

M 242-001: Methods of Proof (3 credits)**Location and Meeting Times:** LA 311; TR 10:30-12:00**Instructor Information:** Don Gayan Wilathgamuwa

LA 841

406-657-2920

don.wilathgamuwa@msubillings.edu

<http://www.msubillings.edu/mathfaculty/wilathgamuwa/>**Office Hours:** M: 10:30-12:30

W: 9:00 a.m.-12:00 noon. (LA 841)

Or by appointment

Catalog Description: -Reasoning and communication in mathematics, including logic, generalization, existence, definition, proof, and the language of mathematics. Topics include functions, relations, set theory, recursion, algebra, number theory, and other areas of mathematics**Text:** Proof: Introduction to Higher Mathematics, 7th edition- Warren W. Esty.**Course Objectives:** Upon completion of the course the successful student will be able to read symbolic mathematics with comprehension, express mathematical thoughts clearly, reason logically, recognize and employ common patterns of mathematical thought, and read and write proofs.**Prerequisite:** M 272 or consent of instructor**Course Outline:**

Ch. 1: Introduction to Proof

Ch. 2: Sentences with Variables

Ch. 3: Proofs

Ch. 4: Set Theory

Ch. 5: Functions

Grading Scale:

<u>Percentage</u>	<u>Grade</u>
90-100%	A
80-89%	B
70-79%	C
60-69%	D
Below 60%	F

Assessment:

<u>Item</u>	<u>Percentage</u>
Homework	10 %
Quizzes	20 %
Exam 1 (Midterm)	25 %
Exam 2 (Final)	35 %
Project	10 %
Total	100 %

Quizzes: Refer to the course calendar.

Exams: There will be 2 in class exams. The use of a scientific calculator will be permitted on the exams. The use of books, notes or other resource materials will not be permitted on any exams.

Incomplete: No Incompletes will be given unless requirements as per student handbook are met.

Classroom Etiquette: Maintaining an environment conducive to learning is of the utmost importance. Hence, talking with fellow students is discouraged. Also, please turn off all electronic devices before entering the class.

Attendance: Regular attendance is essential. Attendance will be taken every day.

Important URL s: How to Study Mathematics-written by Paul Dawkins
http://tutorial.math.lamar.edu/pdf/How_To_Study_Math.pdf

Important Dates:

Last Day for Registering/Adding Classes	Friday, January 23
Last Day for Withdrawing/Dropping Classes with a Partial Refund	Wednesday, February 4
Last Day to Drop Classes Without Instructor Permission (No Refund)	Thursday, March 12
Last Day to Drop a Class with Approval of Advisor and Course Instructor	Thursday, April 9

Financial Aid and Scholarship: Dropping a course, getting an incomplete, or getting a failing/lower grade may affect your scholarship or your financial aid. For more information go to:

<http://www.msubillings.edu/finaid/>

Further Information

1. Some of you will face personal situations during this semester that will rightfully demand more attention than this class, and will not allow you to be mentally in class. Whenever possible, accommodations that are fair to you will be made if I am informed in a timely manner **before deadlines**.
2. For both a student and a teacher there is no substitute for preparation. I expect you to stay current in your readings and other assignments. You should plan on spending time each and every day studying these concepts. Some assignments will require more of your time than others.
3. As college students you should be very familiar with the requirements for academic integrity. Although discussing ideas from the class with others is both productive and encouraged, I expect answers on your exams to be your own independent work. Students who cheat on class assessment work will meet with disciplinary action, including but not limited to a failing grade in the course. For further information, consult the MSU-B student handbook (available online at the MSU-B home page).
4. An Incomplete (grade) is given only when students have been ‘in attendance’ for at least three-fourths of the semester but have been prevented by circumstances beyond their control from completing all the requirements of the course. The student must provide adequate evidence to the instructor as to the reason why

they were unable to complete the requirements of the course. An Incomplete must be made up within one calendar year or the grade will revert to an F. In general, to make up an incomplete for this class, the student must retake the course and will be required to submit all material required by the new instructor of a regular student. No extra credit is offered.

5. Students with disabilities, whether physical learning, or psychological, who believe that they may need accommodations in this class, are encouraged to contact Disability Support Services (DSS) as soon as possible to ensure that such accommodations are implemented in a timely fashion. Please meet with DSS staff to verify our eligibility for any classroom accommodations and for academic assistance related to your disability. The DSS staff can be reached at 406-657-2283.

Memo from Academic Support Center and Disability Support Services

Students with Disabilities:

MSU Billings is committed to providing equal access. If you anticipate barriers related to the format or requirements of this course, please meet with me so that we can discuss ways to ensure your full participation in the course. If you determine that disability-related accommodations are necessary, please contact Disability Support Services (657-2283; located in Room 135 in the College of Education). We can then plan how best to coordinate your accommodations.

Academic Support Center:

The Academic Support Center of MSU Billings provides tutoring services to support the academic success students. Any MSUB/City College student can utilize the services on either campus. The ASC is staffed with student tutors, professional tutors and instructors who are trained to tutor in a variety of subjects. Tutors are available to assist students with math, writing, reading, anatomy and physiology, and other specialty areas for specific majors. Tutoring services are "free" as they are already paid for as part of your student fees. The ASC hours are as follows:

- **University Campus – Located in the SUB**
Monday through Thursday, 8 a.m.-7 p.m., Friday, 8 a.m.-5 p.m. Friday, and Sunday nights from 6-9 p.m.
- **City College Campus —Located in the Tech Building**
Monday through Thursday, 8 a.m.-6 p.m., and Friday, 8 a.m.-5 p.m.

Tentative calendar for M 242-001, spring 2015

Week		Date	Topic	Week		Date	Topic
1	T			8	T	10-Mar	Ch3
	R	15-Jan	Ch1		R	12-Mar	Ch3, Q11
2	T	20-Jan	Ch1	9	T	17-Mar	Ch4, Q12
	R	22-Jan	Ch1, Q1		R	19-Mar	Ch4, Q13
3	T	27-Jan	Ch1, Q2	10	T	24-Mar	Ch4, Q14
	R	29-Jan	Ch1, Q3		R	26-Mar	Ch4, Q15
4	T	3-Feb	Ch2, Q4	11	T	31-Apr	Ch5, Q16
	R	5-Feb	Ch2, Q5		R	2-Apr	No Classes- Spring mini break
5	T	10-Feb	Ch2, Q6	12	T	7-Apr	Ch5, Q17
	R	13-Feb	Ch2, Q7		R	9-Apr	Ch5, Q18
6	T	17-Feb	Ch3, Q8	13	T	14-Apr	Ch5, Q19
	R	19-Feb	Ch3, Q9		R	16-Apr	Ch5, Q20
7	T	24-Feb	Ch3, Q10	14	T	21-Apr	Ch5, Q21
	R	26-Feb	Midterm Exam		R	23-Apr	Ch5, Q22
28-Feb to 8-March: Spring Break							

Final Exam: Tuesday 28-Apr-15, 12:00-1:50