NONCREDIT MATHEMATICS

The Mathematics Department at Las Positas College offers a wide range of tuition-free, noncredit courses and programs designed to help students be successful in mathematics, from student learning support to being a math tutor. Course offerings include sections from our award-winning Math Jam program, foundational math classes in Prealgebra and Algebra, and our new concurrent support courses. Students interested in developing their tutoring skills can take training courses in our Math Jam mode. Most classes are mirrored in the math department and can be taken for noncredit or credit.

Programs of Study

Certificates of Competency:

- College Mathematics Pathway
- College Mathematics Support
- Foundational Mathematics Pathway
- Foundational Mathematics Support
- Math Jam for College Mathematics
- Math Jam for Foundational Mathematics

Certificates of Completion:

• Math Jam Tutor Pathway

Certificate of Competency College Mathematics Pathway

About the Certificate

The Math Course Pathway to an Associate's Degree Program is a noncredit pathway for students to develop the mathematical skills necessary at Las Positas to earn an Associate's (AA/AS). Embedded are essential study and life skills to help each student succeed in credit math courses and beyond. Students can than choose a capstone noncredit intermediate algebra level course based on their field of interest. Noncredit Intermediate Algebra for SLAM (Statistics or Liberal Arts Math) or Intermediate Algebra for BSTEM (Business, Science, Technology, Engineering or Mathematics) continues to offer students rigorous, holistic supports during the semester. Successful students may petition to get credit for the intermediate algebra course of their choice, and hence satisfy the math requirement for an Associate's Degree. Research at our college and similar community colleges have shown that supports such as these have a huge impact on student retention and success rates.

Program Outcomes

• Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to use symbolic, graphical, numerical, and written representations of mathematical ideas.

- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to learn mathematics through modeling real-world situations.
- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to read, write, listen to, and speak mathematics with understanding.
- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to use appropriate technology to enhance their mathematical thinking and understanding, solve mathematical problems, and judge the reasonableness of their results.
- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to use mathematical reasoning and, when appropriate, a general problem solving process to solve problems

Required Core: Select One or Two (72-180 Hours)

NMAT 207 (Pre-Algebra) 108	3
NMAT 210 (Elementary Algebra)72	2

Capstone: Select One (90-108 Hours)

Total Hours	;
NMAT 255 (Intermediate Algebra for BSTEM)90	
NMAT 250 (Intermediate Algebra for SLAM) 108	5

Certificate of Competency College Mathematics Support

About the Certificate

College Mathematics Support is a noncredit program for all Las Positas College students. This pathway is designed to offer students prior and concurrent support as they prepare for the credit transferlevel math course required to transfer. Embedded are essential study and life skills to develop each student holistically as well as rigorous learning support of prerequisite and key math concepts. Prior to starting math courses, Math Jam assists students prepare for their target transfer-level math course required to transfer to a four-year program based on their educational goal. During the semester, concurrent support courses enable students to receive rigorous prerequisite review of math concepts and study skills to apply in their math classes. Research at our college and similar community colleges have shown that supports such as these have a huge impact on student retention and success rates.

Program Outcomes

- Upon completion of the Certificate of Competency in College Mathematics Support, students are able to formulate short-term and long-term learning objectives based on their academic goal(s). Students in this program have a goal to develop their knowledge, skills and abilities in preparing transfer.
- Upon completion of the Certificate of Competency in College Mathematics Support, students are able to demonstrate the appropriate skills necessary to become a more productive,

successful, and independent learner.

- Upon completion of the Certificate of Competency in College Mathematics Support, students are able to use prerequisite topics effectively in their target mathematics course.
- Upon completion of the Certificate of Competency in College Mathematics Support, students are able to learn and apply study skills and life skills that will improve the student's likelihood of succeeding in their academic goals (examples of topics include brain research, identifying their individual growth mindset, personal time management, test taking and conquering math anxiety strategies, etc.).

