# COLLEGE ALGEBRA

MATH 105 ONLINE, FALL 2012

SECTIONS #41271 AND 41920 (4 UNITS)

## INSTRUCTOR

| | |
|---|---|
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| Websites | www.stevetoner.com,  www.MathVideos.Net |
| Office Hours | MTWTh 7:15  AM – 7:40 AM<br>Wed & Thurs 10:00 AM – 11:15 AM |

## COURSE

### DESCRIPTION

This course covers factoring; radicals and rational exponents; rational expressions; solutions of linear, quadratic, and polynomial equations and inequalities; absolute value equations and inequalities; graphing relations and functions; solutions of systems of equations; exponential and logarithmic functions; conics; partial fraction decomposition; complex numbers; binomial theorem, determinants and matrices of any order; arithmetic and geometric progressions; and proof by mathematical induction.

### PREREQUISITES

Math 90 with a grade of "C" or better, or by eligibility by placement on the VVC assessment exam.  You may be asked to provide proof that you have met this prerequisite.  Acceptable forms of proof include (but not limited to) VVC Assessment Test results, WebAdvisor or MicroGrade printout, or prerequisite challenge approval.

### TEXTBOOK / MATERIALS

**COLLEGE ALGEBRA, GRAPHS & MODELS, BY JOHN W. COBURN.**

Online access at http://www.connectmath.com/.  You will need an access code. You can purchase the access code directly from the website ($80) or from the Rams bookstore ($109.60).

**Online access is required** and includes complete digital access to your e-books, videos and homework. Your course Code is **VKRW9-UCRTY**.  You may begin the registration process at ConnectMath beginning Wednesday, August 22nd, but the class will not officially begin until Monday, August 27th.

The 2-week financial aid code for this course is **115BD-BB1AC-5FFBB-A3CC0**. Note that it **does not** give add an additional two weeks to your course. You will need to extend your account BEFORE the end of the two weeks.

## HOMEWORK

Practice is a vital component in learning mathematics.  Students are to read each section in the e-book and do the assigned work. Videos for each section in the course produced by the textbook company may be found by choosing the Resources tab at the top of your Connect window.  I have also created video lecture notes for you.

You may take each homework assignment as many times as you wish, and I will only count the highest grade for each assignment.  I will drop the lowest 5 scores from your homework assignments at the end of the semester before calculating your semester grade.

## LECTURE NOTES AND VIDEOS

I have made a minute switch of texts for this fall term only, so the lecture notes and videos are going to be a little out of order.  Refer to the chart on the last page of the syllabus to get the correlation between sections.

To watch my lecture videos, you will want to go to www.mathvideos.net, my video website, and click on the College Algebra button.  Above each pair of chapters, there is a link to "download blank lecture notes".  Please download and print all of these out at the start of the semester, as we will be bouncing around from section to section for the first half of the course.  For each lecture in the table, there is a video lecture I have created to teach you the material.  **Watch the videos and take lecture notes just as if you were in class.**  *This is an essential part of the class.*  Again, refer to the table beneath the calendar on the next page to see the video correlations for the first two chapters.

## CHAPTER TESTS

We will have 8 chapter tests (chapters 6 and 7 are combined as a single "chapter") and one final exam.  For each chapter test, you will only be allowed ONE 120-minute attempt.  I will drop your lowest-scoring chapter exam.  No graphing calculators, notes or "cheat sheets" may be used on any of the chapter tests.

## E-MAIL ASSIGNMENTS

There will be several short e-mail assignments as part of the course.  Mostly these are of a book-keeping and of a communication nature.  These will be sent directly to you at the email address you use to register for Connect.

# GRADING

It is your responsibility to be aware of your grade. Your final grade will be determined as follows:

| | | | |
|---|---|---|---|
| Chapter Tests | 40% of your grade | A: | [88,100) |
| Online Homework | 25% of your grade | B: | [78,88) |
| E-mail Assignments | 5% of your grade | C: | [70,78) |
| On-Campus Comprehensive Final Exam | 30% of your grade | D: | [65,70) |
| | | F: | [0, 65) |

## CALCULATORS

*Calculators are permitted in this course.  The text will be illustrating problems using a graphing calculator, however, I am primarily assigning problems that will only require a non-graphing calculator.  You will need a __non__-graphing calculator for your on-campus final exam, as a graphing calculator will not be allowed.*

# IMPORTANT NOTES ABOUT TECHNOLOGY

This is an online course, requiring reliable computer access. Please ensure your computer is in good repair at the start of the semester. It is suggested that before any major assignments, the computer be re-booted to clear any memory caches which may cause issues while testing. While documented outages may occur, it is the student's responsibility to meet all deadlines in this course.

At the start of the semester, please go to www.connectmath.com/downloads and install the latest versions of many key plug-ins and movie players. If you ever find your computer running slow, sometimes the cause may be too many versions of Java running in your system. If this is the case, go into your Control Panel, uninstall both Java and Aleks. Then go to the download page mentioned above and re-install Java first, followed by Aleks. This will solve many of the issues that students typically face.

