DEVELOPMENTAL MATHEMATICS - Statistics MATH 0320.001
Department of Mathematics and Statistics
FALL 2019

A. COURSE INFORMATION

Course number/section: MATH 0320.001
Class meeting time: Lecture MW 1:00 – 1:50 / Lab 2:00 – 2:50
Class location: Lecture CI 109; Lab CI 223
Course Website: bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Archana Krishnagiri
Office location: CI - 351
Office hours: TTR 9:45 – 10:45 & 12:45 – 1:45 / W 10:45 – 11:45
Email: archana.krishnagiri@tamucc.edu
Appointments: By e-mail

C. COURSE DESCRIPTION

Catalog Course Description
3 sem. hrs. (2:2) The course is designed for students needing an extensive review of
mathematics to prepare them for state & campus standards and/or higher mathematics
courses. The course covers number concepts, computation, various algebra topics,
geometry, and mathematical reasoning. This course does not count towards credit for
graduation.

Note: Math 0320 (Developmental Mathematics – Statistics) is a prerequisite for Math
1442 (Statistics for Life) or Math 1332 (Contemporary Mathematics). If you are
required to take Math 1314 (College Algebra), the prerequisite course is a Math 310
(Developmental Mathematics – Algebra). The grades of Math 0320 and Math 310 are
not interchangeable.

Prerequisites: There is no prerequisite for this course. Registration for this course will be
by placement

D. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)/Materials
- All homework, quizzes, and exam reviews are administered and graded by Knewton
  through Blackboard. You must purchase the Knewton Access code from the
  bookstore (approximately $44); or through blackboard ($35 with credit card).
- To be successful in this course, you need to take notes every day. To help you stay
  organized, you will need a dedicated notebook for this class
• You will need paper, pencils, highlighters, red and blue pens, erasers, and a graphing calculator such as TI-83 or TI-84 will be highly recommended. Cell phones and computers are not allowed on exams, quizzes and activities.

E. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

After completion of this course, a student should be able to:

1. Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts.
2. Define, represent, and perform operations on real numbers, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.
3. Use algebraic reasoning to solve problems that require ratios, rates, percentages, and proportions in a variety of contexts using multiple representations.
4. Apply algebraic reasoning to manipulate expressions, equations, and inequalities to solve real world problems.
5. Use graphs, tables, and technology to analyze, interpret, and compare data sets.
6. Construct and use mathematical models in verbal, algebraic, graphical, and tabular form to solve problems from a variety of contexts and to make predictions and decisions.
7. Properly use a calculator.

F. INSTRUCTIONAL METHODS AND ACTIVITIES

1. This course is a lecture based, activity driven lab with integration to remediate math deficiencies for students who lack college readiness skills.
2. Students will complete 9 chapters, each consisting of between 3 – 6 topics. There is homework for each topic assigned in Blackboard. Homework is graded for correctness and is 15% of the overall grade and must be completed on time. Late submissions are not accepted.
3. Students are encouraged to watch any assigned media and work with the tutors and instructor during and outside of lab to remediate problem areas. Students will use their dedicated notebook to document their worked problems and for organization.
4. Participation in class and lab is expected and required. You are to write the board notes down and then work on the assigned homework topics, quizzes, actively ask to participate in small group activities during lab and work individually with tutors and/or instructor. Your participation will be recorded for each class meeting.
5. Methods and activities for instruction during lecture include note-taking, some small
group activities, and completion of homework.

G. MAJOR COURSE REQUIREMENTS AND GRADING

Students will be assessed by performance in both the lecture and lab.

<table>
<thead>
<tr>
<th>MATH 0320 Lecture / Lab Grade</th>
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<tbody>
<tr>
<td>Pop Quizzes (no make-up)</td>
<td>10%</td>
</tr>
<tr>
<td>Homework (no late homework accepted)</td>
<td>15%</td>
</tr>
<tr>
<td>Exams (Lowest test grade will be dropped)</td>
<td>40%</td>
</tr>
<tr>
<td>Lab Grade (Online Quizzes, Group Activities)</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
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</tbody>
</table>

Students who have never attended class will receive a grade of DNA. Students who stop
attending without completing all the modules and do not take the Final will receive a grade of
DSA which can impact your financial aid. DNA and DSA grades will be converted to DF
after the next long semester.