Required Core: Select One or More (30-408 Hours)

Capstone: Select One (1-54 Hours)

NMAT 200C (Concurrent Support for SLAM Mathematics)	54
NMAT 201C (Concurrent Support for BSTEM Mathematics)	54
NMAT 202C (Just In Time Concurrent Support	
for Mathematics)1-	-54

Certificate of Competency Foundational Mathematics Pathway

About the Certificate

The Basic Skills Math Program is a noncredit pathway for students to develop the mathematical skills necessary at Las Positas to enroll in an intermediate algebra level credit course required for an Associate's (AA/AS). Embedded are essential study and life skills to help each student succeed in credit math courses and beyond. Successful students will have the necessary mathematical understanding to enroll in an intermediate algebra level course, which is the math requirement for an Associate's Degree. Research at our college and similar community colleges have shown that supports such as these have a huge impact on student retention and success rates.

Program Outcomes

- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to demonstrate the ability to use symbolic, graphical, numerical, and written representations of mathematical ideas.
- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to learn mathematics through modeling real-world situations.
- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to read, write, listen to,

and speak mathematics with understanding.

- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to use appropriate technology to enhance their mathematical thinking and understanding, solve mathematical problems, and judge the reasonableness of their results.
- Upon completion of the Certificate of Competency in College Mathematics Pathway, students are able to use mathematical reasoning and, when appropriate, a general problem solving process to solve problems

Required Core: (180 Hours)

NMAT 207 (Pre-Algebra)	108
NMAT 210 (Elementary Algebra)	

Total Hours 180

Certificate of Competency Foundational Mathematics Support

About the Certificate

Foundational Mathematics Support is a noncredit program for all Las Positas College students. This pathway is designed to offer students prior and concurrent support as they prepare for the credit intermediate algebra-level math course required at Las Positas to earn an Associate's Degree in Arts or Science (AA/AS). Embedded are essential study and life skills to develop each student holistically as well as rigorous learning support of prerequisite and key math concepts. Prior to starting math courses, Math Jam assists students prepare for the intermediate algebra-level, credit math class required for an AA/AS degree. During the semester, concurrent support courses enable students to receive rigorous prerequisite review of math concepts and study skills to apply in their math classes. Research at our college and similar community colleges have shown that supports such as these have a huge impact on student retention and success rates.

Program Outcomes

- Upon completion of the Certificate of Competency in Foundational Mathematics Support, students are able to formulate short-term and long-term learning objectives based on their academic goal(s). Students in this program have a goal to develop their knowledge, skills and abilities in preparing to obtain an Associate's degree.
- Upon completion of the Certificate of Competency in Foundational Mathematics Support, students are able to demonstrate the appropriate skills necessary to become a more productive, successful, and independent learner.
- Upon completion of the Certificate of Competency in Foundational Mathematics Support, students are able to use prerequisite topics effectively in their target mathematics course.
- Upon completion of the Certificate of Competency in Foundational Mathematics Support, students are able to learn and apply study skills and life skills that will improve the student's likelihood of succeeding in their academic goals

(examples of topics include brain research, identifying their individual growth mindset, personal time management, test taking and conquering math anxiety strategies, etc.).

Required Core: Select One or More (30-234 Hours)

Capstone: (54 Hours)

NMAT 255C (Concurrent Support for Intermediate Algebra).......54

Certificate of Competency Math Jam for College Mathematics

About the Certificate

Math Jam for College Mathematics is a noncredit program for all Las Positas College students. This pathway is designed to offer students support as they prepare for the credit transfer-level math course required to transfer. Embedded are essential study and life skills to develop each student holistically as well as rigorous learning support of prerequisite and key math concepts. Prior to starting math courses, Math Jam assists students prepare for their target transfer-level math course required to transfer to a four-year program based on their educational goal. Research at our college and similar community colleges have shown that supports such as Math Jam have a huge impact on student retention and success rates.