# POLICIES

### SCHOLASTIC DISHONESTY
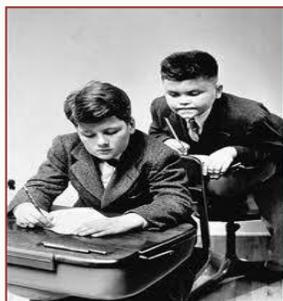
While students may work together on the researching of any assignment, it is expected that each of their writing assignments reflect substantial individual effort. Any student who commits plagiarism or is found to have cheated on a scheduled exam is subject to a zero score for that specific exam which may result in a term grade of "F" for this course. Students should be aware that cases of cheating and/or plagiarism will be forwarded to the appropriate college administrator promptly. The college administration has a range of sanctions that may be imposed including, but not limited to, academic suspension or expulsion from the college.

IT IS EXPECTED THAT YOU ARE ALONE WHEN TAKING ANY CHAPTER EXAMS. YOU MAY NOT SEEK ANYONE'S ASSISTANCE DURING THESE EXAMS. THERE SHOULD NOT BE ANYONE LOOKING OVER YOUR SHOULDER HELPING, PROMPTING, OR CORRECTING YOU. IT IS ALSO ASSUMED THAT YOU ARE TAKING ALL EXAMS WITHOUT THE AID OF A CALCULATOR.

# ATTENDANCE

If this were an on-campus class, you would be required to attend class every day. After 4 hours of absence, you could be dropped from this class. As an online class, the same rules need to hold. **If you do not log in to Connect for 10 straight days, you will be considered to be excessively absent and may be dropped. It is your responsibility to keep your enrollment status current. You risk an "F" if you stop attending without officially withdrawing.**

*Class attendance is not a measure of performance or proficiency. Whether a student is just physically present in the class is not a valid basis for grading. Reference Title 5 Section 55002 of the California Code of Regulations: (A) Grading Policy. The course provides for measurement of student performance in terms of stated course objectives and culminates in a formal, permanently recorded grade based upon uniform standards in accordance with section 55758 of this Division. The grade is based on demonstrated proficiency in the subject matter and the ability to demonstrate that proficiency, at least in part, by means of written expression that may include essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.*

### STUDENT ACCESS

*Students with special needs are encouraged to meet with instructors to discuss the opportunity for academic accommodation and be referred to disabled student program and services per Administrative Procedure (AP 3440).*

*If you have a learning disability or physical need that requires special accommodation, please advise me prior to 09-04-12 (the start of the second week of class).*

# MISCELLANY

## ACADEMIC SUPPORT

You are strongly encouraged to get tutoring or go to the Math Success Center, study in groups, and see me for help outside of class. All of these are free! Students that get help outside of class are typically much more successful than those that do not.

Regular Math Success Center hours are:

Monday-Friday  9:00 AM – 5:30 PM (starting the second week of class)

The Math Lab is located in building 42 (the Academic Commons).  Outside of these those hours, please go to the information booth at the east end of the Tech building to sign in for tutoring help.

My office hours are listed at the start of this syllabus.  Appointments are also available if you are unable to meet me at those times.
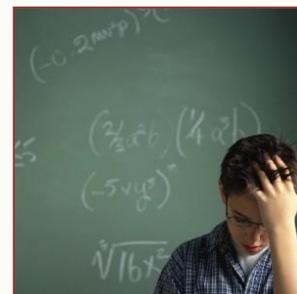
## STUDENT LEARNING OUTCOMES

Upon completion of the course the student can:
1. Recognize, graph and compute zeros for polynomial, rational, radical, logarithmic and/or exponential equations.
2. Apply matrix algebra to determine the solution of a system of linear equations.
3. Apply concepts of analytic geometry to the conic sections.
4. Demonstrate knowledge of geometric and arithmetic sequences.

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# VVC FALL CALENDAR

| | |
|---|---|
| Fall Term Begins | Aug. 27 |
| Labor Day Holiday (college closed) | Sept. 3 |
| Last Day to Drop and still receive a "W" | Oct. 12 |
| Veteran's Day Holiday (college closed) | Nov. 12 |
| Thanksgiving Break (no classes) | Nov. 22-23 |
| Fall Semester Ends | Dec. 15 |

