

M - Mathematics

M 096. Survey of Algebra. 4 Credits. (4 Lec) F,S,Su

Offered by Gallatin College. PREREQUISITE: M 065 or M 085 or Math Placement Test within the past 12 months. Intended for students pursuing majors requiring the M 121Q track and/or chemistry. This instructor-taught course initiates development in students' ability to organize thought processes and systematically solve problems while preparing students for studies in other courses. Topics include linear equations and inequalities and their graphs, systems of linear equations, exponents, polynomials, factoring, rational expressions, and square roots. This course is equivalent to M 097.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10327	001	First Half Session	MTWR	HAMILT228	8:45am - 10:30am
2020 Summer Semester	10653	002	May-start: 4x4	-	-	-

M 105Q. Contemporary Mathematics (formerly M 145Q, Math for Liberal Arts). 3 Credits. (3 Lec)F,S,Su

PREREQUISITE: M 088, M 096, M 097 or Math Placement Test within the past 12 months. Formerly M 145Q. Designed to give liberal arts students the skills required to understand and interpret quantitative information that they encounter in the news and in their studies, and to make numerically-based decision in their lives. Topics include working with large numbers and units, linear and exponential relations, financial mathematics, and essentials of probability and statistics. Common final.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10845	801	Non-standard term dates 18-MAY-20 10-JUL-20	-	ONLINEWEB-	-

M 121Q. College Algebra. 3 Credits. (3 Lec) F,S,Su

PREREQUISITE: M 096, M 097 or Math Placement Test within the past 12 months. Intended for students preparing for precalculus or calculus. Further development of algebraic skills through the study of linear, quadratic, polynomial, exponential, and logarithmic functions. COMMON EXAMS.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	11126	802	Intersession	-	ONLINEWEB-	-
2020 Summer Semester	10525	002	July-start: 4x4	MTWR	WILSON113811:00am - 1:35pm	-
2020 Summer Semester	10689	001	May-start: 4x4	MTWR	WILSON111611:00am - 1:35pm	-
2020 Summer Semester	10823	801	Non-standard term dates 18-MAY-20 10-JUL-20	-	ONLINEWEB-	-
2020 Summer Semester	10824	003	July-start: 4x4	-	-	-

M 151Q. Precalculus. 4 Credits. (4 Lec) F,S,Su

PREREQUISITE: M 121Q or Math Placement Test within the past 12 months. Functions, graphs, and the use symbols for expressing mathematical thoughts. Polynomials, rational, exponential, logarithmic, and trigonometric functions. COMMON EXAMS.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10251	001	Second Half Session	MTWR	WILSON113210:00am - 12:20pm	-
2020 Summer Semester	10252	002	May-start: 4x4	MTWR	WILSON11328:30am - 10:00am	-
2020 Summer Semester	10252	002	May-start: 4x4	MTWR	WILSON11321:00pm - 3:00pm	-

M 161Q. Survey of Calculus. 4 Credits. (4 Lec) F,S,Su

PREREQUISITE: M 121Q or Math Placement Test within the past 12 months. A survey of basic calculus including limits, differentiation, and integration with applications to business, biology, and social science problems. COMMON FINAL ONLY.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	11020	002	Non-standard term dates 29-JUN-20 07-AUG-20	MTWR	WILSON113110:00am - 12:20pm	-
2020 Summer Semester	10825	801	Non-standard term dates 15-JUN-20 07-AUG-20	-	ONLINEWEB-	-
2020 Summer Semester	10253	001	May-start: 4x4	MTWR	WILSON11268:30am - 10:00am	-
2020 Summer Semester	10253	001	May-start: 4x4	MTWR	WILSON11261:00pm - 3:00pm	-

M 171Q. Calculus I. 4 Credits. (4 Lec) F,S,Su

PREREQUISITE: M 151Q or Math Placement Test within the past 12 months. Functions, elementary transcendental functions, limits and continuity, differentiation, applications of the derivative, curve sketching, and integration theory. COMMON EXAMS.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10254	001	First Half Session	MTWR	WILSON112110:00am - 12:20pm	-
2020 Summer Semester	10255	002	Second Half Session	MTWR	WILSON112110:00am - 12:20pm	-

M 172Q. Calculus II. 4 Credits. (4 Lec) F,S,Su

PREREQUISITE: M 171Q. Methods of integration, applications of the integral, infinite sequences and series including Taylor series, parametric and polar equations. COMMON EXAMS.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10256	001	May-start: 4x4	MTWR	JABS415	8:30am - 10:00am
2020 Summer Semester	10256	001	May-start: 4x4	MTWR	JABS415	1:00pm - 3:00pm
2020 Summer Semester	10257	002	Second Half Session	MTWR	WILSON113410:00am - 12:20pm	-

M 221. Introduction to Linear Algebra. 3 Credits. (3 Lec) F,S,Su

PREREQUISITE: M 166Q or M 172Q. Matrix algebra, systems of linear equations, determinants, vector algebra and geometry in Euclidean 3-space, eigenvalues, eigenvectors.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10108	001	May-start: 4x4	MTWR	WILSON114411:00am - 1:35pm	-

M 273Q. Multivariable Calculus. 4 Credits. (4 Lec) F,S,Su

PREREQUISITE: M 172Q. Topics in two and three dimensional geometry. Manipulation and application of vectors. Functions of several variables, contour maps, graphs, partial derivatives, gradients, double and triple integration, vector fields, line integrals, surface integrals, Green's Theorem, Stokes' Theorem, the Divergence Theorem. COMMON FINAL ONLY.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	11227	801	Intersession	-	ONLINEWEB-	-
2020 Summer Semester	10258	001	May-start: 4x4	-	-	-

