TRIAL COURSE OR NEW COURSE PROPOSAL

SUBMITTED BY:

Department	**Department of Developmental Education**	College/School	**CRCD**
Prepared by	**Kelly Houlton**	Phone	**(907) 474-7526**
Email Contact	**klhoulton@alaska.edu**	Faculty Contact	**Kelly Houlton**

1. ACTION DESIRED *(CHECK ONE):* Trial Course [ ]   New Course [X]

2. COURSE IDENTIFICATION: Dept **DEVM** Course # **109H** No. of Credits **1.0**

Justify upper/lower division status & number of credits:
This is the second of three single credits that together are equivalent to our current DEVM 105 Intermediate Algebra course.

3. PROPOSED COURSE TITLE: **Modularized Master Math (M-Cubed): Intermediate Algebra Module H**

4. To be CROSS LISTED? YES/NO **No** If yes, Dept: [ ] Course # [ ]

NOTE: Cross-listing requires approval of both departments and deans involved. Add lines at end of form for additional required signatures.

5. To be STACKED? YES/NO **No** If yes, Dept. [ ] Course # [ ]

How will the two course levels differ from each other? How will each be taught at the appropriate level?: [ ]

Stacked course applications are reviewed by the (Undergraduate) Curricular Review Committee and by the Graduate Academic and Advising Committee. Creating two different syllabi—undergraduate and graduate versions—will help emphasize the different qualities of what are supposed to be two different courses. The committees will determine: 1) whether the two versions are sufficiently different (i.e. is there undergraduate and graduate level content being offered); 2) are undergraduates being overtaxed?; 3) are graduate students being undertaxed? In this context, the committees are looking out for the interests of the students taking the course. Typically, if either committee has qualms, they both do. More info online – see URL at top of this page.

6. FREQUENCY OF OFFERING: **Fall (Every), Spring (Every)**

Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING
(AY2013-14 if approved by 3/1/2013; otherwise AY2014-15)
Summer of 2015 if possible; Fall of AY 2015 - 16

8. COURSE FORMAT:

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, **any core course compressed to less than six weeks must be approved by the Core Review Committee.**

COURSE FORMAT: (check all that apply)	1 [ ]	2 [ ]	3 [ ]	4 [ ]	5 [X]	6 weeks to full semester [ ]

OTHER FORMAT (specify): **Variable depending on students' abilities, previous knowledge, and motivation. The course will be 14 hours of contact time.**

Mode of delivery (specify lecture, field trips, labs, etc): **M-Cubed (MMM) stands for Modularized Mastery Math. Modularization is used to separate topics into smaller mini-modules so students can fully master course concepts more readily and at their own pace. Students only move on to more complex material when they are ready to learn it. Instruction is individualized for each student using individual and small-group lectures, computers and videos in a highly structured and supported learning environment. Students are guided**

individually as they work through their required mini-modules based on finely tuned diagnostic pre- and post-testing. Students will focus individually on what they need to master on their own semester-based timeline instead of being required to demonstrate previous knowledge through homework assignments and tests in a traditional class and having to "stay with the class" time-wise throughout the semester. Students will get the support they need – as they need it – as they work only on the material of which they do not already possess mastery.

9. CONTACT HOURS PER WEEK:	3	LECTURE hours/weeks		LAB hours /week		PRACTICUM hours /week

Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/guidelines-for-computing-/ for more information on number of credits.

OTHER HOURS (specify type)	

10. **COMPLETE** CATALOG DESCRIPTION including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

Example of a **complete** description:

FISH F487 W, O   Fisheries Management
    3 Credits   Offered Spring
    Theory and practice of fisheries management, with an emphasis on strategies utilized for the management of freshwater and marine fisheries. Prerequisites: COMM F131X or COMM F141X; ENGL F111X; ENGL F211X or ENGL F213X; ENGL F414; FISH F425; or permission of instructor. Cross-listed with NRM F487. (3+0)

DEVM F109H   Modularized Mastery Math (M-Cubed): Intermediate Algebra Module H
1 Credit   Offered Fall, Spring
This course covers one credit of the DEVM 105 Intermediate Algebra course and includes the following topics: review of solving quadratic equations by factoring, solving quadratic equations that are not factorable, relations and functions, graphs and transformations of functions, quadratic functions and their graphs, performing operations on functions, compositions of functions, and applications of quadratic equations and functions. Topics are split into mini-modules and worked until mastery is achieved. Some mini-modules may be skipped if a student already demonstrates mastery of them. Computers will be used within a structured and independent learning setting. *Prerequisites: Grade of B or better in DEVM 109G taken within one calendar year; permission of instructor required.* (1+0)

11.   **COURSE CLASSIFICATIONS:** Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.

H = Humanities		S = Social Sciences	

Will this course be used to fulfill a requirement for the baccalaureate core? **If YES, attach form.**	YES:		NO:	X

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, Format 6		W = Writing Intensive, Format 7		X = Baccalaureate Core	

11.A *Is course content related to northern, arctic or circumpolar studies? If yes, a "snowflake" symbol will be added in the printed Catalog, and flagged in Banner.*

YES		NO	X	

12.   *COURSE REPEATABILITY:*

Is this course repeatable for credit?	YES		NO	X

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).	

How many times may the course be repeated for credit?		TIMES
If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?		CREDITS

If the course can be repeated with _variable_ credit, what is the maximum number of credit hours that may be earned for this course? | | **CREDITS**

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13. **GRADING SYSTEM:** Specify only one. Note: Changing the grading system for a course later on constitutes a Major Course Change – Format 2 form.

