Core Mathematics Orientation  
Spring 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 student at UNR is required to satisfy a 3-credit core mathematics requirement in order to receive a degree.

To address the increasing needs of core mathematics on this campus, we have formed a team of coordinators for pre-core and core mathematics courses.

1 An overview of courses

Each student’s initial placement in first-year Mathematics courses is based on ACT/SAT scores or a Readiness test administered at the Mathematics Center as described in the table below.

<table>
<thead>
<tr>
<th>Course</th>
<th>Core Status</th>
<th>Credits</th>
<th>ACT Mathematics</th>
<th>SAT Mathematics</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 096</td>
<td>No</td>
<td>3</td>
<td>17</td>
<td>470</td>
<td>MATH 096, BART 8</td>
</tr>
<tr>
<td>MATH 120</td>
<td>Yes</td>
<td>3</td>
<td>21</td>
<td>510</td>
<td>MATH 096, BART 10</td>
</tr>
<tr>
<td>MATH 124</td>
<td>No</td>
<td>3</td>
<td>22</td>
<td>520</td>
<td>MATH 124, 128 Readiness 11</td>
</tr>
<tr>
<td>MATH 128</td>
<td>Yes</td>
<td>5</td>
<td>27</td>
<td>610</td>
<td>MATH 124, 128 Readiness 11</td>
</tr>
<tr>
<td>MATH 176</td>
<td>Yes</td>
<td>3</td>
<td>27</td>
<td>610</td>
<td>MATH 124, 128 Readiness 11</td>
</tr>
<tr>
<td>STAT 152</td>
<td>Yes</td>
<td>3</td>
<td>27</td>
<td>610</td>
<td>MATH 124, 128 Readiness 11</td>
</tr>
<tr>
<td>MATH 181</td>
<td>Yes</td>
<td>4</td>
<td>28</td>
<td>630</td>
<td>MATH 128, 181 Readiness</td>
</tr>
</tbody>
</table>

The BART, the 128 Readiness Test, and the 181 Readiness Test are web-based readiness tests administered by the Math Center as alternatives to ACT/SAT which are the default placement tools. More information and practice tests can be found at: http://www.unr.edu/mathcenter/placement.

Included below is a brief description for each of the above courses. For additional details of the course see page 99 of the class schedule at http://www.ss.unr.edu/records/pdf/sched/20061back2.pdf.

- **MATH 096 INTERMEDIATE ALGEBRA** ACT 17, SAT 470.
  Coordinator: Birant Ramazan, EJCH 102 F, 784-8291 ext. 3, ramazan@unr.edu
  This is a non-college-credit remedial algebra course which covers exponents, factoring, fractions, radicals, linear and quadratic equations and graphs.

- **MATH 120 FUNDAMENTALS OF COLLEGE MATHEMATICS (3-CR)**
  ACT 21, SAT 510, BART 8, 096 course grade S.
  Coordinator: Jerry Johnson, AB 602, 784-6550, jerryj@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, expo-
nential 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: Benjamin Wilson, AB 413, 784-1343, bewilson@ unr.nevada.edu
  This is a non-core algebra course which includes functions, graphing, polynomial and exponential equations, logarithms, linear systems, matrices, and complex numbers.

**Please note:** In Fall 2006, MATH 124 will be replaced by MATH 126, Precalculus I, and we will begin offering MATH 127, Precalculus II.

Students taking MATH 124 in Spring 2006 will be allowed to take MATH 127, 128, 176 or STAT 152, if they receive a course grade of B or a score of 60% or better on the common departmental final exam.

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 placement criteria for MATH 127 will be the same as those for MATH 128.

- **MATH 128 PRECALCULUS AND TRIGONOMETRY (5-CR)**
  ACT 27, SAT 610, 128 Readiness 11, 124 course grade B or 60% on the final.
  Coordinator: Phil Van Veldhuizen, EJCH 102 J, 784-8291 ext. 4, pavv@ 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. Students may take the 6-credit sequence 126-127 at TMCC as an alternative to MATH 128. MATH 126 and 127 will be offered at UNR starting Fall 2006.

- **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 F, 784-8291 ext. 3, 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.

- **MATH 181 CALCULUS I (4-CR)** ACT 28, SAT 630, 181 Readiness exam, MATH 128.
  Coordinator: Don Pfaff, AB 620, 784-7554, don@ unr.edu
  This is a core course. The topics in 176 are covered in greater depth here. 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.
  Coordinators: Danielle Clarke, EJCH 102 I, 784-8291 ext. 5, ddclarke@ 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.
2 Coordination

Coordinators have circulated sample syllabi and other material. The first coordination meeting will take place on the orientation day.

Instructors and course coordinators will meet regularly to discuss various aspects of the course including topic coverage, homework, exams and grading. Our goal is to have course structures and assessment criteria common to different sections of the same course.

MATH 096 and MATH 124 have mandatory comprehensive departmental final exams. Starting Fall 2006, MATH 126, 127 and 128 will have departmental finals as well. These exams will be based on the input from instructors of the course.

3 Syllabus

The syllabus you hand out to students should include a statement regarding equal opportunity. You may find it beneficial to clearly state your policy regarding cheating and other problems of academic conduct. For more information about the UNR policy regarding academic dishonesty go to http://www.unr.edu/stsv/acdispol.html. Included below are some examples of these.

- **Equal Opportunity Statement:** 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.

- **Academic Conduct:** 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.

- You are strongly encouraged to announce dates of all exams, policy regarding missed work, and the drop deadline (March 17, 2006) at the beginning of the course preferably on the syllabus itself.

**MATH 096 and 124 exams are on a Saturday morning. Please remind students of this several times in the semester.**

- 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. If you have any problems, you may call the Athletic Advisor Kelly Ford at 784-6331, kford@unr.edu.
4 Resources On Campus

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

- **The Mathematics Center:** The Math Center located in AB 610 provides a computer lab with various mathematical software including 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.

- **Other Tutoring options:** 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.

- **Course webpages:** If you wish to maintain a webpage for your course, read the information at [http://www.it.unr.edu/web/studentsites.asp](http://www.it.unr.edu/web/studentsites.asp)

You may also reach this page by following a link from the Information Technology homepage [http://www.it.unr.edu](http://www.it.unr.edu) which has other useful information including WebCT, an online course management system. Some mathematics instructors use a commercially produced system called Educo. To find out more about Educo, please contact Professors Phil Van Veldhuizen or Chaitan Gupta.

5 Contact Information

**The Math/Stat Department:** tel 784-6773, fax 784-6378

**Core Mathematics Coordinators:**
Danelle Clarke, EJCH 102 I, 784-8291 ext. 5, ddeclarke@unr.edu
Jerry Johnson, AB 602, 784-6550, jerryj@unr.edu
Don Pfaff, AB 620, 784-7554, don@unr.edu
Birant Ramazan, EJCH 102 F, 784-8291 ext. 3, ramazan@unr.edu
Phil Van Veldhuizen, EJCH 102 J, 784-8291 ext. 4, pavv@unr.edu
Benjamin Wilson, AB 413, 784-1343, bewilson@unr.nevada.edu

**Core Mathematics Director:** Swatee Naik, AB 615, 784 6020, naik@unr.edu
Assistant: Annie Ragavan, AB 610, 784-4433, ragavan@unr.edu
[http://unr.edu/homepage/naik/coremath/](http://unr.edu/homepage/naik/coremath/)

**Mathematics Center Director:** Chaitan Gupta
Assistant: Cindy Greene, AB 610, 784-4433, cindyy@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/)