

MATH R066S: ALGEBRA SUPPORT FOR MATH R106

Originator

jta

College

Oxnard College

Discipline (CB01A)

MATH - Mathematics

Course Number (CB01B)

R066S

Course Title (CB02)

Algebra Support for MATH R106

Banner/Short Title

Algebra Support for MATH R106

Credit Type

Credit

Start Term

Fall 2021

Formerly

MATH R098T - Algebra Support for MATH R106

Catalog Course Description

This corequisite support course is to be taken concurrently with MATH R106, Business Calculus. Emphasis is placed on foundational skills which are necessary for a student to successfully complete MATH R106. This course offers support for Business Calculus topics along with study skills development.

Taxonomy of Programs (TOP) Code (CB03)

1701.00 - Mathematics, General

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

C (Not transferable)

Course Basic Skills Status (CB08)

N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

E - Non-Occupational

Course Cooperative Work Experience Education Status (CB10)

N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)

A - One level below transfer

Course Noncredit Category (CB22)

Y - Credit Course

Funding Agency Category (CB23)

Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)

2 - Not Program Applicable

General Education Status (CB25)

Y - Not Applicable

Support Course Status (CB26)

S - Course is a support course

Field trips

Will not be required

Grading method

Pass/No Pass Grading

Does this course require an instructional materials fee?

No

Repeatable for Credit

No

Is this course part of a family?

No

Units and Hours

Carnegie Unit Override

No

In-Class

Lecture

Minimum Contact/In-Class Lecture Hours

35

Maximum Contact/In-Class Lecture Hours

35

Activity

Laboratory

Total in-Class

Total in-Class

Total Minimum Contact/In-Class Hours

35

Total Maximum Contact/In-Class Hours

35

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class

Minimum Outside-of-Class Hours

70

Maximum Outside-of-Class Hours

70

Total Student Learning

Total Student Learning

Total Minimum Student Learning Hours

105

Total Maximum Student Learning Hours

105

Minimum Units (CB07)

2

Maximum Units (CB06)

2

Corequisites

MATH R106

Requisite Justification

Requisite Type

Corequisite

Requisite

Math R106

Requisite Description

Other (specify)

Specify Other Requisite Description

Support Course

Level of Scrutiny/Justification

Content review

Student Learning Outcomes (CSLOs)

Upon satisfactory completion of the course, students will be able to:

- | | |
|---|---|
| 1 | Solve application problems using algebraic techniques. |
| 2 | Solve systems of equations algebraically and graphically. |

Course Objectives

Upon satisfactory completion of the course, students will be able to:

- | | |
|---|--|
| 1 | Identify properties of the real numbers (e.g. inverse properties, distributive properties). |
| 2 | Evaluate the value of a formula using the order of operations with and without technology. |
| 3 | Demonstrate the use of inequality symbols and interval notation and explain their meaning. |
| 4 | Simplify polynomials expressions using addition, subtraction, multiplication, and division techniques. |

- | | |
|----|---|
| 5 | Simplify exponential expressions using laws of exponents. |
| 6 | Simplify elementary radical expressions. |
| 7 | Demonstrate the use of factoring techniques to factor polynomials. |
| 8 | Simplify simple and complex fractions. |
| 9 | Solve application problems using algebraic techniques. |
| 10 | Graph basic functions (e.g. linear, quadratic, absolute value, rational, radical, logarithmic, exponential). |
| 11 | Solve linear equations, radical equations, absolute value equations, rational equations, logarithmic equations, exponential equations, and quadratic equations using graphic, numeric and algebraic methods (e.g. zero factor property, square root property, and quadratic formula). |
| 12 | Find the domain, range, intercepts, and asymptotes of polynomial, rational and radical functions. |
| 13 | Solve systems of equations algebraically and graphically. |
| 14 | Solve and interpret the solutions of business and economic application problems. |
| 15 | Utilize study skill strategies within and outside the classroom. |