LETTER: [X]   **PASS/FAIL:** [ ]

RESTRICTIONS ON ENROLLMENT (if any)

14. **PREREQUISITES**	Grade of B or better in DEVM 109G taken within one calendar year; permission of instructor required.

These will be _required_ before the student is allowed to enroll in the course.

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15. **SPECIAL RESTRICTIONS, CONDITIONS**	Permission of instructor required. The Modularized Mastery Math sequence of courses is limited to a total of 18 students at any one time due to the size of our Developmental Math Lab. (DEVM 069D, E, and F, and DEVM 109G, H, and J are all held concurrently and meet at the same time.) Each student will need to be interviewed to determine a) whether they have taken algebra in the past or not; b) what their level of motivation is; c) if they are able to work independently; d) how comfortable they are working with computers; and e) that they understand the structure of modularized mastery learning and what they will be expected to do. Attendance will necessarily be a considerable part of their grade because M-Cubed is designed to help students finish their math sequence as quickly as possible. The only way to insure this is to require that a minimum amount of guided time is devoted to this class each week by the student. Since the course is self-paced and students are not all working on the same assignments at the same time, there is a very real danger of falling behind. Once a student gets behind, it becomes very difficult to catch up.

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16. **PROPOSED COURSE FEES** | **$15**

Has a memo been submitted through your dean to the Provost for fee approval?
Yes/No | **Yes**

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17. **PREVIOUS HISTORY**

Has the course been offered as special topics or trial course previously?
Yes/No | **Yes**

If yes, give semester, year, course #, etc.:	Spring 2014: DEVM F194H Fall 2014: DEVM F194H

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18. **ESTIMATED IMPACT**

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

The Department of Developmental Education's Math Lab in Gruening 406 will lose 3 hours per week of open lab time while class is in session, and there will be a significant increase in lab usage. The class is offered Monday, Wednesday and Friday from 8:00 – 9:00 AM in order to minimize the loss of 3 hours' worth of open lab time.

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19. **LIBRARY COLLECTIONS**

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

| No | X | Yes | | | Unnecessary; using an e-book and computers. |

20. IMPACTS ON PROGRAMS/DEPTS
What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)

Department of Developmental Education; Math Department (Primarily); All other UAF departments and programs that require DEVM 060 or DEVM 105 as a prerequisite or degree/certificate requirement

I met with John Rhodes, the current Math Department Chair, in Spring 2014 to explain how M-Cubed works and how students finishing the last Module (Mod J) will have the equivalent of DEVM 105. He agreed to inform the professors in his department teaching current courses requiring completion of DEVM 105 as a prerequisite for placement to accept students who have successfully completed the last module of M-Cubed. (See attached email.) I also sent a letter via email to all Department Chairs and Program Heads explaining M-Cubed and it's equivalency to DEVM 060 (DEVM 069F) and DEVM 105 (DEVM 109J). It will necessarily take some time for all affected departments and programs to submit catalog changes reflecting acceptance of DEVM 069F and DEVM 109J as alternative prerequisites.

21. POSITIVE AND NEGATIVE IMPACTS
*Please specify **positive and negative** impacts on other courses, programs and departments resulting from the proposed action.*

Students will learn material to mastery levels and so be better prepared for their subsequent math courses. Students will be able to work as quickly as they are able to complete their developmental math sequence faster than traditional, semester-based courses. Students will only need to take the modules for which they do not already possess mastery instead of having to take and pay for a whole 3-credit course. M-Cubed is a valuable option for students allowing for more flexibility and tailoring to meet each student's individual needs. In Spring 2014 when the course was first offered as a trial course, two students completed all six credits in one semester and another student completed four credits (as she was able to test out of the first two Modules). Most students finished the first three Modules and one student who had placed into DEVM 105 finished the last three Modules. Overall the student response was wonderful: they loved it. I asked for informal feedback twice during the semester and made some changes based on my students' suggestions. I have created a set of DVDs with lectures corresponding to all 54 Mini Modules.

JUSTIFICATION FOR ACTION REQUESTED
The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

Developmental mathematics would like to offer another delivery option for our diverse students. The topics covered in DEVM 060 Elementary Algebra and DEVM 105 Intermediate Algebra have been split up into three individual credits each in order to offer students a more tailor-made, and thus efficient, learning experience. Structure has been built in to insure that students receive the support and focus they need to complete their math sequence in a timely manner. Attendance will necessarily be a considerable part of their grade because M-Cubed is designed to help students finish their math sequence as quickly as possible. The only way to insure this is to require that a minimum amount of guided time is devoted to this class each week by the student. Since the course is self-paced and students are not all working on the same assignments at the same time, there is a very real danger of falling behind. Once a student gets behind, it becomes very difficult to catch up.

This course (together with courses DEVM 069E, 069F, 109G, 109H, and 109J) allows students to complete their developmental math sequence faster since, 1) students only need to complete the Modules for which they do not already exhibit mastery levels, thus saving them money as well, and 2) it is possible for students to earn up to six credits (DEVM 060 and 105 topics) in one semester.

