Math 1314 - College Algebra (Spring 2013)

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Joshua Patterson</th>
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<tbody>
<tr>
<td>Office</td>
<td>BIN 316</td>
</tr>
<tr>
<td>Phone</td>
<td>903-886-5952</td>
</tr>
<tr>
<td>E-Mail</td>
<td><a href="mailto:Joshua.Patterson@tamuc.edu">Joshua.Patterson@tamuc.edu</a></td>
</tr>
<tr>
<td>Web Page</td>
<td><a href="http://www.coursecompass.com/">http://www.coursecompass.com/</a></td>
</tr>
<tr>
<td>Office Hours</td>
<td>MW: 3:30pm-5:00pm, TR: 12:00pm-2:15pm</td>
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“All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.”

(Student’s Guide Handbook, Policies and Procedures, Conduct.)

Rude and/or disruptive behavior will not be tolerated.

No electronic devices (except calculators) are allowed during class time.

**Course Information:** College Algebra, a passing grade in this course will satisfy the mathematics portion of your university studies requirements. This course covers an in-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations. Additional topics such as sequences and series are included.

**Student Learning Outcomes:** Upon completion of this course, students will be able to:

1) Demonstrate knowledge of properties of functions, which include domain and range, operations, compositions, and inverses.
2) Identify, interpret, and solve problems of various types of functions and their graphs, including but not limited to linear, quadratic, polynomial, rational, exponential, and logarithmic functions.
3) Apply graphing techniques for various functions.
4) Identify and develop basic sequences and series.
5) Solve systems of equations with various methods including elimination, substitution, Cramer’s rule and matrices.

**Material Required:** You must purchase a copy of MyMathLab/MyLab student access code from either of the campus bookstores or directly from Pearson at [http://www.coursecompass.com](http://www.coursecompass.com). **Textbook:** *College Algebra* (5th Edition) by Robert F. Blitzer, ISBN # 978-0-321-55983-8, is the textbook for the course. ***The MyMathLab access code includes access to an e-book, so the book is optional but the MyMathLab access code is required.*** (You will have to purchase a new MyMathLab access code if you have an account with MyMathLab for your intermediate algebra class the previous semester. You do NOT need to purchase a new MyMathLab access code if you are retaking this course using MyMathLab for the same book with the same edition. Please come see me for directions to do so). ***Portions of Chapters 1-8 in the textbook will be discussed. A Texas Instruments (TI-83 or TI-83 Plus) graphing calculator for this course is highly recommended. All exams must be completed in pencil.***

Please use the MyMathLab 17 day free trial to start working on your homework if you cannot purchase it right away. The MyMathLab student access code must be purchased by the beginning of the 3rd week of class to prevent a loss in points.

**Technology Requirements:** Use of graphing calculators will be required throughout the course and each student must have access to a suitable graphing calculator. The graphing calculator must have at least the capabilities of the TI-83 (the highly recommended calculator). Graphing calculators other than Texas Instruments calculators may be used but classroom instruction on calculators will be given for TI equipment only.

Mission for College of Science, Engineering, and Agriculture: Innovation and Discovery
Students need to check their e-mail regularly with the address that they have provided to the instructor for class announcements. Access to MyMathLab, a computer, and the internet will be needed for online homework assignments.

**Instruction:** Instruction will include lecture, demonstration and models, and some group work, based on time available. All turned in work should be completed in pencil, please.

**Grading Policy:**
- Daily Grade (Attendance, Homework, Tutoring, Quizzes and Projects): 15%
- Competence Exam: 10 %
- Exams: 50%
- Final Exams: 25%

*Grade:* A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = 59 or below

**Attendance & Continual Enrollment:** Attendance will be taken each class. Students need to actively participate in class to receive credits. **Attendance is a must to be able to do well in this class.** Every class period will be covering new material that you will be responsible for—even in the event of an absence!! It is expected that you follow the guidelines set forth by the Class Attendance Policy in the current Undergraduate Catalogue.

If you represent an athletic team for this university, departmental team, scholastic team, choir, or other group and must miss class, notify me in writing with the appropriate documentation within one week of the absence in order not to be counted absent. Arrangements for make-up work will be made at that time.

*** All students should be aware that they are NOT allowed to drop this math course, and that they must be continually enrolled in a math course until they have successfully completed their college-level math course (University Policy).***

**Homework:** Homework will be assigned every class period. The homework is a must for success in this class. ***You are required to complete your homework using MyMathLab/MyLab software.*** **Homework is due in a week after the day that is assigned (or before the exam day, whichever comes first).**

If you experience any technical difficulties with MyMathLab, be sure to use the online help and technical support from the software company. If you continue to have trouble accessing or navigating the software, please contact me for some individual help. If you have questions concerning the homework, email me, or come by my office during my office hours for help.

