



# SYLLABUS

# MATH 165 College Algebra

202241

# MATH 165 College Algebra School of Distance Education

# Self-Paced Format

This course follows a self-paced online format. This format allows you to set your own pace of study. While you have 180 days from your start date to complete the course with Andrews University, it is your responsibility to meet any deadlines set by your home institution. The last day to withdraw with a full refund is 15 days after your start date. See <u>more withdrawal details here</u>.

# **Instructor Contact**

Please refer to course in LearningHub for the teacher contact information.

# **Communication with the Instructor**

It is important to remember that while the Internet is available 24 hours a day, your instructor is not. You can expect that your instructor will respond to e-mail message to you within *2 business days* during the week and may not be available to respond on weekends.

## **Other Assistance**

Username and password assistance	helpdesk@andrews.edu	(269) 471-6016
Technical assistance with online courses	dlit@andrews.edu	(269) 471-3960
Exam requests and online proctoring	sdeexams@andrews.edu	(269) 471-6566
Distance Student Services - any other questions	sdestudents@andrews.edu	(269) 471-6566 Text: (269) 397-4477

# **Part 1: Course Information**

# **Course Descriptions**

Introduction to precalculus. Linear, quadratic, radical, and absolute value equations and inequalities; graphs of lines, parabolas, circles, ellipses and hyperbolas; composition and inverses of functions; transformations of graphs, symmetry; linear, quadratic, exponential, logarithmic, polynomial, and rational functions. Introduction to derivatives of polynomials. Applications to business and science, including interpretation of graphs and charts.

## Prerequisite

SAT Math  $\ge$  480 or ACT Math  $\ge$  20 or Andrews Math Placement Exam  $\ge$  P2

## **Required Text/Material**

Blitzer, R. (2022). *College Algebra*. 8<sup>th</sup> edition. Hoboken, NJ: Pearson. ISBN-13: 9780136970613.

Your homework, quizzes, tests and final exam will be administered in MyMathLab. (see instructions in the course or in the MyMathLab access found on page 4. The link is located in LearningHub.

# Credit Hour and Commitment

This course is offered for 3 semester credits; therefore it is expected that you will spend 135 total hours on this course. This course has 16 modules with 16 lessons, 2 exams, and homework assignments for each chapter. Each module represents a week of a typical semester course. It is recommended that you budget 9 hours for studying and completing the activities for each module. There are suggested schedules to accomplish this cork included in this syllabus

#### **Institutional Outcomes:**

- 1.a. Demonstrate competence in intellectual, affective, and practical skills to prepare for careers in the twenty-first century, lifelong learning and service.
- 1.b. Select and apply intellectual, affective, and practical skills from their field of study to solve meaningful problems. The identified transferable skills for undergraduate students are: information literacy, quantitative literacy, engaging diverse perspectives, ethical reasoning, analytical inquiry in the form of problem solving and creative thinking, communication, wellness and transferable life skills.
- 2.b. Pursue enduring questions through study in core fields and explore the connections between those fields.

# **Student Learning Outcomes**

- Understand and apply mathematics to real-world activities (Learning Outcome 1 (SLO1))
- Remember basic facts and terms (Learning Outcome 2 (SLO2))
- Develop problem-solving skills (Learning Outcome 3 (SLO3))
- Evaluate and analyze various data sets and draw conclusions from such data (Learning Outcome 4 (SLO4))
- Evaluate discuss ideas related to new technologies (Learning Outcome 5 (SLO5))
- Appreciate the utility and power of mathematics in a wide range of topics (Learning Outcome 6 (SLO6))
- Prepare for future coursework requiring mathematics (Learning Outcome 7 (SLO7))

# **Part 2: Course Methods and Delivery**

# **Methods of Instruction**

Methods of instruction include assigned readings from the textbook, MyMathLab videos, power point presentations, and MyMathLab access for homework, blogs, quizzes and chapter tests, and exams. <u>MyMathLab is a rich resource with explanatory videos, guided tutorials, test prep videos, activities, animations, multimedia textbook</u> etc. Please take full advantage of these resources.

