 course levels within the major at CMU).
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- 2.00 cumulative GPA or higher in all CMU coursework
- 2.50 cumulative GPA or higher in coursework toward the major content area
- 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.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (31 semester hours)
See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course	No	Title	Sem.hrs	Grade	Term/Trns

English (6 semester hours, must receive a grade of "C" or better and must be completed by the time the student has 60 semester hours.)

ENGL	111	English Composition	3		
ENGL	112	English Composition	3		

Math: (3 semester hours, must receive a grade of "C" or better, must be completed by the time the student has 60 semester hours.)

MATH	151	Calculus I	5*		

*3 credits apply to the General Ed requirements and 2 credits apply to Foundation Courses credit

Humanities (3 semester hours)

Social and Behavioral Sciences (6 semester hours)

Natural Sciences (7 semester hours, one course must include a lab)

History (3 semester hours)
HIST

Course	No	Title	Sem.hrs	Grade	Term/Trns

Fine Arts (3 semester hours)

OTHER LOWER DIVISION REQUIREMENTS (6 semester hours)
Kinesiology (3 semester hours)

KINE	100	Health and Wellness	1		
KINA	1		1		
KINA	1		1		

Applied Studies (3 semester hours)

FOUNDATION COURSES (10 semester hours)

*MATH	151	Calculus I	2		
MATH	152	Calculus II	5		
STAT	200	Probability and Statistics	3		

MATHEMATICS MAJOR REQUIREMENTS
(40-43 semester hours) A 2.5 GPA is required in the major courses. At most one "D" may be used in completing major requirements.

Core Classes (28 semester hours)

CSCI	111	Comp. Science 1-Foundations	4		
MATH	240	Intro to Advanced Mathematics	4		
MATH	253	Calculus III	4		
MATH	325	Linear Algebra	3		
MATH	452	Introduction to Real Analysis I	3		
MATH	490	Abstract Algebra I	3		
MATH	453	Introduction to Real Analysis II			
	OR		3		
MATH	491	Abstract Algebra II			
MATH	484	Senior Seminar I	2		
MATH	494	Senior Seminar II	2		

Four courses from list on page 3 (12-15 semester hours) (At most one topics course, which must be 3 semester hours, can be used as one of these four courses.)

MATH					
MATH					
MATH					

ELECTIVES (30-33 semester hours;) (All college level courses appearing on your final transcript, **not listed above** that will bring your total semester hours to 120 hours.) (10-15 upper division hours needed.)

CORE CLASS ELECTIVES: Four Courses from the following:

MATH 260 Differential Equations (3) **or** MATH 236 Diff. Eqs/Linear Algebra (4)
MATH 310 Number Theory (3)
MATH 360 Methods of Applied Mathematics (3)
MATH 361 Numerical Analysis (4)
MATH 362 Fourier Analysis (3)
MATH 365 Mathematical Modeling (3)
MATH 369 Discrete Structures I (3)
MATH 370 Discrete Structures II (3)
MATH 386 Geometries (4)
MATH 420 Introduction to Topology (3)
MATH 430 Mathematical Logic (3)
MATH 450 Complex Variables (3)
MATH 460 Linear Algebra II (3)
MATH 453 Introduction to Real Analysis II (3) **or** MATH 491 Abstract Algebra II (3)
MATH 396 Topics (1-3) **or** MATH 496 Topics (1-3)
STAT 311 Statistical Methods (3)

(At most one topics class, which must be 3 semester hours, can be used as one of these four courses)

SUGGESTED COURSE SEQUENCING FOR A MAJOR IN MATHEMATICS

This is one recommended sequence of course work. This sequence is not unique, there are other sequences that will fulfill the program requirements. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FRESHMAN YEAR

Fall Semester		Hours	Spring Semester		Hours
MATH 151	Calculus I	5	MATH 152	Calculus II	5
ENGL 111	English Composition	3	ENGL 112	English Composition	3
KINA	Activities (2 courses)	2	CSCI 111	Computer Science 1-Foundations	4
General Education Natural Science		3	KINE 100	Health and Wellness	1
General Education Social/Behavioral Science		3	General Education Social/Behavioral Science		3
		16			16

SOPHOMORE YEAR

Fall Semester		Hours	Spring Semester		Hours
MATH 240	Introduction to Advanced Mathematics	4	MATH 325	Linear Algebra	3
MATH 253	Calculus III	4	Upper Division Math Choice		3
General Education Fine Arts		3	General Education Natural Science with Lab		4
General Education History		3	General Education Applied Studies		3
Upper Division Elective		3	General Education Humanities		3
		17			16

JUNIOR YEAR

Fall Semester		Hours	Spring Semester		Hours
MATH 490	Abstract Algebra I **or**		MATH 491	Abstract Algebra II **or**	
MATH 452	Intro to Real Analysis I	3	MATH 453	Intro to Real Analysis II	3
STAT 200	Probability and Statistics	3	Upper Division Math Choice		3
Upper Division Elective		3	Upper Division Electives		6
Electives		6	Elective		3
		15			15

SENIOR YEAR

Fall Semester		Hours	Spring Semester		Hours
MATH 452	Intro to Real Analysis I **or**		MATH 494	Senior Seminar II	2
MATH 490	Abstract Algebra I	3	Upper Division Math Choice		3
Upper Division Math Choice		3	Electives		6
Elective		3			11
Upper Division Elective		3			
MATH 484	Senior Seminar I	2			
		14			

POLICIES:

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the Catalog for a complete list of graduation requirements.
2. 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. 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.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
6. 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.
7. NOTE: The semester before graduation, you will be required to take a Major Field Achievement Test (exit exam).