**Tutoring:** ***Students are required to spend an hour a week outside class tutoring.*** Students can choose to attend tutoring in the Math Skills Center, TRIO, Supplemental Instruction tutoring sessions, and other on campus tutoring sessions that are approval by the Mathematics Department.

The **Math Skills Center**, located in Binnion 328, is open **Monday and Wednesday from 8am – 8pm, Tuesday and Thursday from 8am – 6pm, and Friday from 8am – 3pm.** Free tutoring is available for students who need help with their math courses. In addition, the **Academic Success Center also offers supplemental instruction/tutoring for students and their hours can be found at the university web site.**

The **Mach III/TRIO Program** is available for students who qualify for additional resources, such as private tutoring. In order to qualify, students must meet certain conditions, such as being a first-generation college student. For more information, contact TRIO at 903-886-5833 or in the Halladay Student Services building, Room 300.
**Quizzes:** Quizzes will be given in class periodically. No make-up quizzes will be given, but the lowest quiz grade will be dropped. Be sure to attend all classes so you do not miss any quizzes.

**Project(s):** Application problems related to course materials and projects will be assigned during the semester. Be sure to attend all classes in order to participate in the class activities and projects.

**Competency Exam:** Math1314 students are required to take the competency exam which covers the prerequisite materials for college algebra. Students need to seek tutoring help if they do not pass the competency exam on the first try (in class). Students have to score 80% or higher on the test in order to pass this exam. Competency exams will be graded with no partial credits. Students can retake the competency exam outside of class in the academic testing center SS308 (up to three times a week) before the deadline which is **Friday Feb. 22, 2013**. Students will receive 10% on the final grade if they pass the competency exam. Students will receive a zero for that 10% of the final grade if they do not pass the competency exam before the deadline.

**Exams:** There are three scheduled exams. A practice exam and answer key will be provided prior the exam. Partial credit may be given on exams IF all work is neatly shown for determination of the student’s mistakes. **CELL PHONES AND OTHER SUCH DEVICES MUST BE TURNED OFF AND STORED OUT OF THE STUDENT’S REACH.** The only electronic device allowed during tests and quizzes is a stand-alone calculator (such as a TI-34, TI-83, TI-85, etc.), and only with the instructor’s permission. All exams must be completed in pencil; failure to complete your exam in pencil will result in a reduction of the earned grade by 5 points.

No make-up exams will be given without prior notice of a university excused absence*. I realize that at times throughout the semester, emergency situations may arise that affect a student’s performance on an exam or even prevent a student from attending on an exam day. **I am willing to replace the lowest exam grade with the student’s grade on the final exam, provided the final exam score is higher.** This provision will only be applied to ONE exam, so students should make every effort to be present and well-prepared for all exams.

A Practice exam and answer key will be available prior to each exam. Be sure to take advantage of this valuable resource!!

These test dates are tentative and are subject to change: **(instructor: delete dates not relevant to you)**

<table>
<thead>
<tr>
<th>Test 1</th>
<th>2/14 (T/R classes)</th>
<th>2/15 (M/W/F classes)</th>
<th>2/18 (M/W classes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 2</td>
<td>3/21 (T/R classes)</td>
<td>3/20 (M/W/F classes)</td>
<td>3/25 (M/W classes)</td>
</tr>
<tr>
<td>Test 3</td>
<td>4/18 (T/R classes)</td>
<td>4/19 (M/W/F classes)</td>
<td>4/17 (M/W classes)</td>
</tr>
</tbody>
</table>

* University Authorized Excuses: 1) Participation in a required/authorized university activity; 2) Verified illness; 3) Death in a student's immediate family; 4) Obligation of a student at legal proceedings in fulfilling responsibility as a citizen; and others determined by individual faculty to be excusable (e.g., elective University activities, etc.)

**Final Exam:** The final exam will be a departmental, comprehensive exam. All students will take the exam at the same time on **Monday, May 6, between 3:30 and 5:30 p.m.**

Please note that this is an unusual time and make your arrangements to be present. Make-up final exams will not be allowed. The location of the final exam will be announced toward the end of the semester (Departmental policy).

* **NO MAKE-UP FINAL EXAM WILL BE ALLOWED!!!** *
**Academic Integrity:** I believe a majority of students are honest in doing their school work. However, due to recent cheating events, I must take measures to protect the academic integrity of my classroom. I have a **NO TOLERANCE policy for cheating and if you are caught cheating you will either get a zero for the test or fail this course.** Cheating in this course is defined as the following:

- Giving or receiving answers during an exam or quiz.
- Viewing the exam or quiz answers of nearby classmates.
- Having notes/practice work available during quizzes or tests.
- Possession or access to test items before the test is given.
- Deception in getting an excused absence to obtain the undeserved opportunity to make-up work.
- Use of cell phones or text messaging technology during exams or quizzes. **You may NOT use the calculator on your cell phones or any other similar electronic devices (such as I-Pods, I-Touch, etc.). IF ONE OF THESE DEVICES IS AVAILABLE, IN ANY WAY, DURING AN EXAM OR QUIZ, THE STUDENT WILL BE GIVEN AN AUTOMATIC “0” ON THE ASSIGNMENT.**
- Improper citations in written works, or using another person’s ideas and words as your own without giving proper credit.
- Any method, no matter how well rationalized or accepted, which improves a person’s grade by any means other than study and skillful performances on exams and/or other assignments.