# **Technical Requirements**

- Computer: PC (Win 10 or newer) or MAC (10.14 or better)
- A webcam with microphone, and speakers (or plug in headset)
- Internet: 2.4 Mbps or faster DSL, cable or Wi-Fi connection
- Browser: Current version of Chrome or Firefox
- Software: Office 2013 or newer (Office 365 available here)

#### LearningHub Access

This course is delivered online through LearningHub at <u>http://learninghub.andrews.edu</u>

Your username and password are your Andrews username and password. You need to activate your username and password to access LearningHub. Please do this online here: <u>https://vault.andrews.edu/vault/pages/activation/information.jsp</u> if you haven't already. If you need assistance, call or email us: (296) 471-6016 or <u>mailto:helpdesk@andrews.edu</u>.

If you need technical assistance at any time during the course, or to report a problem with LearningHub, please email <u>dlit@andrews.edu</u> or call (269) 471-3960.

## MyMathLab Access

- A purchase of a <u>new</u> hardcopy textbook comes with an access code to additional online materials
- Alternatively, you can purchase a standalone code from MyMathLab and use the eversion of the text, DO NOT: use mystatlab.com to sign into the course.
- Click on the MyLab & Mastering Tools in LearningHub
  MyLab & Mastering Tools
- Click on Open MyLab & Mastering Open MyLab & Mastering
- Following the instructions to put in your access code that you received with your textbook or that your purchased at mystatlab.com
- You are now ready to do your assignments for the course
- Your assignment grades will show up in the gradebook in LearningHub
- If you need assistance with MyMathLab access, email dlit@andrews.edu

# **Part 3: Course Requirements**

**Important Note:** Activity and assignment details will be explained in detail within each learning module. If you have any questions, please contact your instructor.

# Your Schedule

In Learning Hub, you will access online lessons, course materials, and resources. This course is self-paced. You must complete the course within 180 days. This is the Consortium policy. You may have a stricter deadline imposed by graduation, financial aid, or other restrictions.

Start by creating a schedule for completion of the course.

- Determine your deadline. Do you need a transcript sent to your home institution?
- Working from your deadline, count backwards. Allow 2 weeks after you take your final exam for your final grade to be calculated. Allow another 2 weeks for the transcript to be processed and sent.
- Now use the suggested schedules to create a schedule for yourself that ensures completion 4 weeks before your deadline.

Submit your course plan to your instructor within Learning Hub AND discipline yourself to make regular progress.

# **Assessment Descriptions**

#### MyMathLab Homework

These are administered online via MyMathLab. Homework is only via MyMathLab, not the textbook. These are intended to help you to learn and understand the material for each section. There is no time limit, and you will have 10 attempts. From within the homework assignment, you will have access to the electronic textbook, guided problem-solving, additional worked-out sample problems, and several other learning aids.

#### MyMathLab Quizzes

These are intended to allow you to self-test your understanding and problem-solving ability. You may use your textbook and notes to solve the quiz problems. You may use your textbook and notes to solve the quiz problems. There is no time limit, and you have 1 attempt. For quizzes, you will have access to three learning aids.

#### Blogs

The world around us is changing rapidly. Knowledge is indeed increasing as men run to and fro! For many of us, digital technologies are playing an increasing role in our everyday lives. For your blog question, you will be provided with an article(s) on some topic related to robotics/artificial intelligence (AI). If you like, this article can be a springboard for you to do further research on the topic. As you read the article, here are some things you might want to reflect on:

- 1. How was the math you learned this week used in the development of this piece of technology?
- 2. What does it mean for man to be created "in the image of God"?
- 3. What are the ramifications/implications of this piece of technology on human

existence?

4. Scripture teaches that there is dignity in work. However, in many industries, humans are quickly being

replaced by robots and AI.

5. How does your Christian worldview affect your opinion of this piece of technology?

Write at least one good paragraph. Please post your response in Learning Hub.

# **Rubrics**

#### **Discussion Forums**

	Excellent (5)	Average (3)	Below Average (1)	Unacceptable (0)
Response is:	Well thought-out, addressing the question carefully and completely	Reasonable, but does not address all aspects of the question, address them carelessly	Minimal, showing little thought and missing many question aspects completely	Off topic or completely missing

#### Exams

There are 2 exams in this course. The midterm or first exam covers material from Chapters 1-3. You will be allowed 180 minutes to take this exam. This exam is worth 30% of your grade.

The final or second exam covers material from 1-4, 5, & 7 You will be allowed 180 minutes to take this exam. This exam is worth 30% of your grade. Both exams require proctoring.

