



2016-2017 PETITION/PROGRAM SHEET

Degree: Bachelor of Science

Major: Mathematics

Concentration: Statistics

About This Major . . .

The statistics concentration in mathematics prepares students for graduate work in statistics or to enter the job force. With some additional job-specific training, students entering the job market could function as applied statisticians working in areas such as actuarial science, wildlife management, marketing, quality control, and epidemiology to name a few. For more information on what you can do with this major, go to http://www.coloradomesa.edu/career/whatmajor.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 and concentration will be able to:

- 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. Apply appropriate statistical procedures and justify chosen assumptions. (Applied Learning)
4. Draw statistical conclusions and evaluate the validity of others' conclusions. (Critical Thinking)
5. Communicate technical analyses to non-specialists. (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.

Signature of Advisor _____ Date _____ 20__

Signature of Department Head _____ Date _____ 20__

Signature of Registrar _____ Date _____ 20__

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 No more than one "D" may be used in completing major requirements.
- 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 for additional graduation information.
- Essential Learning Capstone should be completed between 45 and 75 hours.
- See "Requirements for Undergraduate Degrees and Certificates" in the catalog for additional graduation information.

ESSENTIAL LEARNING REQUIREMENTS (31 semester hours):
See the current catalog for a list of courses that fulfill the requirements below. If a course is an Essential Learning option and a requirement for your major, you must use it to fulfill the major requirement and make a different selection for the Essential Learning requirement.

Course No	Title	Sem.hrs	Grade	Term/Trns
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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 Essential Learning requirements and 2 credits apply to Foundation Courses

Humanities (3 semester hours)

Social and Behavioral Sciences (6 semester hours)

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

Course No	Title	Sem.hrs	Grade	Term/Trns
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History (3 semester hours)
HIST _____

Fine Arts (3 semester hours)

WELLNESS REQUIREMENT (2 semester hours)
KINE 100 Health and Wellness 1 _____
KINA 1 _____ 1 _____

ESSENTIAL LEARNING CAPSTONE (4 semester hours)
ESSL 290 Maverick Milestone
(see English & math pre-reqs) 3 _____
ESSL 200 Essential Speech (co-requisite) 1 _____

Foundation Courses (10 Semester Hours)
MATH 151 Calculus I 2 _____
MATH 152 Calculus II 5 _____
STAT 200 Probability and Statistics 3 _____

MATHEMATICS – STATISTICS MAJOR REQUIREMENTS
(41 semester hours) A 2.5 GPA is required in the major courses. No more than one "D" may be used in completing major requirements.

Core Classes
CSCI 111 CS1: Foundations of Computer Science I 4 _____
MATH 240 Intro to Advanced Mathematics 4 _____
MATH 253 Calculus III 4 _____
MATH 325 Linear Algebra I 3 _____
MATH 394 Mathematics Colloquium 1 _____
MATH 452 Introduction to Real Analysis I
OR
MATH 460 Linear Algebra II 3 _____
MATH 484 Senior Seminar I 2 _____
MATH 494 Senior Seminar II 2 _____
STAT 311 Statistical Methods 3 _____
STAT 313 Sampling Techniques 3 _____
STAT 350 Mathematical Statistics I 3 _____
STAT 351 Mathematical Statistics II 3 _____
STAT 412 Correlation and Regression 3 _____
STAT 425 Design & Analysis of Experiments 3 _____

Electives (All college level courses appearing on your final transcript, **not listed above** that will bring your total semester hours to 120 hours.) (32 total semester hours; some upper division hours may be needed.)

SUGGESTED COURSE SEQUENCING FOR THE CONCENTRATION IN STATISTICS

This is a recommended sequence of course work. 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
CSCI 111 CS1: Foundations of Computer Science	4	ENGL 112 English Composition	3
ENGL 111 English Composition	3	Essential Learning Social/Behavioral Science	3
Essential Learning Social/Behavioral Science	3	Essential Learning History	3
KINE 100 Health and Wellness	<u>1</u>	KINA Activity	<u>1</u>
	16		15

SOPHOMORE YEAR

Fall Semester	Hours	Spring Semester	Hours
MATH 240 Introduction to Advanced Mathematics	4	MATH 253 Calculus III	4
Essential Learning Humanities	3	Essential Learning Natural Science with Lab	4
Essential Learning Fine Arts	3	ESSL 200 Essential Speech	1
STAT 200 Probability and Statistics	3	ESSL 290 Maverick Milestone	3
Essential Learning Natural Science	<u>3</u>	Elective	<u>3</u>
	16		15

JUNIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
MATH 325 Linear Algebra I	3	STAT 313 Sampling Techniques	3
STAT 311 Statistical Methods	3	STAT 351 Mathematical Statistics II	3
STAT 350 Mathematical Statistics I	3	Upper Division Elective	3
Elective	3	MATH 394 Mathematics Colloquium	1
Upper Division Elective	<u>3</u>	Elective	3
	15	Elective	<u>3</u>
			16

SENIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
MATH 452 Intro to Real Analysis I OR		STAT 425 Design & Analysis of Experiments OR	
MATH 460 Linear Algebra II	3	STAT 496 Topics	3
STAT 412 Correlation and Regression	3	MATH 494 Senior Seminar II	2
MATH 484 Senior Seminar I	2	Upper Division Elective	2
Upper Division Elective	3	Elective	3
Elective	<u>3</u>	Elective	<u>3</u>
	14		13

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)