There are six single-credit modularized mastery math courses being submitted for new courses at this time. In order to distinctly identify and clarify each course, they are each assigned a different letter designator – starting with "D" and progressing up through "J" (note: "I" is skipped since it is problematic; it looks too much like the numeral 1.) Letters A, B, and C are being reserved for possible future development of three single-credit modularized mastery learning math courses covering our DEVM 050 Prealgebra course. The new course sequence consists of DEVM 069D, DEVM 069E, DEVM 069F (together they are equivalent to DEVM 060 Elementary Algebra), DEVM 109G, DEVM 109H, and DEVM 109J (together these last three are equivalent to DEVM 105 Intermediate Algebra).
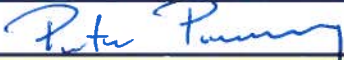
The progression is as follows:

1. Students placing into DEVM 060-level math work a review of pre-test concepts for Module D (DEVM 069D).
2. Students then take the pre-test for Module D. If they receive 80% or higher, they already demonstrate mastery of these topics and will work the review of pre-test concepts for the subsequent Module. If the student receives less than 80%, they begin working Mini Modules (Mini Mods) associated with each question/concept they missed on the pre-test. Each Mini Mod covers one or two concepts broken down into smaller parts. Once they reach the required mastery level for each Mini Mod, they again work a review for their current Module, and after achieving the required mastery level on the review, they take the Module post-test. If they receive 80% or higher, they have completed the Module and will begin working the pre-test review for the next Module in the sequence. If they receive less than 80% mastery they begin reworking the associated Mini Mods for each question they missed.
3. Students continue working in this cycle until they complete each module in which they have registered.
4. Students do not pay for or earn credit for any module in which they already possess mastery. The professor helps manage the necessary paperwork for dropping and adding to insure that each student is registered only for the modules that they need in order to help streamline the process as much as possible for the student.

APPROVALS: Add additional signature lines as needed.

		Date	9/23/14
Signature, Chair, Program/Department of:	DEV ED		

		Date	9/25/2014
Signature, Chair, College/School Curriculum Council for:	CRCD		

		Date	9/29/14
Signature, Dean, College/School of:	CRCD		

Offerings above the level of approved programs must be approved in advance by the Provost.

		Date	
Signature of Provost (if above level of approved programs)			

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

		Date	
Signature, Chair Faculty Senate Review Committee: ___Curriculum Review ___GAAC ___Core Review ___SADAC			

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

		Date	
Signature, Chair, Program/Department of:			

		Date	
Signature, Chair, College/School Curriculum Council for:			

		Date	
Signature, Dean, College/School of:			

ATTACH COMPLETE SYLLABUS (as part of this application). This list is online at:
http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/uaf-syllabus-requirements/
The Faculty Senate curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course (or changes to it) may be denied.

SYLLABUS CHECKLIST FOR ALL UAF COURSES
During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

1. Course information:
  ☐Title, ☐ number, ☐credits, ☐prerequisites, ☐ location, ☐ meeting time
(make sure that contact hours are in line with credits).

2. Instructor (and if applicable, Teaching Assistant) information:
  ☐ Name, ☐ office location, ☐ office hours, ☐ telephone, ☐ email address.

3. Course readings/materials:
  ☐ Course textbook title, ☐ author, ☐ edition/publisher.
  ☐ Supplementary readings (indicate whether ☐ required or ☐ recommended) and
  ☐ any supplies required.

4. Course description:
  ☐ Content of the course and how it fits into the broader curriculum;
  ☐ Expected proficiencies required to undertake the course, if applicable.
  ☐ Inclusion of catalog description is *strongly* recommended, and
  ☐ Description in syllabus must be consistent with catalog course description.

5. ☐ **Course Goals (general), and (see #6)**

6. ☐ **Student Learning Outcomes (more specific)**

7. Instructional methods:
  ☐ Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

8. Course calendar:
  ☐ A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.

9. Course policies:
  ☐ Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.

10. Evaluation:
  ☐ Specify how students will be evaluated, ☐ what factors will be included, ☐ their relative value, and ☐ how they will be tabulated into grades (on a curve, absolute scores, etc.) ☐ Publicize UAF regulations with regard to the grades of "C" and below as applicable to this course. (Not required in the syllabus, but is a convenient way to publicize this.) Link to PDF summary of grading policy for "C":
http://www.uaf.edu/files/uafgov/Info-to-Publicize-C_Grading-Policy-UPDATED-May-2013.pdf

11. Support Services:
  ☐ Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

12. Disabilities Services: Note that the phone# and location have been **updated.**
http://www.uaf.edu/disability/ The Office of Disability Services implements the Americans with Disabilities Act (ADA), and ensures that UAF students have equal access to the campus and course materials.
        ☐ State that you will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655)to provide reasonable accommodation to students with disabilities.

5/21/2013

UNIVERSITY of ALASKA

DEVM 194

John Rhodes <jarhodes2@alaska.edu>
To: Kelly Houlton <klhoulton@alaska.edu>, Jane Weber <jane.weber@alaska.edu>

Tue, May 6, 2014 at 9:39 AM

As we discussed, I will direct DMS instructors to treat successful completion of the trial course DEVM 194 as on par with DEVM 105 for the purposes of fulfilling prerequisites for entry into MATH and STAT courses.

I also encourage other departments to do the same if they are using placement into math courses as a prerequisite.

John Rhodes
DMS chair

📄 **jarhodes2.vcf**
1K

Jane Weber <jmweber@alaska.edu>
To: John Rhodes <jarhodes2@alaska.edu>
Cc: Kelly Houlton <klhoulton@alaska.edu>, Jane Weber <jane.weber@alaska.edu>

Tue, May 6, 2014 at 9:51 AM

Thank you John!

jane
[Quoted text hidden]

Kelly Houlton <klhoulton@alaska.edu>
To: John Rhodes <jarhodes2@alaska.edu>

Tue, May 6, 2014 at 9:52 AM

Thanks, John. I will let you know in the fall what course number has been chosen for DEVM 194J - currently we are looking at DEVM 109J.

