Core Mathematics Orientation  
Fall 2006

All links mentioned in this document are available at http://unr.edu/homepage/naik/coremath/

Core mathematics is an essential component of the mission of the Department of Mathematics and Statistics at the University of Nevada, Reno. Every undergraduate student at UNR is required to satisfy a 3-credit core mathematics requirement in order to receive a degree.

1 An overview of courses

Each student’s initial placement in first-year Mathematics courses is based on ACT/SAT scores. See http://www.ss.unr.edu/records/catalog/?prefix=MATH

The Basic Algebra Readiness Test (BART), the 128 Readiness Test, and the 181 Readiness Test may be used as alternatives to these default placement tools. These proctored web-based tests are administered at the Mathematics Center and at some local High Schools. More information and practice tests can be found at: http://www.unr.edu/mathcenter/placement.

<table>
<thead>
<tr>
<th>Course</th>
<th>Core Status</th>
<th>Credits</th>
<th>Minimum Scores required for Placement into the course</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>ACT Mathematics</td>
</tr>
<tr>
<td>MATH 096</td>
<td>No</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>MATH 120</td>
<td>Yes</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>MATH 124</td>
<td>No</td>
<td>3</td>
<td>22</td>
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<tr>
<td>MATH 127</td>
<td>Yes</td>
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<td>27</td>
</tr>
<tr>
<td>MATH 128</td>
<td>Yes</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>MATH 176</td>
<td>Yes</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>STAT 152</td>
<td>Yes</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>MATH 181</td>
<td>Yes</td>
<td>4</td>
<td>28</td>
</tr>
</tbody>
</table>

Note 1. As MATH 127 assumes the first half of MATH 128, we plan to change the 128-readiness cut-off for MATH 127 to 13 for next semester.

Included below is a brief description for each of the above courses. For additional details of the course see page 102 of the class schedule at http://www.ss.unr.edu/records/pdf/sched/20064back.pdf.

- **MATH 096 INTERMEDIATE ALGEBRA** ACT 17, SAT 470.
  Coordinator: Irina Timchenko, AB 618, 784 4446, iratimch@hotmail.com
  This is a non-college-credit remedial algebra course which covers exponents, factoring, fractions, radicals, linear and quadratic equations and graphs.
  An S in MATH 096 will allow a student to enroll in MATH 120 or MATH 124.
• MATH 120 FUNDAMENTALS OF COLLEGE MATHEMATICS (3-CR)
ACT 21, SAT 510, BART 8, 096 course grade S.
Coordinator: Danelle Clarke, EJCH 102 I, 784-8291 ext. 5, ddclarke@unr.edu
This is a core course. Students will see basic set operations, probability, statistics, consumer mathematics, variation, geometry and trigonometry for measurement, linear, quadratic, exponential and logarithmic functions with emphasis on problem solving and applications. MATH 019-119 is a one year alternative of 120 for students with disabilities.

• MATH 124 COLLEGE ALGEBRA (3-CR) ACT 22, SAT 520, BART 10, MATH 096 course grade S.
Coordinator: Don Pfaff, AB 620, 784-7554, don@unr.edu
This is a non-core algebra course which includes functions, graphing, polynomial and exponential equations, logarithms, linear systems, matrices, and complex numbers.
A course grade of C- in MATH 124 in Fall 2006 will allow a student to enroll in MATH 127, 176 or STAT 152. Some students choose to take MATH 128 after completing MATH 124. They should be directed to MATH 127 instead.

• MATH 127 Precalculus II (3-CR)
ACT 27, SAT 610, 128 Readiness 11, 124 course grade B or 60% on the final. Birant Ramazan, EJCH 102 H, 784-8291 ext. 1, ramazan@unr.edu.
This is core mathematics course which includes the study of trigonometric functions, identities and equations; conic sections; complex numbers, and vectors.
Credit may not be received for both MATH 127 and MATH 128. A course grade of C- in MATH 127 will allow a student to enroll in MATH 181.