Students found guilty of an act of academic dishonesty in this course will be subject to receiving an “F” in this course.

**Classroom Behavior:** Appropriate classroom behavior is required to attend this class. **All cell phones and electronic devices must be put on silent or turned off during class.** NOTE: THIS INCLUDES BLUETOOTH AND OTHER DEVICES THAT ARE PLACED IN THE EAR. Phones and iPods are distractions for me and the other students in the class. All people will be treated with respect and I will not allow talking that will disrupt my class. If disruptions occur during class time, you will be asked to leave class and will earn a zero on any applicable grades for that class period. Serial disrupters will be asked to withdraw from this class. This will mean that you are withdrawn from school, entirely.

**Comments:** I will do my best to make quality presentations each class and, in return, I expect that you will do your best to learn the material presented in and outside classes. It is important that you be actively engaged in class activities. Questions are welcome in the classroom, and I will gladly schedule outside help for you if necessary. I know that together, these efforts can contribute significantly to your education in this class.

**Getting Help Outside of Office Hours:** Utilizing the multimedia library and online help from the MyMathLab computer software program is suggested as a valuable resource for many students to improve their grades in Math classes. Also, the free tutoring on campus is also highly recommended.

**Calculator Loan Program:** The Mathematics Department has set up a calculator loan program to support students. Students can borrow a calculator for a semester with a fee ($10 to $15 for TI-83/84). It is first come, first served basis.

**Early Intervention for First Year Students:** Early intervention for freshmen is designed to communicate the University’s interest in their success and a willingness to participate fully to help students accomplish their academic objectives. Grades for students in freshmen level classes will be reported to the Registrar's Office at the end of the fifth week of class during the fall and spring semesters. The Registrar's Office will report grades to...
students, Advising Services, Academic Departments (faculty advisors) and mentors. This procedure will allow students to be knowledgeable about their academic progress early in the semester. The university, through Advising Services, faculty advisors and mentors, will take steps to assist students who may be experiencing difficulty to focus on improvement and course completion. Grade reports will be mailed by the end of the sixth week of the semester.

**Student Health Services** are located at Henderson Hall (Corner of Lee St. and Monroe St.). It offers health care to the student body of Texas A&M University – Commerce. It provides primary health care services including treatment of illness, injury, and women’s health. **Tel:** (903) 886-5853.

**University Police Department** is located at Henderson Hall. For Emergency, please call: 911
For Non-Emergency, please call: 903.886.5868

**Students with Disabilities:** 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 have a disability requiring an accommodation, please contact:

**Office of Student Disability Resources and Services**
Texas A&M University-Commerce, Room 132, Gee Library
Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148
StudentDisabilityServices@tamu-commerce.edu

*** By Remaining Enrolled In This Course, All Students Agree To Abide By The Policies Of This Class, As Stated In The Syllabus ***

~ Good Luck and WORK Hard ~
Math 1314 – College Algebra: Competency Exam (Practice Questions)

Formulas to remember:
1) Quadratic formula  
2) Slope formula

1) Factor $3x^2 + 2x - 16$
2) Factor $4 - 36x^2$
3) Factor $24x^3 + 3y^3$
4) Solve $15x^2 + 4x - 4 = 0$
5) Solve by Quadratic Formula $3x^2 + x = -3$
6) Simplify $(4xyz)^0(6xy)^{-2}(3x)^1$
7) Simplify $\left(\frac{2x^2}{y^4}\right)^3 \times \left(\frac{2x^4}{y}\right)^{-2}$
8) Multiply the following polynomials: $(3x - 4y)(6x + 2y)$
9) Reduce $\frac{x^2 - 2x}{3x - 6}$
10) Simplify $\sqrt[4]{135x^6y^{10}z^4}$
11) Simplify $\sqrt[8]{480a^4b^5c^{10}}$
12) Solve the inequality: $5 - 2x \leq 7$. Draw the answer on a number line. Then write the answer in interval notation.
13) Solve the inequality: $-2 < 3x - 5 \leq 7$. Draw the answer on a number line. Then write the answer in interval notation.
14) Find the slope of the line containing the points $(5, -4)$ & $(-3, 3)$.
15) Find x-intercept and y-intercept for the equation $2x - 3y = 6$. Then graph the line.
Answers for Practice Competency Exam Questions:

Formulas to remember:

Quadratic formula \( x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \)

Slope formula \( m = \frac{y_2 - y_1}{x_2 - x_1} \)

1) \((3x + 8)(x - 2)\)
2) \(4(1 + 3x)(1 - 3x)\)
3) \(3(2x + y)(4x^2 + 2xy + y^2)\)
4) \(x = \frac{2}{5}, -\frac{2}{3}\)
5) \(x = \frac{-1 + \sqrt{35}}{6}, \ x = \frac{-1 - \sqrt{35}}{6}\)
6) \(\frac{1}{12x^2y^2}\)
7) \(\frac{2}{x^4y^{10}}\)
8) \(18x^2 - 18xy - 8y^2\)
9) \(\frac{x}{3}\) (Factor top and bottom, then reduce)
10) \(3x^2y^3 z \sqrt[3]{5yz}\)
11) \(4a^2b^2c^2 \sqrt[3]{30b}\)

12) Answer: \(x \geq -1\), Graph: \([-1, \infty)\)

13) Answer: \(1 < x \leq 4\), Graph: \((1, 4]\)

14) \(m = -\frac{7}{8}\)

15) x-intercept \((3, 0)\) y-intercept \((0, -2)\)
Name: _____________________________  Math 1314 section _______

Required: An hour a week for tutoring, with at least 15 hours for the whole semester. Please use this table to keep up with your tutoring hours. Your instructor will receive the official count of your tutoring hours from the university at the end of the semester.

<table>
<thead>
<tr>
<th>Week &amp; Date</th>
<th>location and time</th>
<th>Time Spent</th>
<th>Total Hrs/ minutes</th>
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<tbody>
<tr>
<td>Example:</td>
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<tr>
<td>WK1, 8/28</td>
<td>Math Skills Center</td>
<td>1 hr 15 mins</td>
<td>1 hr 15 mins</td>
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<td>10 – 11:15 a.m.</td>
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Getting Started With My Math Lab

The first time you try to use the software, you will need to register as a new user:

You will need the following before you are able to get started:

A valid email address
A computer with Internet Explorer. (If, for some reason, you have Windows, but no shortcut to get to Internet Explorer, you may still be able to access Internet Explorer by going into “My Computer” and typing the web address into the “Address” line at the top.)
An internet connection, such as: Cable/DSL, T1, or other high-speed for multimedia content; 56k modem (minimum) for tutorials, homework, and testing
A computer with 64 MB of RAM, monitor resolution of at least 1024 x 768,
This course ID number
Your Student Access Code

COURSE ID #: patterson16763

The first time you use the software, you will need to register as a new user.

1.) Go to www.coursecompass.com and click on “Register” under Students.

2.) Click on “Get access to a new course”, then “Next”.

3.) Type in the course ID number given above. Go to the section entitled “Access Code” and enter your six-word access code. (You will have to hit tab between words.)

4.) Go to the section entitled “School Location” and enter the zip code 75429. Choose “United States” from the drop-down menu for School Country, and click on “Next”.

5.) Go to the section entitled “School Information” and use the drop-down menu to select “TEXAS A&M UNIV-COMMERCE”.

6.) Under the section entitled “Personal Information”, fill in your name and email address.

7.) Go to the section entitled “Login Name and Password” and enter your personal user name and password.

8.) Go to the section entitled “Security Question” and use the drop-down menu to choose a security question. Enter your response in the blank for the answer to the security question.
9.) Go to the section entitled “Licensing Agreement and Privacy Policy” and read the sections. Also, you may wish to de-select the box that says that you are interested in receiving information on related Pearson Education products. Click “Next”.

10.) Once the computer creates your login profile for your user ID, you will need to go to the section entitled “You Now Have Access To” and click on “Log In Now”.

**After you have registered, you will need to log in to the system:**

1.) Enter your user name and password and click on “Log in”.

2.) On the left side of your screen, you should see a section entitled “Courses you are taking” and there should be a link to this course. Click on this link.

**Every time you log in on a new computer, you MAY need to run the installation wizard or download plug-ins:**

1.) You may need to run the installation wizard or download plug-ins anytime you are using a new computer to use this software. If you are using the same computer every time, you should only have to install the plug-ins once.

2.) Follow all instructions for installing the various plug-ins, and remember to click “Next” once each installation has been completed. If you are using a dial-up modem, the required installations of Math XL should take approximately 20 minutes. The other plug-ins, such as Quick Time, could take an hour or more. However, these plug-ins are needed if you would like to view the helpful videos when you are trying to learn new material.

**After you have registered and run the installation wizard on a given computer, you should not have to go through this process again for that computer. Instead, you will only have to log in.**