SYLLABUS

*** *PLEASE TURN OFF YOUR CELL PHONE AND ANY MUSIC DEVICES* ***

1. Course information: DEVM 069D Modularized Mastery Math: Elementary Algebra (1 credit)
DEVM 069E (1 credit)
DEVM 069F (1 credit)

DEVM 109G Modularized Mastery Math: Intermediate Algebra (1 credit)
DEVM 109H (1 credit)
DEVM 109J (1 credit)

Prerequisites: DEVM 069: Grade of C or better in DEVM 050 or ABUS 155 or appropriate ALEKS PPL placement test scores. DEVM 109: Grade of C or better in DEVM 060; or DEVM 069F; or appropriate ALEKS PPL placement test scores. Prerequisite courses and/or placement exams must be taken within one calendar year; permission of instructor required.
Place: Gruening 406 Developmental Math Lab
Time: Monday/Wednesday/Friday 8:00 – 9:00 AM

2. Instructor: Kelly Houlton, Assistant Professor, Department of Developmental Education
Office: Gruening 508E
Office Hours: Mon/Wed/Fri NOON – 3:00 PM, Tue/Thur 1:30 – 3:00 PM or by appointment
Phone/Email: 474-7526 / klhoulton@alaska.edu
Fax: 474-1118
Emergency: Call Renee Pike, 474-1112, Gruening 508

3. Course readings/materials: Required: Beginning and Intermediate Algebra, Sherri Messersmith, 3rd edition, (McGraw-Hill) **on ALEKS (electronic copy of textbook).** Required: ALEKS 360 access code to utilize ALEKS on computer. Recommended: Mastering Mathematics: How to be a Great Math Student by Richard Manning Smith (Wadsworth). These books are on reserve at the library on a 2-hour basis. If you do not have your ALEKS 360 access code yet, please see me after class. You will be provided with DVDs for each Module when you begin working the assignments.

Supplies checklist: ___ **pencil**
                      ___ **eraser**
                      ___ **3-ring binder notebook**
                      ___ **lots of paper**
                      ___ **headphones (for watching math videos during class or lab times)**

4. Course Description and Expectations: DEVM 069D, E and F each cover one credit of the DEVM 060 Elementary Algebra course and includes the following topics:

Module D - simplifying algebraic expressions, solving linear equations in one variable, solving linear and compound inequalities in one variable, applications of linear equations, and solving formulas;

Module E - linear equations in two variables, graphing linear equations, finding the slope of linear equations, writing equations of lines, exponent rules, and operations on polynomials;

Module F - factoring polynomials, solving quadratic equations by factoring, simplifying rational expressions, operations with rational expressions, complex fractions, solving rational equations, and applications of quadratic and rational equations.

DEVM 109G, H, and J each cover one credit of the DEVM 105 Intermediate Algebra course and includes the following topics:

Module G - solving systems of equations and applications, simplifying radicals and expressions with rational exponents, performing operations on radical expressions, solving radical equations, and performing operations on complex numbers;

Module H - review of solving quadratic equations by factoring, solving quadratic equations that are not factorable, relations and functions, quadratic functions and their graphs, performing operations on functions, compositions of functions, and applications of quadratic equations and functions;

Module J - solving absolute value equations and inequalities, solving linear and compound linear inequalities, solving quadratic and rational inequalities, inverse functions, exponential functions, logarithmic functions, properties of logarithms, and solving exponential and logarithmic equations.

Topics are split into mini-modules and worked until mastery is achieved. Some mini-modules may be skipped if a student already demonstrates mastery of them. Computers will be used within a structured and independent learning setting. **Prerequisites: DEVM 069** - Grade of C- or better in DEVM 050 or ABUS 155 or appropriate ALEKS PPL placement test scores. **DEVM 109** - Grade of C- or better in DEVM 060; or DEVM 069F; or appropriate ALEKS PPL placement test scores. Prerequisite courses and/or placement exams must be taken within one calendar year; permission of instructor required.

The sequence of courses DEVM 069D, 069E, and 069F is intended to prepare students for DEVM 105 Intermediate Algebra or DEVM 106 Intensive Intermediate Algebra. You must be able to perform basic math processes at the C- grade level or above. The sequence of courses DEVM 109G, 109H, and 109J is intended to prepare students for MATH 103, 107 or 161. You must be able to perform beginning algebra at the C- grade level or above.

Each module consists of a Preview (30 problems), Pre-test (30 problems), 9 mini-modules (MINI MODs) consisting of 5 Practice (Prac) problems and 10 Homework (HMWK) problems, Post-Review (30 problems), and a Post-test (30 problems). This class will be taught through videos, one-on-one computer classwork on ALEKS, small-group lectures and one-on-one tutoring. You will only work on the MINI MODs for which you do not already exhibit mastery based on the results of your Module Pre-tests. If you pass the Pre-test with 80% or higher we will transfer you to the next module in your sequence. There is no penalty for not achieving mastery instantly or for reworking MINI MODs or for retaking Module Post-tests. Attendance will be crucial in insuring that students are able to complete at least three, and possibly all six, Modules in one semester.

Here's the Game Plan for each Module:

1. Work the 30-problem Preview. Ask questions, but don't spend a lot of time here.
2. Schedule a time with me to take the Pre-test.
3. If you receive 80% or better you will be transferred to the next module in your sequence.
   If you receive less than 80% you will begin working the MINI MODs for the questions you missed.

4. Read the sections in the book associated with your first assigned MINI MOD, then watch the associated MINI MOD video on the DVD.

5. Work the MINI MOD Practice problems until you reach the required mastery level, then work the MINI MOD HMWK problems until you reach the required mastery level.
6. After reaching mastery levels for each MINI MOD, you will work the Post-Review.
7. Schedule a time with me to take the Post-test.
8. If you receive 80% or better you have completed the module and earned one credit. You may begin work on the next module for which you have enrolled.
If you receive less than 80% you will begin working the MINI MODs that correspond to the questions you answered incorrectly. You will continue this cycle until you achieve mastery.