Program Outcomes

- Upon completion of the Certificate of Competency in Math Jam for College Mathematics, students are able to formulate shortterm and long-term learning objectives based on their academic goal(s). Students in this program have a goal to develop their knowledge, skills and abilities in preparing to transfer.
- Upon completion of the Certificate of Competency in Math Jam for College Mathematics, students are able to demonstrate the appropriate skills necessary to become a more productive, successful, and independent learner.
- Upon completion of the Certificate of Competency in Math Jam for College Mathematics, students are able to apply prerequisite mathematical topics at a higher level.
- Upon completion of the Certificate of Competency in Math Jam for College Mathematics, students are able to learn study skills and life skills that will improve the student's likelihood of succeeding in their academic goals (examples of topics include brain research, identifying their individual growth mindset, personal time management, test taking and conquering math anxiety strategies, etc.).

Required Core: Select One or More (30-180 Hours)

Capstone: Select One (30-60 Hours)

Total Hours......60-240

Certificate of Competency Math Jam for Foundational Mathematics

About the Certificate

Math Jam for Foundational Mathematics is a noncredit program for all Las Positas College students. This pathway is designed to offer students support as they prepare for the credit intermediate algebralevel math course required at Las Positas to earn an Associate's Degree in Arts or Science (AA/AS). Embedded are essential study and life skills to develop each student holistically as well as rigorous learning support of prerequisite and key math concepts. Prior to starting math courses, Math Jam assists students prepare for the intermediate algebra-level, credit math class required for an AA/AS degree. Research at our college and similar community colleges have shown that supports such as Math Jam have a huge impact on student retention and success rates.

Program Outcomes

- Upon completion of the Certificate of Competency in Math Jam for Foundational Mathematics, students are able to formulate short-term and long-term learning objectives based on their academic goal(s). Students in this program have a goal to develop their knowledge, skills and abilities in preparing to obtain an Associate's degree.
- Upon completion of the Certificate of Competency in Math Jam for Foundational Mathematics, students are able to demonstrate the appropriate skills necessary to become a more productive, successful, and independent learner.
- Upon completion of the Certificate of Competency in Math Jam for Foundational Mathematics, students are able to apply basic skills mathematical concepts at a higher level.
- Upon completion of the Certificate of Competency in Math Jam for Foundational Mathematics, students are able to learn study skills and life skills that will improve the student's likelihood of succeeding in their academic goals (examples of topics include brain research, identifying their individual growth mindset, personal time management, test taking and conquering math anxiety strategies, etc.).

Required Core: Select One or More (30-120 Hours)

Capstone: (30-60 Hours)

NMAT 263 (Math Jam for Intermediate Algebra Preparation). 30-60

Total Hours60-180

Certificate of Completion Math Jam Tutor Pathway

About the Certificate

The Math Jam for Tutors Program is designed specifically to provide a supportive, noncredit pathway for current Las Positas College math students who are interested in becoming tutors. This program will recruit and prepare students to become paid math tutors at Las Positas College. It offers the unique experience of receiving hands-on training helping students learn key math concepts while in a collaborative setting, supported by a math instructor and fellow math tutors. This program complements possible concurrent training and/or employment at the Tutorial Center, and while completion of this program is very desirable, it is not a requisite for working at the Tutorial Center.

Program Outcomes

- Upon completion of the Certificate of Completion in Math Jam Tutor Pathway, students are able to communicate effectively about theory of Growth Mindset, as an individual and as a tutor.
- Upon completion of the Certificate of Completion in Math Jam Tutor Pathway, students are able to apply mathematical concepts at a higher level.
- Upon completion of the Certificate of Completion in Math Jam Tutor Pathway, students are able to support students in math using best practices in teaching and learning pedagogy.
- Upon completion of the Certificate of Completion in Math Jam Tutor Pathway, students are able to assist students comfortably in a lab setting.
- Upon completion of the Certificate of Completion in Math Jam Tutor Pathway, students are able to navigate an online support course environment effectively.
- Upon completion of the Certificate of Completion in Math Jam Tutor Pathway, students are able to model effective problemsolving, growth mindset and study skills.
- Upon completion of the Certificate of Completion in Math Jam Tutor Pathway, students are able to coach students in how to be an effective learner, using Growth Mindset theory and intelligent practices to be successful.
- Upon completion of the Certificate of Completion in Math Jam Tutor Pathway, students are able to provide guided math workshops to students on historically difficult topics with the support of instructors and fellow tutors.