Students who work and attend class through the semester but do not pass the course will earn a
DIP. A DIP grade means you will enroll in this class again and complete all the work again.

Grading scale: DA = 90% or more; DB = 80% - 89%; DC = 70% - 79%.
DIP, DSA, and DNA grades require the student to enroll in MATH 0320 the next semester or
risk being dropped from all classes.

(The D in front of the grade stands for Developmental A, B or C.)

H. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Learning Objective</th>
<th>Course Content</th>
<th>Lab</th>
</tr>
</thead>
</table>
| 1    | 8/26-8/30 | CH 1: Critical Thinking and Set Theory | * Estimation and Rounding  
* Set concepts and Venn Diagrams | Week 1 Quiz  
Worksheet / Knewton |
<p>|      |         | * Problems Solving                          | * Exponents                                        |                         |
|      |         | * Scientific Notation                       |                                                   |                         |
| 2    | 9/2-9/6  | CH 2: Number Representation and Foundations |                                                   |                         |
|      |         | of Computations                             |                                                   |                         |
|      |         |                                               |                                                   |                         |
| 3    | 9/9-9/13 | CH 3: Rates, Ratios and                     | * Algebraic expressions                            |                         |
|      |         |                                               | * Converting with percent                          |                         |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topic</th>
<th>Topics</th>
<th>Quiz/Worksheet</th>
</tr>
</thead>
</table>
| 4    | 9/16-9/20   | Proportions                  | * Ratios  
* Proportions                                                          | Week 4 Quiz    |
|      |             |                              |                                                                      | Worksheet / Knewton |
| 5    | 9/23-9/27   | CH 4: Probability Topics     | * Intro to probability and probability rules  
(Basic rules, Complement and Addition Rules, Mutually exclusive events)  | EXAM 2:         |
|      |             |                              |                                                                      | CH 2 & CH 3     |
|      |             |                              |                                                                      | Week 5 Quiz     |
|      |             |                              |                                                                      | Worksheet / Knewton |
| 6    | 9/30-10/4   | * Intro to probability and probability rules  
(Conditional probabilities, Multiplication rule and Independent and mutually exclusive events) | Week 6 Quiz     |
|      |             | * Introduction to experimental design |                                                                      | Worksheet / Knewton |
| 7    | 10/7-10/11  | CH 5: Data Collection and Sampling  | * Introduction to experimental design  
(Components of Experimental Design & Variables and Measures of Data)  
* Sampling: Methods | EXAM 3: CH 4      |
|      |             |                              |                                                                      | Week 7 Quiz     |
|      |             |                              |                                                                      | Worksheet / Knewton |
| 8    | 10/14-10/18 | * Sampling  
(Comparing Sampling Methods & Sampling Errors, Bias and Misleading Statistics) | Week 8 Quiz     |
|      |             | * Frequency Tables and Histograms |                                                                      | Worksheet / Knewton |
| 9    | 10/21-10/25 | CH 6: Graphic Displays of Data  | * Frequency Tables and Histograms  
for grouped data  
* Graphical representations of data | Week 9 Quiz     |
|      |             |                              |                                                                      | Worksheet / Knewton |
| 10   | 10/28-11/1  | CH 7: Measures of Center and Dispersion  | * Measures of central tendency  
* Quartiles and box plots | EXAM 4: CH 5 & CH 6 |
|      |             |                              |                                                                      | Week 10 Quiz    |
|      |             |                              |                                                                      | Worksheet / Knewton |
| 11   | 11/4-11/8   | * Introduction and application of standard deviation | Week 11 Quiz     |                             |
|      |             | CH 8: Normal Distribution    | * Normal distribution  
* Normal distribution  
* Linear regression: Linear Regression Equations |                             |
|      |             |                              |                                                                      | Worksheet / Knewton |
| 12   | 11/11-11/15 | * Linear regression  
(Uses of Linear Regression, Outliers and Prediction Errors, | Week 12 Quiz    |
|      |             | CH 9: Linear Regression      |                                                                      | Worksheet / Knewton |
| 13   | 11/18-11/22 |                              |                                                                      | EXAM 5: CH 7 & CH 8 |
|      |             |                              |                                                                      | Week 13 Quiz    |
Using slope, Correlation and Causation

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>11/25-11/26</td>
<td>* Linear regression: Coefficient of Determination</td>
</tr>
<tr>
<td>12/2-12/3</td>
<td>REVIEW</td>
</tr>
</tbody>
</table>