5. Course goals: The goal of DEVM 069 is for you to demonstrate mastery of prerequisite Elementary Algebra skills required for successful completion of DEVM 105 OR DEVM 109G, H, J OR DEVM 106. The goal of DEVM 109 is for you to demonstrate mastery of prerequisite Intermediate Algebra skills required for successful completion of MATH 103, 107 or 161. These skills include logical reasoning, knowing when and how to use appropriate formulas, communicating mathematical solutions verbally and in writing, critical thinking and problem-solving skills, collaborative learning, and appreciation for the importance and beauty of mathematics.

6. Student Learning Outcomes:

DEVM 069
Module D:
1. Simplify and evaluate algebraic expressions
2. Solve linear equations in one variable
3. Solve and graph linear inequalities in one variable
4. Solve applied problems using linear equations in one variable

Module E:
5. Solve linear equations in two variables
6. Graph and interpret linear equations
7. Determine the slope of a line
8. Determine equations of lines
9. Apply understanding of exponent rules
10. Perform operations on polynomials

Module F:
11. Factor polynomials
12. Solve quadratic equations by factoring
13. Simplify and perform operations on rational expressions
14. Solve rational equations
15. Solve applied quadratic and rational equations problems

DEVM 109
Module G:
1. Solve systems of linear equations
2. Simplify and perform operations on radical expressions and rational exponents
3. Solve radical equations
4. Simplify and perform operations on complex numbers
5. Solve applied problems using systems of linear equations

Module H:

6. Solve quadratic equations that are not factorable
7. Graph and interpret linear functions

8. Graph and interpret quadratic functions
9. Graph and interpret absolute value functions
10. Graph and interpret square root functions
11. Combine, compose, and evaluate functions
12. Solve applied problems with quadratic equations and functions

Module J:
13. Solve linear absolute value equations
14. Solve linear inequalities in two variables
15. Solve quadratic inequalities
16. Determine and graph inverse functions
17. Graph and interpret exponential functions
18. Graph and interpret logarithmic functions
19. Solve exponential and logarithmic equations

7. Instructional methods: This class will be taught through videos, one-on-one computer classwork on ALEKS, small-group lectures and one-on-one tutoring outside of class following a modularized, mastery learning format. Attendance is very important in order to finish three, or all six, modules in one semester.

8. Course calendar: Note – since you will be working independently, this schedule will vary. I will check your notebook three times this semester. There are three calendars here: one for completing **all six modules** this semester (DEVM 069D, E, F and DEVM 109G, H, J); one for completing the **first three modules** this semester (DEVM 069D, E, F); and one for completing the **last three modules** this semester (DEVM 109G, H, J). Keep in mind that you may not need to do every module or MINI MOD (based on your Pre-test scores.) **You should be working on M-Cubed EVERY DAY!**

CALENDAR FOR FINISHING ALL 6 MODULES:

Week #:	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	8-31-14	9-1-14	9-2-14	9-3-14	9-4-14 1st day of classes	9-5-14 Mod D Preview 1st day of M-Cubed class	9-6-14
2	9-7-14	9-8-14 Mod D Pre-test	9-9-14	9-10-14 28 Prac 28 HMWK 29 Prac 29 HMWK 30 Prac 30 HMWK	9-11-14	9-12-14 31 Prac 31 HMWK 32 Prac 32 HMWK 33 Prac	9-13-14
3	9-14-14	9-15-14 33 HMWK 34 Prac 34 HMWK 35 Prac Lab Sheet Due	9-16-14	9-17-14 35 HMWK 36 Prac 36 HMWK Mod D Post-Review	9-18-14	9-19-14 Mod D Post-test Mod E Preview	9-20-14

4	9-21-14	9-22-14 Mod E Pre-test 37 Prac 37 HMWK Lab Sheet Due	9-23-14	9-24-14 38 Prac 38 HMWK 39 Prac 39 HMWK 40 Prac 40 HMWK	9-25-14	9-26-14 41 Prac 41 HMWK 42 Prac 42 HMWK 43 Prac 43 HMWK	9-27-14
5	9-28-14	9-29-14 44 Prac 44 HMWK 45 Prac 45 HMWK Lab Sheet Due	9-30-14	10-1-14 Mod E Post-Review Mod E Post-test	10-2-14	10-3-14 Mod F Preview Mod F Pre-test	10-4-14
6	10-5-14	10-6-14 46 Prac 46 HMWK 47 Prac 47 HMWK 48 Prac Lab Sheet Due	10-7-14	10-8-14 48 HMWK 49 Prac 49 HMWK 50 Prac 50 HMWK	10-9-14	10-10-14 51 Prac 51 HMWK 52 Prac 52 HMWK	10-11-14
7	10-12-14	10-13-14 53 Prac 53 HMWK 54 Prac 54 HMWK Lab Sheet Due	10-14-14	10-15-14 Mod F Post-Review Mod F Post-test	10-16-14	10-17-14 Final Exam Review DEVM 060 written final exam	10-18-14
8	10-19-14	10-20-14 Mod G Preview Mod G Pre-test Lab Sheet Due	10-21-14	10-22-14 55 Prac 55 HMWK 56 Prac 56 HMWK	10-23-14	10-24-14 57 Prac 57 HMWK 58 Prac 58 HMWK	10-25-14
9	10-26-14	10-27-14 59 Prac 59 HMWK 60 Prac 60 HMWK 61 Prac Lab Sheet Due	10-28-14	10-29-14 61 HMWK 62 Prac 62 HMWK 63 Prac 63 HMWK	10-30-14	10-31-14 Mod G Post-Review Mod G Post-test	11-1-14
10	11-2-14	11-3-14 Mod H Preview Mod H Pre-test Lab Sheet Due	11-4-14	11-5-14 64 Prac 64 HMWK 65 Prac 65 HMWK 66 Prac 66 HMWK Last day to add a Module	11-6-14	11-7-14 67 Prac 67 HMWK 68 Prac 68 HMWK	11-8-14