Career Opportunities

This program prepares students to become paid tutors in the area of Mathematics

Required Core: (9 Hours)

NMAT 260A (Math Jam Introduction to Tutoring)4
NMAT 260B (Math Jam for Tutors)5

Total Hours9

Noncredit Mathematics Courses (NMAT)

NMAT 200C CONCURRENT SUPPORT 0 UNITS FOR SLAM MATHEMATICS

Concurrent Support for SLAM Math is for students interested in disciplines that require Statistics and Liberal Arts Mathematics (SLAM) courses. This course offers structured support to students who are concurrently enrolled in a first-level transfer course, such as Statistics and Mathematics for Liberal Arts, and Finite Mathematics. The support course includes material to prepare students for the rigor of the transfer math course by teaching learning skills necessary to succeed in college courses as well as review of relevant prerequisite algebraic and geometric concepts, and more in-depth investigation of core concepts in their concurrent math course. Corequisite: MATH 40 or MATH 47 or MATH 33. 54 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NMAT 200H DROP-IN MATHEMATICS 0 UNITS TUTORING FOR HIGH SCHOOL STUDENTS

This course offers individualized support tailored to high school students seeking assistance with their mathematics coursework. Trained tutors and instructors will provide tutoring in basic skills mathematics subjects. Students will also develop the study skills needed to succeed in their math classes. 1-54 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP/SP

NMAT 201C CONCURRENT SUPPORT 0 UNITS FOR BSTEM MATHEMATICS

Concurrent Support for BSTEM Mathematics is for students interested in Business, Science, Technology, Engineering and Mathematical fields. This course offers structured support to students who are concurrently enrolled in a first-level transfer course, such as College Algebra, Trigonometry, and Business Calculus. The support course includes material to prepare students for the rigor of the transfer math course by teaching learning skills necessary to succeed in college courses as well as review of relevant prerequisite algebraic and geometric concepts, and more in-depth investigation of core concepts in their concurrent math course. Corequisite: MATH 30 or MATH 39 or MATH 34. 54 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NMAT 202C JUST IN TIME 0 UNITS CONCURRENT SUPPORT FOR MATHEMATICS

This course is just-in-time concurrent support for students enrolled in a first-level transfer course, such as Statistics, College Algebra, Trigonometry, Business Calculus, Mathematics for Liberal Arts, and Finite Mathematics. The support course is noncredit, open entry/open exit. The content will prepare students for the rigor the transfer math course by teaching learning skills necessary to succeed in college courses as well as review of relevant basic and secondary education prerequisite algebraic and geometric concepts, and more in-depth investigation of core concepts to their concurrent math course. The course design is to meet the needs of a variety of students, such as students who desire formal, regular ongoing learning supports, students wishing self-place into transfer-level mathematics courses as defined by AB 705, and students who are repeating the course for the second or third time. The support course includes a review of basic and secondary level math relevant to their college-level course, provides study strategies to promote understanding and improve performance, and more in-depth investigation of core concepts that are difficult for students to master and learning skills such as growth mindset, brain research, time management, study skills, test taking, math anxiety and more. Corequisite: MATH 30 or MATH 33 or MATH 34 or MATH 39 or MATH 40 or MATH 47. 1-54 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NMAT 207 PRE-ALGEBRA 0 UNITS

This course is intended to serve as a bridge between arithmetic and Elementary Algebra. It includes a review of arithmetic, operations involving signed integers, fractions, and decimals, variables and variable expressions, simple linear equations and their graphs, percent and proportion, introduction to statistics, geometry and measurement, and application problems. Students can petition to get credit for the credit Math 107 course by examination. 108 hours.