**THANKSGIVING**

**FALL 2019 Important Deadlines/Holidays:**

- August 26: First Day of Classes
- September 2: Labor Day No Classes
- September 3: Last day to late register or add a class
- October 16 – 30: Midterm Grading
- November 8: Last day to drop a class
- November 27: Reading Day No Class
- November 28 – 29: Thanksgiving Holidays No Class
- December 3: Last Day to withdraw from the University
- December 4: Last Day of Classes
- December 5: Reading Day
- December 9: Final

**Students taking Math 0320, in most cases, will NOT be permitted to drop this course. Consult your advisor, the financial aid office and the TSI office in CASA if you believe it is necessary to drop this class.**

**Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.**

I. **COURSE POLICIES**

**Attendance/Tardiness**

1. I expect each student to attend all classes and labs. Attendance is mandatory. Please save absences for emergencies and illness.
2. If you are more than 5 minutes tardy or if you leave more than 5 minutes before the end of class you are considered absent.
3. All absences are considered unexcused unless a written excuse or documentation is made available to me in a timely manner and accepted.
4. If you must leave early inform me prior to the beginning of class or if you must be absent, please email me through my university email stated at the top of this syllabus.

**Extra Credit**

There is no extra credit in this course.
Cell Phone Use
Cell phones are prohibited in class and/or lab. They should be stored in backpacks or purses during class and not in pockets.

Laptop Use
You will not need your laptop during class; the class is held in a computer lab.

Food in Class
Do not bring food or drinks into this class; it is a computer lab.

Participation
1. Participation is required in completing course materials. This includes notes taken from lecture, power points, or videos.
2. Students found to be working on material other than mathematics during class or lab will be given a zero for that day’s participation. This will include those using class or lab time for personal business-like emails or texting. Cell phones will be turned off and put away during class or lab. Use of your phone will result in a 0 for the day’s participation.
3. Staying on task & completing an appropriate amount of work will be noted each day by the instructor and/or tutors.

Expectations
1. Students are expected to attend each class meeting.
2. Students are expected to purchase the Knewton Access code before the temporary 14 day financial access expires.
3. Students are expected to report difficulties purchasing or accessing the Knewton Access code promptly. You have required homework due on the 2nd class day.
4. Students are expected to work on course homework outside of class as needed.
5. Students are expected to keep all worked problems in the dedicated notebook in an organized format.
6. Students will complete the Weekly Quizzes and Exam Reviews without notes, instructional materials, or assistance from instructor or tutors. The Quizzes and Final Exam will be completed in class without instructional materials or assistance from the instructor or MPLA’s.
7. Students may receive help with the course Homework problems from both the instructor and MPLA’s.

Responsibility
1. You are responsible for obtaining the required supplies and bringing them to class. This will include the Knewton Access code and dedicated notebook required to begin work. The Knewton Access code is active for 2 years. If it is necessary, you will be able to use your Knewton Access code in a future MATH 0320 class.
2. You are responsible for organizing your time so that you can study at least 1 hour each day outside of class and lab. You should include in your weekly schedule a total of at least 9 hours (including class and lab time) to complete your work in this course. Some
students will require more to finish the material.

3. You are responsible to complete the homework and assignments outside of class and must be turned in by the due date. No late work will be accepted. These can all be done outside of class as your schedule allows. Quizzes and chapter exams will be taken during lab time.

4. You are responsible for your own learning; therefore, you should come prepared with questions you need answered. Keep up with what you need to do and set appropriate goals for yourself. Our goal is for you to be an independent learner by the end of the semester and have completed the course requirements.

J. COLLEGE AND UNIVERSITY POLICIES

8. Academic Integrity (University)
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

9. Classroom/Professional Behavior
Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

10. Statement of Civility
Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

11. Deadline for Dropping a Course with a Grade of W (University)
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to
drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

12. Grade Appeals (College of Science and Engineering)
As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

13. Disability Services
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

http://disabilityservices.tamucc.edu/

14. Statement of Academic Continuity
In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be
operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

K. OTHER INFORMATION

15. Academic Advising
The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

16. CASA
The Center for Academic Student Achievement is your best free resource on campus. It provides free academic support through tutoring, counseling, and helps you navigate through higher education. The CASA website is: http://casa.tamucc.edu/

GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.