Course Content

Lecture/Course Content

1. Linear Equations and Inequalities
 - a. Solve linear equations
 - b. Graph linear equations
2. Solve systems of equations
 - a. Algebraically
 - b. Graphing calculator
3. Exponents
 - a. Laws of exponents
 - b. Negative exponents
 - c. Rational exponents
4. Polynomials
 - a. Addition, subtraction, multiplication
 - b. Division
 - c. Techniques for factoring
5. Quadratic Equations
 - a. Square root method
 - b. Factoring method
 - c. Quadratic Formula
6. Rational Expressions and Equations
 - a. Addition, subtraction, multiplication and division of rational algebraic expressions
 - b. Solve rational equations
7. Radical Expressions and Equations
 - a. Convert between n th root and forms
 - b. Compute and estimate radical
 - c. Simplify radicals and radical expressions
 - d. Perform operations (sum, difference, product, quotient) on radicals and radical expressions
 - e. Rationalize the denominator
 - f. Solve radical equations
 - g. Evaluate radical functions
8. Solve applications problems
 - a. Algebraic techniques
 - b. Graph functions with technology
9. Graph functions
 - a. Linear
 - b. Quadratic
 - c. Absolute value
 - d. Rational
 - e. Radical

- f. Exponential
- g. Logarithmic
- 10. Absolute value function
 - a. Simplify absolute value expression
 - b. Solve absolute value equation
 - c. Graph absolute value
- 11. Functions
 - a. Characteristics of functions
- 12. Study skill strategies for effective and successful learning in college
 - a. In class strategies attend class regularly; turn in assignments on time; work productively with peers on group assignments
 - b. Outside of class strategies seek help from peers, teacher and other resources when necessary; set up and maintain their math notebook; meet with a counselor to develop an educational plan

Laboratory or Activity Content

Find the slope of Conejo Grade using Excel.

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Problem solving exercises

Skills demonstrations

Written expression

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Computational homework

Group projects

Individual projects

Problem-solving exams

Quizzes

Skill tests

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Computer-aided presentations

Collaborative group work

Class activities

Class discussions

Case studies

Distance Education

Group discussions

Instructor-guided interpretation and analysis

Lecture

Small group activities

Describe specific examples of the methods the instructor will use:

Calculating the slope of the Conejo Grade using Excel.

Representative Course Assignments

Writing Assignments

The course is primarily computational, but students must present written worked out homework solutions using correct mathematical notation on problems such as writing the range and domain using interval notation.

Reading Assignments

Textbook readings of definitions, rules, properties, and processes for completing various types of application problems.

Other assignments (if applicable)

The course is primarily computational, but students must present written worked out homework solutions using correct mathematical notation on problems such as writing the range and domain using interval notation.

Outside Assignments

Representative Outside Assignments

Homework and group work activities.

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals

Resource Type

Textbook

Description

Martin-Gay, E. (2016). *Beginning and Intermediate Algebra* (6th). Pearson Prentice Hall, New York.

Resource Type

Textbook

Description

Claves, C., & Hobbs, M. (2014). *College Mathematics* (9th). Pearson, New York.

Library Resources

Sufficient Library Resources exist

Yes

Distance Education Addendum

Definitions

Distance Education Modalities

Hybrid (51%–99% online)

Hybrid (1%–50% online)

100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities.

Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards encourages various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course outcomes. Students will be required to respond to one another with substantive comments with the intent of creating a dialog. Other discussion boards may be used for Q&A and general class discussion by students and instructor to facilitate student success and strengthen student learning outcomes.
Video Conferencing	Video tools such as ConferZoom can be used to provide live synchronous or asynchronous sessions with students. ADA compliance will be upheld with Closed Captioning during the session or of the recorded session. Recordings of all live sessions will be made available within the LMS. Video Conferences will be used to facilitate SLOs and student-to-student group meetings will also be encouraged.
Other DE (e.g., recorded lectures)	Faculty will use a variety of ADA compliant tools and media integrated within the learning management system to help students reach SLO competency. Tools may include: <ul style="list-style-type: none"> o Recorded Lectures, Narrated Slides, Screencasts • Instructor created content • OC Online Library Resources • Canvas Peer Review Tool • Canvas Student Groups (Assignments, Discussions) • 3rd Party (Publisher) Tools (MyOpenMath) • Websites and Blogs o Multimedia (YouTube, Films on Demand, 3CMedia, Khan Academy, etc.)

E-mail	E-mail, class announcements and various learning management system tools such as “Message Students Who” and “Assignment Comments”, will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email instructor through both the learning management system inbox and faculty provided email accounts.
Hybrid (51%–99% online) Modality:	
Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards encourages various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course outcomes. Students will be required to respond to one another with substantive comments with the intent of creating a dialog. Other discussion boards may be used for Q&A and general class discussion by students and instructor to facilitate student success and strengthen student learning outcomes.
Video Conferencing	Video tools such as ConferZoom can be used to provide live synchronous or asynchronous sessions with students. ADA compliance will be upheld with Closed Captioning during the session or of the recorded session. Recordings of all live sessions will be made available within the LMS. Video Conferences will be used to facilitate SLOs and student-to-student group meetings will also be encouraged.
Other DE (e.g., recorded lectures)	Faculty will use a variety of ADA compliant tools and media integrated within the learning management system to help students reach SLO competency. Tools may include: <ul style="list-style-type: none"> o Recorded Lectures, Narrated Slides, Screencasts • Instructor created content • OC Online Library Resources • Canvas Peer Review Tool • Canvas Student Groups (Assignments, Discussions) • 3rd Party (Publisher) Tools (MyOpenMath) • Websites and Blogs o Multimedia (YouTube, Films on Demand, 3CMedia, Khan Academy, etc.)
E-mail	E-mail, class announcements and various learning management system tools such as “Message Students Who” and “Assignment Comments”, will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email instructor through both the learning management system inbox and faculty provided email accounts.
100% online Modality:	
Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards encourages various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course outcomes. Students will be required to respond to one another with substantive comments with the intent of creating a dialog. Other discussion boards may be used for Q&A and general class discussion by students and instructor to facilitate student success and strengthen student learning outcomes.

Video Conferencing	Video tools such as ConferZoom can be used to provide live synchronous or asynchronous sessions with students. ADA compliance will be upheld with Closed Captioning during the session or of the recorded session. Recordings of all live sessions will be made available within the LMS. Video Conferences will be used to facilitate SLOs and student-to-student group meetings will also be encouraged.
Other DE (e.g., recorded lectures)	Faculty will use a variety of ADA compliant tools and media integrated within the learning management system to help students reach SLO competency. Tools may include: <ul style="list-style-type: none"> o Recorded Lectures, Narrated Slides, Screencasts • Instructor created content • OC Online Library Resources • Canvas Peer Review Tool • Canvas Student Groups (Assignments, Discussions) • 3rd Party (Publisher) Tools (MyOpenMath) • Websites and Blogs o Multimedia (YouTube, Films on Demand, 3CMedia, Khan Academy, etc.)
E-mail	E-mail, class announcements and various learning management system tools such as “Message Students Who” and “Assignment Comments”, will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email instructor through both the learning management system inbox and faculty provided email accounts.

Examinations

Hybrid (1%–50% online) Modality

Online
On campus

Hybrid (51%–99% online) Modality

Online
On campus

Primary Minimum Qualification

MATHEMATICS

Review and Approval Dates

Department Chair

12/01/2020

Dean

12/01/2020

Technical Review

12/09/2020

Curriculum Committee

12/09/2020

CCCCO

MM/DD/YYYY

Control Number

CCC000611498

DOE/accreditation approval date

MM/DD/YYYY