• MATH 128 PRECALCULUS AND TRIGONOMETRY (5-CR)
ACT 27, SAT 610, 128 Readiness 11, 124 course grade B or 60% on the final.
Coordinator: Frank Amankonah, EJCH 102 G, 784-8291 ext. 2, amankona@unr.edu
This is a core course which includes polynomial, rational, exponential, logarithmic, and circular functions with graphs and applications, complex numbers, coordinate geometry in the plane, trigonometric functions and identities, matrices, determinants, and the binomial theorem.
A course grade of C- in MATH 128 will allow a student to enroll in MATH 181.

Information about some recent changes to the pre-calculus courses is posted at http://www.unr.edu/math/NewMathCourses4.pdf

• MATH 124-127 is a two-semester, six-credit alternative to MATH 128.
• In Fall 2007, MATH 124 will be replaced by MATH 126, Precalculus I.
• Students will not be allowed to obtain credit for both MATH 126 and MATH 128, or both MATH 127 and MATH 128.
• The placement criteria for MATH 126 will be the same as those for MATH 124 and the ACT/SAT placement criteria for MATH 127 are currently the same as those for MATH 128.
• **MATH 176 CALCULUS FOR BUSINESS AND SOCIAL SCIENCES (3-CR)**
  ACT 27, SAT 610, 128 Readiness 11, 124 course grade B or 60% on the final.
  Coordinator: Birant Ramazan, EJCH 102 H, 784-8291 ext. 1, ramazan@unr.edu
  This is a core course. It contains differential and integral calculus including functions, graphs, limits, derivatives, integrals, the fundamental theorem of calculus, rates of change and extrema with applications to Business. Some students choose to take MATH 181 after completing MATH 176. Unlike MATH 176, MATH 181 will assume the knowledge of trigonometry (MATH 127).

• **MATH 181 CALCULUS I (4-CR)** ACT 28, SAT 630, 181 Readiness exam, MATH 128.
  Coordinator: Chris Herald, AB 621, 784-4647, herald@unr.edu
  This is a core course. The topics in 176 are covered in greater depth. Additional material is derivatives and integrals of trigonometric functions and applications to Science and Engineering.

• **STAT 152, INTRODUCTION TO STATISTICS (3-CR)**
  ACT 27, SAT 610, 128 Readiness 11, 124 course grade B or 60% on the final.
  Coordinator: Danelle Clarke, EJCH 102 I, 784-8291 ext. 5, dclarke@unr.edu
  This core course covers descriptive statistics, probability models, normal and binomial distributions, statistical estimation and hypothesis testing, and linear regression. The software Minitab is used for analyzing data.

Sequencing rules for some of these courses prohibit students from earning credit for a lower numbered course after receiving credit for a higher numbered one.

2 Coordination

Each pre-core and core mathematics course is assigned a course coordinator. Instructors and course coordinators meet regularly to discuss various aspects of the course including topic coverage, homework, exams and grading.

At the beginning of each semester the course coordinators share sample syllabi and other material. Shared course materials are currently posted on moodle. (See [http://www.tmcc.nevada.edu/moodle/login/index.php](http://www.tmcc.nevada.edu/moodle/login/index.php))

MATH 096, 124, 127, and 128 feed into other mathematics courses, and starting this semester, all of these courses will have mandatory comprehensive departmental final exams. Final exam dates can be found in the Schedule of Classes [http://www.ss.unr.edu/records/pdf/sched/20064cal.pdf](http://www.ss.unr.edu/records/pdf/sched/20064cal.pdf).

Our goals are:

1. Ensure proper placement into courses and alignment between courses,

2. Bring uniformity to content coverage and to assessment of student performance in different sections of a multi-section course,

3. Train and mentor graduate student instructors, with help from the Excellence in Teaching Program and faculty mentors from the department.