Week #	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11	11-9-14	11-10-14 69 Prac 69 HMWK 70 Prac 70 HMWK Lab Sheet Due	11-11-14	11-12-14 71 Prac 71 HMWK 72 Prac 72 HMWK	11-13-14	11-14-14 Mod H Post-Review Mod H Post-test	11-15-14
12	11-16-14	11-17-14 Mod J Preview Mod J Pre-test Lab Sheet Due	11-18-14	11-19-14 73 Prac 73 HMWK 74 Prac 74 HMWK	11-20-14	11-21-14 75 Prac 75 HMWK 76 Prac 76 HMWK	11-22-14
13	11-23-14	11-24-14 77 Prac 77 HMWK 78 Prac 78 HMWK Lab Sheet Due	11-25-14	11-26-14 79 Prac 79 HMWK 80 Prac 80 HMWK	11-27-14 No classes	11-28-14 No classes	11-29-14
14	11-30-14	12-1-14 81 Prac 81 HMWK Mod J Post-Review Lab Sheet Due	12-2-14	12-3-14 Mod J Post-test Final Exam Review	12-4-14	12-5-14 DEVM 105 written final exam Last day of M-Cubed	12-6-14

CALENDAR FOR FINISHING MODULES D, E AND F:

Week #:	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	8-31-14	9-1-14	9-2-14	9-3-14	9-4-14 (classes start)	9-5-14 Mod D Preview (start) 1st day of M-Cubed class	9-6-14
2	9-7-14	9-8-14 Mod D Preview (fin.)	9-9-14	9-10-14 Mod D Pre-test	9-11-14	9-12-14 28 Prac 28 HMWK 29 Prac 29 HMWK	9-13-14
3	9-14-14	9-15-14 30 Prac 30 HMWK Lab Sheet Due	9-16-14	9-17-14 31 Prac 31 HMWK	9-18-14	9-19-14 32 Prac 32 HMWK	9-20-14

4	9-21-14	9-22-14 33 Prac 33 HMWK Lab Sheet Due	9-23-14	9-24-14 34 Prac 34 HMWK	9-25-14	9-26-14 35 Prac 35 HMWK	9-27-14
5	9-28-14	9-29-14 36 Prac 36 HMWK Lab Sheet Due	9-30-14	10-1-14 Mod D Post-Review	10-2-14	10-3-14 Mod D Post-test	10-4-14
6	10-5-14	10-6-14 Mod E Preview (start) Lab Sheet Due	10-7-14	10-8-14 Mod E Preview (fin.)	10-9-14	10-10-14 Mod E Pre-test	10-11-14
7	10-12-14	10-13-14 37 Prac 37 HMWK Lab Sheet Due	10-14-14	10-15-14 38 Prac 38 HMWK	10-16-14	10-17-14 39 Prac 39 HMWK	10-18-14
8	10-19-14	10-20-14 40 Prac 40 HMWK Lab Sheet Due	10-21-14	10-22-14 41 Prac 41 HMWK	10-23-14	10-24-14 42 Prac 42 HMWK 43 Prac 43 HMWK	10-25-14
9	10-26-14	10-27-14 44 Prac 44 HMWK Lab Sheet Due	10-28-14	10-29-14 45 Prac 45 HMWK	10-30-14	10-31-14 Mod E Post-Review	11-1-14
10	11-2-14	11-3-14 Mod E Post-test Lab Sheet Due	11-4-14	11-5-14 Mod F Preview Last day to add a Module	11-6-14	11-7-14 Mod F Pre-test	11-8-14
11	11-9-14	11-10-14 46 Prac 46 HMWK 47 Prac Lab Sheet Due	11-11-14	11-12-14 47 HMWK 48 Prac	11-13-14	11-14-14 48 HMWK 49 Prac 49 HMWK	11-15-14
12	11-16-14	11-17-14 50 Prac 50 HMWK Lab Sheet Due	11-18-14	11-19-14 51 Prac 51 HMWK 52 Prac	11-20-14	11-21-14 52 HMWK 53 Prac 53 HMWK	11-22-14
13	11-23-14	11-24-14 54 Prac 54 HMWK Lab Sheet Due	11-25-14	11-26-14 Mod F Post-Review	11-27-14 No classes	11-28-14 No classes	11-29-14

| 14 | 11-30-14 | 12-1-14

Mod F Post-test

Final Exam Review

Lab Sheet Due | 12-2-14

STUDY | 12-3-14

STUDY | 12-4-14

STUDY | 12-5-14

DEVM 060 written final exam

Last day of M-Cubed | 12-6-14 |

CALENDAR FOR COMPLETING MODULES G, H, AND J:

Week #:	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	8-31-14	9-1-14	9-2-14	9-3-14	9-4-14 1st day of classes	9-5-14 Mod G Preview (start) 1st day of M-Cubed class	9-6-14
2	9-7-14	9-8-14 Mod G Preview (fin.)	9-9-14	9-10-14 Mod G Pre-test	9-11-14	9-12-14 55 Prac 55 HMWK 56 Prac	9-13-14
3	9-14-14	9-15-14 56 HMWK 57 Prac Lab Sheet Due	9-16-14	9-17-14 57 HMWK 58 Prac 58 HMWK	9-18-14	9-19-14 59 Prac 59 HMWK	9-20-14
4	9-21-14	9-22-14 60 Prac 60 HMWK Lab Sheet Due	9-23-14	9-24-14 61 Prac 61 HMWK	9-25-14	9-26-14 62 Prac 62 HMWK	9-27-14
5	9-28-14	9-29-14 63 Prac 63 HMWK Lab Sheet Due	9-30-14	10-1-14 Mod G Post-Review	10-2-14	10-3-14 Mod G Post-test	10-4-14
6	10-5-14	10-6-14 Mod H Preview Lab Sheet Due	10-7-14	10-8-14 Mod H Pre-test	10-9-14	10-10-14 64 Prac 64 HMWK	10-11-14
7	10-12-14	10-13-14 65 Prac 65 HMWK Lab Sheet Due	10-14-14	10-15-14 66 Prac 66 HMWK	10-16-14	10-17-14 67 Prac 67 HMWK	10-18-14
8	10-19-14	10-20-14 68 Prac 68 HMWK Lab Sheet Due	10-21-14	10-22-14 69 Prac 69 HMWK	10-23-14	10-24-14 70 Prac 70 HMWK	10-25-14

9	10-26-14	10-27-14 71 Prac 71 HMWK Lab Sheet Due	10-28-14	10-29-14 72 Prac 72 HMWK	10-30-14	10-31-14 Mod H Post-Review	11-1-14
10	11-2-14	11-3-14 Mod H Post-test Lab Sheet Due	11-4-14	11-5-14 Mod J Preview Last day to add a Module	11-6-14	11-7-14 Mod J Pre-test	11-8-14
11	11-9-14	11-10-14 73 Prac 73 HMWK Lab Sheet Due	11-11-14	11-12-14 74 Prac 74 HMWK 75 Prac	11-13-14	11-14-14 75 HMWK 76 Prac 76 HMWK	11-15-14
12	11-16-14	11-17-14 77 Prac 77 HMWK 78 Prac Lab Sheet Due	11-18-14	11-19-14 78 HMWK 79 Prac	11-20-14	11-21-14 79 HMWK 80 Prac 80 HMWK	11-22-14
13	11-23-14	11-24-14 81 Prac 81 HMWK Lab Sheet Due	11-25-14	11-26-14 Mod J Post-Review	11-27-14 No classes	11-28-14 No classes	11-29-14
14	11-30-14	12-1-14 Mod J Post-test Final Exam Review Lab Sheet Due	12-2-14 STUDY	12-3-14 STUDY	12-4-14 STUDY	12-5-14 DEVM 105 written final exam Last day of M-Cubed	12-6-14

9. Course policies: In addition to attending class (3 hours per week at 2 points per class = 6 pts), you are required to spend 2 hours every week in our Math Lab in Gruening 406 or CTC 120 (1 pt per lab hour = 2 pts, for a total weekly score of 8 pts). You will need to keep track of your lab hours on your Lab Sheet and have the lab tutor sign for each session. **Your completed Lab Sheet is due each Monday, starting 9-15-14.** Since each person is working at their own pace on varying assignments, there is a very real danger of lagging behind. Attendance in class and acquiring the necessary lab time every week will be crucial. Once you fall behind it is very difficult to get caught up – particularly in math classes!

You will need lots of paper and a 3-ring binder notebook that allows for good organization. You will also need daily computer access with reliable internet connection to work on your ALEKS assignments outside of class. Since you will need to watch videos during class and lab times, you will need a set of headphones that plug into the computer.

Your responsibilities include:

- **attending every class on time**
- **attending Math Lab for at least 2 required hours per week**
    - **being prepared with pencil, eraser, and notebook for every class**

- **taking complete notes during class, while watching videos and while working on ALEKS**
- **organizing your notebook**
- **achieving required levels of mastery on your ALEKS assignments**
    - **seeking extra help whenever you have questions**
    - **helping your fellow classmates during class time and in the Math Lab**
    - **improving and refining your study skills**

Classroom Rules: Attendance is mandatory. You are expected to be on time for each class, prepared to take notes, and ready to work. If you have to be late, please take a seat *quietly* without disrupting class. If you are more than 15 minutes late, you will be counted absent. Please note that sleeping is the same as being absent. You will be asked to leave class if your cell phone rings or you are texting during class. Cheating is not tolerated and will result in a failing grade. All of your work on ALEKS must be done by you. Be honest in all your work and show the highest integrity in how you conduct yourself during your academic career. Please let me know if anything distracts you during class so I can deal with it promptly. Our classroom is a safe place where we are each accepted and respected, and we will all work together to ensure that each of us has a successful semester.

Attendance/Participation Policy: This class requires your attendance for 5 hours each week. ***This is a MINIMUM.*** It is easy to fall behind when working at your own pace. The only way to master the material is to spend the necessary amount of time in learning it. We will meet 3 hours per week during our scheduled class time (2 points per class = 6 pts), and you will spend an additional 2 hours per week in our Math Labs in Gruening 406 or CTC 120 (1 pt. per lab hour = 2 pts, for a total weekly score of 8 pts). You may schedule these 2 additional hours at any time that fits your schedule – just see the lab schedule for days and times. Keep track of your hours on your Lab Sheet, making sure to get the lab tutor's signature before you leave the lab each time. You are also encouraged to work at home on your ALEKS assignments as much as possible. You are not required to keep a log of the time you spend working outside of the lab.

If you have to miss a class, send me an email explaining why and make up an extra 2 hours in the Math Lab. If you are really sick or traveling, send me an email informing me of the expected days of class you will miss. Upon returning you will simply pick up from where you left off, but you must inform me of your expected absences.