These are password-protected, proctored, and administered online via MyMathLab. You may <u>**not**</u> use your textbook and notes to solve the midterm problems. You have one attempt to answer each question. And these exams may not be repeated, so do not attempt it until you have completed the homework assignments and quizzes for that chapter. Please bring your photo ID, and a graphing calculator to the test. The weight of the midterm is 35% of your final grade.

Follow prompts in the course space to set up your exam session. In each module that contains an exam, you will find what to review and what materials are allowed (if any) during the exam.

Please read the important information about taking exams and how online proctoring works at <u>www.andrews.edu/distance/students/exams.html</u>. The follow the instructions that apply to your situation on the <u>exam request form</u> to set up your exam session.

Please note that an exam code is never released to the student. All students must present photo identification before each exam session. Exams can only be proctored after a deadline with approval directly from the instructor to the Testing Center (<u>sdeexams@andrews.edu</u> or 269-471-6566). No exam is returned to the student for review. The instructor, to aid studying for future exams can provide feedback on exams.

# Suggested schedule for completion in 8 weeks:

Module	Lessons	Readings	Assignments	Outcomes Met
Intro	These items will need to be completed before you will have access to the rest of the course	Orientation Course Overview Introductions Academic Integrity	Schedule Introduce Yourself Academic Integrity Quiz Academic Integrity Statement	
1	Chapter P: Prerequisites and Review	P1: Algebraic Expressions etc. P2: Exponents and Scientific Notation P3: Radicals and Rational Exponents	HW P1 HW P2 HW P3	SLO1, SLO2 SLO3, SLO6, SLO7
	Chapter P: Prerequisites and Review continued	P4: Polynomials P5: Factoring Polynomials P6: Rational Expressions	HW P4 HW P5 HW P6 Chapter P Quiz	SLO1, SLO2 SLO3, SLO5, SLO6, SLO7
2	Chapter 1: Equations and Inequalities	Section 1.1: Graphs and Graphing Utilities Section 1.2 Linear Equations and Rational Equations Section 1.3 Models and Applications	HW 1.1 HW 1.2 HW 1.3 Discussion Forum 1	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
	Chapter 1: Equations and Inequalities continued	Section 1.4 Complex Numbers Section 1.5 Quadratic Equations Section 1.6 Other Types of Equations	HW 1.4 HW 1.5 HW 1.6 Discussion Forum 2	SLO1, SLO2 SLO3, SLO5, SLO6, SLO7
3	Chapter 1: Equations and Inequalities continued Chapter 2: Functions and Graphs	Section 1.7 Linear Inequalities and Absolute Value Inequalities Section 2.1 Basics of Functions and Their Graphs Section 2.2 More on Functions and Their Graphs	HW 1.7 Chapter 1 Quiz HW 2.1 HW 2.2	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
	Chapter 2: Functions and Graphs continued	Section 2.3 Linear Functions and Slope Section 2.4 More on Slope Section 2.5 Transformations of Functions	HW 2.3 HW 2.4 HW 2.5 Discussion Forum 3	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
4	Chapter 2: Functions and Graphs continued	Section 2.6 Combinations of Functions; Composite Functions Section 2.7 Inverse Functions Section 2.8 Distance and Midpoint Formulas; Circles	HW 2.6 HW 2.7 HW 2.8 Chapter 2 Quiz	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
	PROCTORED MIDTERM EXAM			
5	Chapter 3: Polynomials and Rational Functions	Section 3.1 Quadratic Functions Section 3.2 Polynomial Functions and their graphs Section 3.3 Dividing Polynomials	HW 3.1 HW 3.2 HW 3.3 Discussion Forum 4	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
	Chapter 3: Polynomials and Rational Functions continued	Section 3.4 Zeros of Polynomial Functions Section 3.5 Rational Functions and their graphs Section 3.6 Polynomial and Rational Inequalities	HW 3.4 HW 3.5 HW 3.6 Discussion Forum 5	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7