4. Facilitate program assessment.
3 Syllabus and policies

Your syllabus should include the following information:

Course and section number
Instructor’s contact information, e.g. name, office, phone, email, office hours
Textbook and other materials required, calculator policy
Drop deadline (October 20, 2006)
Information about free tutoring on campus
Grading policy, break-down, cut-offs
Test dates

MATH 096 and MATH 124, 127, 128 final exams are on a Saturday morning, December 16, 2006, 9:45-11:45. MATH 096 final is on Saturday December 16, 2006, 2:15 to 4:15 pm. Please remind students of this several times in the semester.

Your syllabus MUST contain the following information:

Equal opportunity statement
Example: The Math/Stat department supports providing equal access for students with disabilities. I encourage any student needing to request accommodations for a specific disability to please meet with me at your earliest convenience to ensure timely and appropriate accommodations. You may also contact Mary Zabel at Thompson Student Services 107, 784-6000.

See http://www.unr.edu/stsv/slservices/drc/eligibility.html for more information.

Academic misconduct statement
Example: Bring your student identification to all exams. Work independently on all exams. Behaviors inappropriate to test taking may disturb other students and will be considered cheating. Don’t talk or pass notes with other students during an exam. Don’t read notes or books while taking exams given in the classroom. Homework may be discussed freely. If you are unclear as to what constitutes cheating, please consult with me.


• Please note that an instructor may drop students who do not attend the first two class meetings.
• Please consider reporting midterm grades through CAIS. https://www.cis.unr.edu/caislogin/
• Student athletes are required to give you their travel schedule at the beginning of the semester to allow you to make appropriate arrangements regarding any missed work.
4 Resources On Campus

There are several resources on our campus for instructors and students. Some of these are listed below for your information. Please share relevant information with students.

- **The Mathematics Center:** The Math Center located in AB 610 provides a computer lab with various mathematical software including Educo, ThomsonNow (IlrN), Maple, MATLAB, and Minitab. The lab may be reserved by faculty for occasional class meetings. Math Center also has student tutors available for one-on-one assistance. For more information call 784-4433.

- **The Writing Center:** The Writing Center located at Cain Hall 206 will provide assistance to students with their writing assignments in your class. For more information call 784-6030.

- **Tutors:** In addition to the Math Center tutors, the Academic Skills Center located in Thompson Student Services 100 offers free group-tutoring for students from the same section of a class as well as walk-in labs. For more information call 784-6801.

- **Getchell Library** You may put course materials, such as notes, student solutions manuals, exam solutions on reserve in the library. Call 784-6500 for more information.

- **On-line Course Management:**
  - WebCT: [http://www.it.unr.edu](http://www.it.unr.edu)

5 Contact Information

**The Math/Stat Department:** tel 784-6773, fax 784-6378  
Assistant: Lisa Kornze, lkornze@unr.edu  
Student workers: Ashley, Lindsey  

**Core Mathematics Coordinators:**  
Frank Amankonah, EJCH 102 G, 784-8291 ext. 2, amankona@unr.edu  
Danelle Clarke, EJCH 102 I, 784-8291 ext. 5, ddclarke@unr.edu  
Christopher Herald, AB 621, 784 4647, herald@unr.edu  
Don Pfaff, AB 620, 784-7554, don@unr.edu  
Birant Ramazan, EJCH 102 H, 784-8291 ext. 1, ramazan@unr.edu  
Irina Timchenko, AB 618, 784 4446, iratimch@hotmail.com  

**Core Mathematics Director:** Swatee Naik, AB 615, 784 6020, naik@unr.edu  
[http://unr.edu/homepage/naik/coremath/](http://unr.edu/homepage/naik/coremath/)

**Mathematics and Statistics Chair:** William Cathey  
Assistant: Meg Affinito, AB 601, 784-6775 affin_m@unr.edu

**Mathematics Center Director:** Chaitan Gupta  
Assistant: Cynthia Greene, AB 610, 784-4433, cindyg@unr.edu

**The Director of Core Curriculum:** Paul Neill  
Assistant: Julie Habara, Clark Administration 108, 784-4710, core@unr.edu  
[http://www.unr.edu/core-curriculum/contact/](http://www.unr.edu/core-curriculum/contact/)