You will need to come to class in time to get logged in on a computer before class starts. If you are more than 15 minutes late you will be marked absent and will need to work an extra 2 hours in the Math Lab.

Students not acquiring enough lab hours each week will be withdrawn from the class. **Please keep in mind that attendance and participation are very important and will be <u>30% of your overall grade</u> for Modules D, E, G and H. Attendance and participation will be 20% of your overall grade for Modules F and J, and a written final exam will be 10% of your overall grade for these two modules.**

Your **notebook** will be graded three times this semester (possible 10 pts for each check). These are the six parts you will be graded on:

1. Syllabus – this should be in your notebook at all times (+1 pt).
2. Module Pre- and Post-tests Master Sheets – keep these lists readily handy (+1 pt).
3. MINI MOD Checklist – keep track of the dates you attain mastery of each assignment (+1pt).
4. Notes – from mini-lectures during class, from your ALEKS eBook readings, from watching math videos, from working with me or the lab tutors (+2 pts).
5. Work – write down each problem from the Practices, HMWKs, Previews and Post-Reviews and show all your work (+2 pts). NOTE: you may combine your notes and work together for 4 pts.
6. Vocabulary Sheet – this must be completed as soon as possible (+3 pts).

Assignments on ALEKS:

ALEKS is a web-based, artificially intelligent assessment and learning system that provides the advantages of one-on-one instruction, 24/7, from virtually any web-based computer for a fraction of the cost of a human tutor.

How ALEKS will be graded in this class: MINI MODs, Reviews and Post-tests **(all work must be your own – be honest.)**

- You will need to buy an ALEKS 360 **access code**. You can purchase ALEKS at the UAF Bookstore or directly from the website:

To buy ALEKS 360 online:

1. Go to www.aleks.com and click on "**sign up now**"
2. Enter the course code (see above) and click "**continue**"
3. Confirm that it is the correct class and click "**continue**"
4. Click "**purchase an access code online**" and select "**Higher Ed 1-semester (18 weeks)**"
5. Follow the on-screen instructions

- Go to www.aleks.com and click on "**sign up now**", choose the option for using ALEKS 360 with a class, and enter the **course code** | **TCGNQ – VPJTF** | You will then be asked to input your student code which came with your ALEKS 360 access code or was purchased on the website. This will put you into the correct course. **Here is a financial aid code you can use to access ALEKS for two weeks:**

F32B5 – B9005 – F148B – 5B2FE

- After you establish your account on ALEKS, you will be asked to take an interactive tutorial that explains how to enter answers on ALEKS. Once you've taken the tutorial you will take an initial assessment which includes about 25 to 30 questions. YOU CAN SKIP THIS INITIAL ASSESSMENT BY QUICKLY TYPING IN ANY NUMBER FOR EACH QUESTION.

- **NOTE: If you do not have internet access there are several labs on campus which are ALEKS-ready including the DEVM lab in Gruening 406, the library, the Bunnell computer lab, and CTC 120.**

- We will be using ALEKS for Practice, Homework, Reviews, and Previews and Post-tests. All of our ALEKS work will be listed under the "**Assignments**" tab. **Write each problem down on paper along with the problem number** and then work it out carefully. You can recheck your answers before you submit your answers. Organize all your work in your notebook.

- Once you have checked your answers you can "submit" your work. It will be graded instantly and you can go back and look at any problems you may have missed to see the correct answer and an explanation. **You can redo the Practice, Homework, and Reviews as many times as is necessary to achieve the required level of mastery.** You will only need to rework the problems you missed. ALEKS will automatically record your **best** score. **Preview and Post-test problems can only be worked one time**.

- If ALEKS ever seems to freeze up, it usually means that you must take an assessment. This is connected to the ALEKS Pie which we are not using for this class.

- **How to find answers in the "back" of the eBook for odd-numbered problems:**

1. Click on "**eBook**"
2. Click on "**Book Contents**" (top middle of the new window that pops up)
3. Click on "**End Matter**" (bottom on the right)
4. Click on "**End Matter Sections**" (on the right, down a little bit)
5. "**Answers to Exercises**" with a list of the chapters will be all in blue text, so click on the chapter you want, and then scroll to find the section you want.

Note: If you are texting during class or listening to music with headphones, you are not participating in class or contributing to the learning environment. I will ask you to leave if your cell phone rings or you are texting during class. Your full participation is required.

10. Evaluation: Your grade will be based on your MINI MOD and Review scores (averaged together), your attendance/participation (which includes your notebook), and your Module Post-test. Attendance will count 2 points per class hour and one point per lab hour with a total of 8 points possible per week. Your notebook is worth 10 points per check (I will check it 3 times during the semester) for a possible total of 30 points.

Grading Policy:	**% of Grade:**	**Grading Scale (no curve):**
	40% MINI MODs and Reviews	90 – 100% A
	30% Attendance/Participation (MODs D, E, G, H)	80 – 89% B
	(20% for MODs F and J)	79% and lower, Incomplete
	30% Module Post-test	
	10% Written Final Exam (MODs F and J only)	

- *NOTE: Students who are not attending or making significant progress (70%) will be withdrawn from the class.*

11. Support Services: Free tutoring is available in our **Math Labs in Gruening 406 and CTC 120**. Please see lab schedule for days and times. There are computers in each lab that you can use to work on ALEKS assignments.

12. Disabilities Services: The Office of Disability Services located in the Center for Health and Counseling (474-5655, 208 WHIT) implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal and reasonable access to the campus and course materials. Please let me know as soon as possible if you have a letter of accommodation. I will work with the Office of Disabilities Services to provide reasonable accommodation to students with disabilities.