Module	Lessons	Readings	Assignments	Outcomes Met
6	Chapter 3: Polynomials and Rational Functions continued Chapter 4: Exponential and Logarithmic Functions	Section 3.7 Modeling Using Variation Section 4.1 Exponential Functions Section 4.2 Logarithmic Functions	HW 3.7 Chapter 3 Quiz HW 4.1 HW 4.2	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
	Chapter 4: Exponential and Logarithmic Functions continued	Section 4.3 Properties of Logarithms Section 4.4 Exponential and Equations Section 4.5 Exponential Growth and Decay	HW 4.3 HW 4.4 HW 4.5 Chapter 4 Quiz	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
7	Chapter 5: Systems of Equations and Inequalities Chapter 7: Conic Sections continued	Section 5.1 Systems of Linear Equations in Two Variables Section 7.1 Ellipse	HW 5.1 Chapter 5 Quiz HW 7.1	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
	Chapter 7: Conic Sections continued	Section 7.2 Hyperbola Section 7.3 Parabola	HW 7.2 HW 7.3 Discussion Forum 6	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
8	Practice Final (Chapters 1-5, 7)	Practice Final	Practice Final Exam Discussion Forum 7	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
	PROCTORED FINAL EXAM Chapters 1, 2, 3, 4, 5, 7			

# Suggested schedule for completion in 16 weeks:

Module	Lessons	Readings	Assignments	Outcomes Met
Intro	These items will need to be completed before you will have access to the rest of the course	Orientation Course Overview Introductions Academic Integrity	Schedule Introduce Yourself Academic Integrity Quiz Academic Integrity Statement	
1	Chapter P: Prerequisites and Review	P1: Algebraic Expressions etc. P2: Exponents and Scientific Notation P3: Radicals and Rational Exponents	HW P1 HW P2 HW P3	SLO1, SLO2 SLO3, SLO6, SLO7
2	Chapter P: Prerequisites and Review continued	P4: Polynomials P5: Factoring Polynomials P6: Rational Expressions	HW P4 HW P5 HW P6 Chapter P Quiz	SLO1, SLO2 SLO3, SLO5, SLO6, SLO7
3	Chapter 1: Equations and Inequalities	Section 1.1: Graphs and Graphing Utilities Section 1.2 Linear Equations and Rational Equations Section 1.3 Models and Applications	HW 1.1 HW 1.2 HW 1.3 Discussion Forum 1	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
4	Chapter 1: Equations and Inequalities continued	Section 1.4 Complex Numbers Section 1.5 Quadratic Equations Section 1.6 Other Types of Equations	HW 1.4 HW 1.5 HW 1.6 Discussion Forum 2	SLO1, SLO2 SLO3, SLO5, SLO6, SLO7

Module	Lessons	Readings	Assignments	Outcomes Met
5	Chapter 1: Equations and Inequalities continued Chapter 2: Functions and Graphs	Section 1.7 Linear Inequalities and Absolute Value Inequalities Section 2.1 Basics of Functions and Their Graphs Section 2.2 More on Functions and Their Graphs	HW 1.7 Chapter 1 Quiz HW 2.1 HW 2.2	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
6	Chapter 2: Functions and Graphs continued	Section 2.3 Linear Functions and Slope Section 2.4 More on Slope Section 2.5 Transformations of Functions	HW 2.3 HW 2.4 HW 2.5 Discussion Forum 3	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
7	Chapter 2: Functions and Graphs continued	Section 2.6 Combinations of Functions; Composite Functions Section 2.7 Inverse Functions Section 2.8 Distance and Midpoint Formulas; Circles	HW 2.6 HW 2.7 HW 2.8 Chapter 2 Quiz	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
8		PROCTORED MIDTERM EXAM		
9	Chapter 3: Polynomials and Rational Functions	Section 3.1 Quadratic Functions Section 3.2 Polynomial Functions and their graphs Section 3.3 Dividing Polynomials	HW 3.1 HW 3.2 HW 3.3 Discussion Forum 4	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
10	Chapter 3: Polynomials and Rational Functions continued	Section 3.4 Zeros of Polynomial Functions Section 3.5 Rational Functions and their graphs Section 3.6 Polynomial and Rational Inequalities	HW 3.4 HW 3.5 HW 3.6 Discussion Forum 5	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
11	Chapter 3: Polynomials and Rational Functions continued Chapter 4: Exponential and Logarithmic Functions	Section 3.7 Modeling Using Variation Section 4.1 Exponential Functions Section 4.2 Logarithmic Functions	HW 3.7 Chapter 3 Quiz HW 4.1 HW 4.2	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
12	Chapter 4: Exponential and Logarithmic Functions continued	Section 4.3 Properties of Logarithms Section 4.4 Exponential and Equations Section 4.5 Exponential Growth and Decay	HW 4.3 HW 4.4 HW 4.5 Chapter 4 Quiz	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
13	Chapter 5: Systems of Equations and Inequalities Chapter 7: Conic Sections continued	Section 5.1 Systems of Linear Equations in Two Variables Section 7.1 Ellipse	HW 5.1 Chapter 5 Quiz HW 7.1	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
14	Chapter 7: Conic Sections continued	Section 7.2 Hyperbola Section 7.3 Parabola	HW 7.2 HW 7.3 Discussion Forum 6	SLO1, SLO2 SLO3, SLO4, SLO6, SLO7
15	Practice Final (Chapters 1-5, 7)	Practice Final	Practice Final Exam Discussion Forum 7	SLO1, SLO2 SLO3, SLO4, SLO5, SLO6, SLO7
16	PROCTORED FINAL EXAM Chapters 1, 2, 3, 4, 5, 7			