# OUR CLASS SCHEDULE

| Week | Dates | Section | Deadline |
|---|---|---|---|
| 0 | | | Connect course becomes available on Wednesday, August 22nd, 2012 |
| 1 | 08.27 – 09.01 | Start Ch. 1 | |
| 2 | 09.02 – 09.08 | Finish Ch. 1 | All HW and Chapter Test for Ch. 1 must be submitted by 8:00 AM on Monday, Sept. 10 |
| 3 | 09.09 – 09.15 | Start Ch. 2 | |
| 4 | 09.16 – 09.22 | Finish Ch. 2 | All HW and Chapter Test for Ch. 2 must be submitted by 8:00 AM on Monday, Sept. 24 |
| 5 | 09.23 – 09.29 | Start Ch. 3 | |
| 6 | 09.30 – 10.06 | Finish Ch. 3 | All HW and Chapter Test for Ch. 3 must be submitted by 8:00 AM on Monday, Oct. 8 |
| 7 | 10.07 – 10.13 | Start Ch. 4 | *October 12th, 2012 is the last day to drop the course and still receive a "W" grade. |
| 8 | 10.14 – 10.20 | | |
| 9 | 10.21 – 10.27 | Finish Ch. 4 | All HW and Chapter Test for Ch. 4 must be submitted by 8:00 AM on Monday, Oct. 29 |
| 10 | 10.28 – 11.03 | Start Ch. 5 | |
| 11 | 11.04 – 11.10 | Finish Ch. 5 | All HW and Chapter Test for Ch. 5-6 must be submitted by 8:00 AM on Monday, Nov. 12 |
| 12 | 11.11 – 11.17 | Start Ch. 6-7 | |
| 13 | 11.18 – 11.24 | Finish Ch. 6-7 | All HW and Chapter Test for Ch. 6-7 must be submitted by 8:00 AM on Monday, Nov. 26 |
| 14 | 11.25 – 12.01 | Start Ch. 8 | |
| 15 | 12.02 – 12.08 | Finish Ch. 8; Start Ch. 9 | All HW and Chapter Test for Ch. 8 must be submitted by 8:00 AM on Monday, Dec. 10 |
| 16 | 12.09 – 12.14 | Finish Ch. 9; Final Exam | All HW and Chapter Test for Ch. 9 must be submitted by 8:00 AM on FRIDAY, Dec. 14 |
| | Dec. 14, 2012 | | FINAL EXAM on-campus from either 8:00-10:00 or from 10:00-noon (for those who have not completed it earlier) |

# FINAL EXAM

A comprehensive final exam will be given the final day of class on Friday, December 14th.  If you are finished with the course early, you may schedule a time to take the final exam in one of Professor Toner's on-campus classes at 8 am during the last week of class, December 12-13.

Since there will be some in the class who will not stay in the class the full term, sign-up times for final exams will begin the in November, when we have determined how many students are still in the class and will be taking the final exam.  An email will be sent to all remaining students at that time to start scheduling specific times for taking the final exam.

Students living *outside the area (Inland Empire)*  may set up to have an alternate Final Exam administered by a proctor, approved ahead of time.  If this may apply to you, you MUST notify Professor Toner *by the end of the third week of class, Sept 15, 2012*.  Specific arrangements will be made with those students after October 12th (the "W" drop deadline).

# VIDEO CORRELATIONS FOR COLLEGE ALGEBRA GRAPHS & MODELS

While waiting for the regular version of this text to get completed in Connect, I need to use the "Graphs & Models" version of the text this semester.  This means that many of the section numbers have changed along with the order in which some of the topics are presented.  This chart will help you to access the videos in the proper order for our text.

For example, when you start section 1.1 in your e-text, watch the video and take the notes for section 2.1 from www.mathvideos.net.

⇨ While some of you may be adventurous and try to learn the material using the "Guided Solution" buttons in Connect, this is no substitute for the video explanations.  Students in the past who have tried both approaches have found that the video lectures help to explain the concepts and the differences between problem types which is missing if you just try to follow examples to learn the material on your own.

| Section in Text | "old text" section | | Section in Text | "old text" section |
|---|---|---|---|---|
| 1.1 | 2.1 | | 5.1 | 4.1 |
| 1.2 | 2.2 | | 5.2 | 4.2 |
| 1.3 | 2.4 | | 5.3 | 4.3 |
| 1.4 | 2.3 | | 5.4 | 4.4a |
| 1.5 | 1.1, 1.2a | | 5.5 | 4.4b |
| 1.6 – skip! | -- | | 5.6 | 4.5 |
| | | | 5.7 – skip! | -- |
| 2.1 | 2.5 | | | |
| 2.2 | 2.6 | | 6.1 | 5.1 |
| 2.3 | 1.3 | | 6.2 | 5.2 |
| 2.4 | 3.5, 3.6 | | 6.3 | 5.3 |
| 2.5 | 2.7 | | 6.4 | 5.4 |
| 2.6 | 3.8 | | 7.1 | 6.1 |
| | | | 7.2 | 6.2 |
| 3.1 | 1.4 | | 7.3 | 6.3 |
| 3.2 | 1.5, 3.7 (first column) | | 7.4 | 6.4 |
| 3.3 | 3.1 | | 7.5 – skip! | -- |
| 3.4 – skip! | -- | | | |
| 3.5 | 2.8a | | 8.1 – skip! | -- |
| 3.6 | 2.8b | | 8.2 | 7.2 |
| | | | 8.3 | 7.3 |
| 4.1 | 3.2 | | 8.4 | 7.4 |
| 4.2 | 3.3 | | | |
| 4.3 | 3.4 | | 9.1 | 8.1 |
| 4.4 | 3.5 | | 9.2 | 8.2 |
| 4.5 | 3.6 | | 9.3 | 8.3 |
| 4.6 | 3.7 | | 9.4 - minimal | 8.4 |
| | | | 9.5 - minimal | 8.5 |
| | | | 9.6 – skip! | -- |
| | | | 9.7 | 8.7 |