M 274. Introduction to Differential Equation. 4 Credits. (4 Lec) F,S,Su

PREREQUISITE: M 172Q. An introduction to qualitative, quantitative, and numerical methods for ordinary differential equations. Topics include modeling via differential equations, linear and nonlinear first order differential equations and systems, elementary phase plane analysis, forced oscillations, and Laplace transform techniques. COMMON FINAL ONLY.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10109	001	May-start: 4x4	MTWR	WILSON11348:30am - 10:00am	-
2020 Summer Semester	10109	001	May-start: 4x4	MTWR	WILSON11341:00pm - 3:00pm	-

M 517. Advanced Mathematical Modeling for Teaching. 3 Credits. (3 Lec) Su Alternate Even Years - Online only PREREQUISITE: Graduate standing in mathematics education, teaching endorsement in mathematics, or consent of instructor. Focus on the use of modeling to solve real-world problems. Topics include the modeling process, an overview of relevant technology, strategies to engage students in modeling in the secondary classroom, and classroom assessment of modeling activities. Extensive use of mathematics to explore application areas, leading to the construction of original models.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	11357	801	Non-standard term dates 08-JUN-20 17-JUL-20	-	ONLINEWEB-	

M 518. Statistics for Teaching. 3 Credits. (3 Lec) Su

Distance format PREREQUISITE: Graduate standing in mathematics or science education, teaching endorsement in mathematics or science, or consent of instructor. Stochastic concepts including probabilistic underpinnings of statistics, measures of central tendency, variability, correlation, distributions, sampling, and simulation. Exploratory data analysis including experiments, surveys, measures of association and inferential statistics. Discussion of methods for teaching statistics in secondary mathematics and science.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10236	801	Non-standard term dates 08-JUN-20 17-JUL-20	-	ONLINEWEB-	

M 520. Access and Equity in Mathematics Teaching. 3 Credits. (3 Lec) Su

Alternate Odd Years ONLINE only PREREQUISITE: Graduate standing in mathematics education, teaching endorsement in mathematics, or consent of instructor. Study of the social context of schooling in the U.S. through the lens of access and equity in mathematics education. Key content themes and connections in algebra, geometry, probability/data analysis, number, and measurement with a focus on mathematical practices. Exploring, extending, designing, and teaching equity-oriented classroom activities for middle/high school students and reflecting on issues of access, equity, and student outcomes.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	11199	801	Non-standard term dates 18-MAY-20 07-AUG-20	-	-	-

M 523. Number Structure for Teaching. 3 Credits. (3 Lec) Su

To be offered for two consecutive years; alternates with 526 PREREQUISITE: Graduate standing in mathematics education, teaching endorsement in mathematics, or consent of instructor. Develop the relationship and distinction between the mathematics that underlies the structure of number and the learning and teaching of number structure in schools. Explore representation, abstraction, and basic proof in the context of number and operations. Develop foundations of the real number system and examine relevant research about students' understanding of number.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	11021	001	Non-standard term dates 18-MAY-20 07-AUG-20	-	-	-

M 524. Linear Algebra for Teaching. 3 Credits. (3 Lec)

Su. Distance format. PREREQUISITE: Graduate standing in mathematics education, teaching endorsement in mathematics, or consent of instructor. Algebraic systems, special matrices, determinants, vector spaces, and linear programming. Includes applications relevant to industry and business and connections to topics in secondary mathematics.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10902	001	Non-standard term dates 08-JUN-20 17-JUL-20	MTWRF	WILSON11339:45am - 11:00am	
2020 Summer Semester	10902	001	Non-standard term dates 08-JUN-20 17-JUL-20	MTWRF	WILSON11333:45pm - 5:00pm	

M 526. Discrete Mathematics for Teaching. 3 Credits. (3 Lec) Su for two consecutive years; alternates with M 523. PREREQUISITE: Graduate standing in mathematics education, teaching endorsement in mathematics, or consent of instructor. A study of classical topics in discrete mathematics, chosen from combinatorics, probability, graph theory, and other areas relevant to secondary mathematics. Emphasis on problem solving and justification.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	11383	001	Non-standard term dates 08-JUN-20 17-JUL-20	-	ONLINEWEB-	
2020 Summer Semester	11383	001	Non-standard term dates 08-JUN-20 17-JUL-20	MTWRF	WILSON11338:15am - 9:30am	
2020 Summer Semester	11383	001	Non-standard term dates 08-JUN-20 17-JUL-20	MTWRF	WILSON11338:15am - 9:30am	
2020 Summer Semester	11383	001	Non-standard term dates 08-JUN-20 17-JUL-20	MTWRF	WILSON11332:15pm - 3:30pm	
2020 Summer Semester	11383	001	Non-standard term dates 08-JUN-20 17-JUL-20	MTWRF	WILSON11332:15pm - 3:30pm	

M 570. Individual Problems. 1-3 Credits. (1-3 Ind; 6 cr max) F,S,Su

PREREQUISITE: Graduate standing, consent of instructor, approval of department head and Dean of Graduate Studies. Directed research and study on an individual basis.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	11278	002	Full Semester	-	-	-
2020 Summer Semester	10111	001	Full Semester	-	-	-

M 576. Internship. 1-12 Credits. (1-12 Ind; unlimited max) F,S,Su

PREREQUISITE: Graduate standing, consent of instructor and approval of department head. An individualized assignment arranged with an agency, business or other organization to provide guided experience in the field.

Term	CRN	Section	Session/Dates	Days	Location	Time
2020 Summer Semester	10226	001	Full Semester	-	-	-

Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.