Non-Degree Applicable, Noncredit Grading Option: OP

NMAT 210 ELEMENTARY ALGEBRA 0 UNITS

Elementary algebra concepts, including: real numbers and their properties; algebraic expressions; integer exponents; operations with polynomial expressions; linear and quadratic equations; linear inequalities and set notation; graphs of linear equations and inequalities; slope; systems of linear equations and inequalities; and modeling with linear and quadratic equations. Students can petition to get credit for the Math 110 Elementary Algebra course by examination. Strongly Recommended: MATH 107 with a minimum grade of C or MATH 107B with a minimum grade of C or NMAT 207 with a minimum grade of C. 72 hours.

Non-Degree Applicable, Noncredit Grading Option: OP

NMAT 210C CONCURRENT SUPPORT 0 UNITS FOR ELEMENTARY ALGEBRA

This course is concurrent support for Elementary Algebra. The course is designed to provide additional, formal support to students who are currently taking an Elementary Algebra. It includes a review of arithmetic, algebraic and geometric concepts that are relevant to their Elementary Algebra course, study strategies that promote understanding and improve performance, and more in-depth investigation of core concepts that are difficult for students to master. Embedded are learning skills such as growth mindset, brain research, time management, study skills, test taking, math anxiety and more. Corequisite: MATH 110 or NMAT 210. 54 hours.

Non-Degree Applicable, Credit Grading Option: P/NP

NMAT 250 INTERMEDIATE ALGEBRA 0 UNITS

FOR SLAM

This is an Intermediate Algebra course for students interested in fields of study that require Statistics or Liberal Arts Mathematics (SLAM). Intermediate algebra concepts will be explored in the context of the function. Function concepts covered include: distinction between functions and relations, domain and range, function notation, multiple representation of functions, behavior of functions, operations with functions (including composition), one-to-one functions, and invertible functions. Types of functions considered: polynomial, rational, radical, exponential and logarithmic functions. The course includes an introduction to probability, counting and quantitative data. Standards for mathematical practice, applications of functions, and modeling with functions are emphasized throughout. Strongly Recommended: MATH 110 with a minimum grade of C or MATH 110B with a minimum grade of C or NMAT 210 with a minimum grade of C. 108 hours.

Non-Degree Applicable, Noncredit Grading Option: OP

NMAT 255 INTERMEDIATE ALGEBRA 0 UNITS FOR BSTEM

Intermediate Algebra concepts, in the service of Business, Science, Technology, Engineering and Math fields (BSTEM), will be explored in this course including: an introduction to functions; linear and absolute value functions; absolute value equations and inequalities; compound linear inequalities; rational expressions, functions and equations; radical expressions, functions and equations; rational exponents; complex numbers; quadratic functions and equations; inverse of a function; exponential and logarithmic functions; properties of logarithms; exponential and logarithmic equations; conic sections; and systems of equations and inequalities. Multiple representations, applications and modeling with functions are emphasized throughout. Students can petition to get credit for the MATH 55 Intermediate Algebra for BSTEM course by examination. Strongly Recommended: MATH 110 with a minimum grade of C or MATH 110B with a minimum grade of C or NMAT 210 with a minimum grade of C. 90 hours.

Non-Degree Applicable, Noncredit. Grading Option: OP

NMAT 255C CONCURRENT SUPPORT 0 UNITS FOR INTERMEDIATE ALGEBRA

This course is concurrent support for Intermediate Algebra. The course is designed to provide additional, formal support to students who are currently taking an Intermediate Algebra. It includes a review of arithmetic, algebraic and geometric concepts that are relevant to their Intermediate Algebra course, study strategies that promote understanding and improve performance, and more indepth investigation of core concepts that are difficult for students to master. Embedded are learning skills such as growth mindset, brain research, time management, study skills, test taking, math anxiety and more. Corequisite: MATH 55 or NMAT 255 or MATH 50 or NMAT 250. 54 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

MATH 256 GEOMETRY

0 UNITS

Topics include congruence, similarity, right triangles, trigonometry, circles, expressing geometric properties with equations, geometric measurement and dimension, modeling with geometry, conditional probability and the rules of probability, and using probability to

make decisions. Prerequisite: MATH 110 with a minimum grade of C or NMAT 210 with a minimum grade of C. 81 hours.