# **Completing Assignments**

All assignments for this course will be submitted electronically through LearningHub unless otherwise instructed. Assignments and exams must be completed **within 180 days** of course registration date. This timeframe is subject to change depending on deadlines set by your home institution.

# **Part 4: Grading Policy**

## **Graded Course Activities**

Percent %	Description
28	MyMathLab Homework
10	MyMathLab Quizzes
2	Discussion Forums
30	MyMathLab Midterm
30	MyMathLab Final
100	<b>Total Percent Possible</b>

# **Viewing Grades in Moodle**

- Click into the course.
- Click on the **Grades** link in Administration Block to the left of the main course page.

#### Letter Grade Assignment

Letter Grade	Percentage
Α	93-100%
A-	90-92%
B+	88-89%
В	83-87%
В-	80-82%
C+	78-79%
С	73-77%
C-	70-72%
D	60-69%
F	0-59%

# Part 5: Course Policies

## **Withdrawal and Incomplete Policies**

The current withdrawal policy can be found online at <u>https://www.andrews.edu/distance/students/gradplus/withdrawal.html</u>. The incomplete policy is found online at <u>http://www.andrews.edu/weblmsc/moodle/public/incompletes.html</u>.

## Maintain Professional Conduct Both in the Classroom and Online

The classroom is a professional environment where academic debate and learning take place. Your instructor will make every effort to make this environment safe for you to share your opinions, ideas, and beliefs. In return, you are expected to respect the opinions, ideas, and beliefs of other students—both in the face-to-face classroom and online communication. Students have the right and privilege to learn in the class, free from harassment and disruption.

## **Academic Accommodations**

Students who require accommodations may request an academic adjustment as follows:

- 1. Read the Andrews University Disability Accommodation information at <u>https://www.andrews.edu/services/sscenter/disability/</u>
- Download and fill in the disability form at <u>http://www.andrews.edu/services/sscenter/disability/accommodationsreqform.pdf</u>. Preferably type answers. To save a digital copy, 1) print to file and save or 2) print and scan. Email the completed form and disability documentation (if any) to <u>success@andrews.edu</u> or fax it to (269) 471-8407.
- 3. Email <u>sdestudents@andrews.edu</u> to inform the School of Distance Education that a disability has been reported to Student Success.

#### **Commitment to Integrity**

As a student in this course, and at the university, you are expected to maintain high degrees of professionalism, commitment to active learning, participation in this course, and integrity in your behavior in and out of this online classroom.

#### **Commitment to Excellence**

You deserve a standing ovation based on your decision to enroll in, and effectively complete this course. Along with your pledge of "commitment to Integrity" you are expected to adhere to a "commitment to excellence." Andrews University has established high academic standards that will truly enhance your writing and communication skills across the disciplines and in diverse milieu with many discourse communities in the workplace.

#### Honesty

Using the work of another student or allowing work to be used by another student jeopardizes not only the teacher-student relationship but also the student's academic standing. Lessons may be discussed with other students, tutors may help to guide a student's work, and textbooks, encyclopedias and other resource materials may be used for additional assistance, but the actual response must be the student's own work. A student who gives information to another student to be used in a dishonest way is equally guilty of dishonesty.

Any violation of this policy will be taken before the Higher Education Academic and Curriculum Committee for appropriate punitive action.

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