Non-Degree Applicable, Noncredit Grading Option: OP

NMAT 260A MATH JAM 0 UNITS INTRODUCTION TO TUTORING

Math Jam is designed to help students prepare for their upcoming math class. This Math Jam Tutor Training course is designed to train tutors prior to Math Jam in strategies for effectively engaging students in learning difficult math concepts. Tutors will learn about intelligent practices for mastering material and how to navigate in the online course environment participants will be using during Math Jam. This is designed for students who are interested in becoming a paid mathematics tutor at Las Positas College or in any educational capacity. 4 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NMAT 260B MATH JAM FOR TUTORS 0 UNITS

Math Jam is designed to help students prepare for their upcoming math class. This Math Jam Tutor Training course supports tutors during Math Jam to apply strategies for effectively engaging students in learning difficult math concepts with participants. Tutors apply knowledge around intelligent practices for mastering material as they tutor participants during Math Jam. This is an excellent second course for students who are interested in becoming a paid mathematics tutor at Las Positas College or in any educational capacity. 5 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NMAT 261 MATH JAM FOR 0 UNITS PREALGEBRA PREPARATION 0 UNITS

Math Jam is a noncredit program designed to help students prepare for their upcoming math class at a community college. Embedded are essential study and life skills to develop each student holistically, including learning skills and career development. Students will be learning arithmetic and Prealgebra material with the goal of preparing them to be successful in their upcoming class. It is strongly recommended that students taking this course be enrolled in a community college math course. 30-60 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NMAT 262 MATH JAM FOR 0 UNITS ELEMENTARY ALGEBRA PREPARATION

Math Jam is a noncredit program designed to help students prepare for their upcoming math class at a community college. Embedded are essential study and life skills to develop each student holistically, including learning skills and career development. Students will be learning prealgebra material with the goal of preparing them to be successful in their upcoming class. It is strongly recommended that students taking this course be eligible for and enrolled in a community college math course. 30-60 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NMAT 263 MATH JAM FOR 0 UNITS INTERMEDIATE ALGEBRA PREPARATION Math Jam is a noncredit program designed to help students prepare for their upcoming math class at a community college. Embedded are essential study and life skills to develop each student holistically, including career development. Students will be learning elementary algebra material with the goal of preparing them to be successful in their upcoming class. It is strongly recommended that students taking this course are enrolled in a community college math course. 30-60 hours.

Non-Degree Applicable, Noncredit

Grading Option: P/NP

NMAT 264 MATH JAM FOR 0 UNITS SLAM PREPARATION 0 UNITS

Math Jam for SLAM Prep is for students preparing for math courses in Statistics and Probability or Mathematics for Liberal Arts. Math Jam is a FREE noncredit program designed to help students prepare for their upcoming math class at a community college. Embedded are essential study and life skills to develop each student holistically, including career development. Students will be learning prerequisite algebraic and basic probability material with the goal of preparing them to be successful in their upcoming first-level transfer course of Statistics or Math for Liberal Arts class. It is strongly recommended that students taking this course be enrolled in Math 40: Statistics and Probability or Math 47: Mathematics for Liberal Arts at Las Positas College. 30-60 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NMAT 265MATH JAM FOR
BSTEM PREPARATION0 UNITS

Math Jam for BSTEM Prep is for students preparing for math courses in College Algebra, Trigonometry, Business Calculus and review prior to Calculus I. Math Jam is a noncredit program designed to help students prepare for their upcoming STEM focused math class at a community college. Embedded are essential study and life skills to develop each student holistically, including career development. Students will be learning pre-transfer level material with the goal of preparing them to be successful in their upcoming class. It is strongly recommended that students taking this course are enrolled in a community college math course. 30-60 hours.

Non-Degree Applicable, Noncredit Grading Option: P/NP

NONCREDIT TUTORING

The noncredit tutoring course provides enrolled students with free supervised tutoring to increase the likelihood of success. Trained tutors and instructors provide one-on-one or small-group tutoring to help students achieve specific course objectives in a wide variety of subjects. Students seeking support with communication/ literacy skills, quantitative reasoning skills, and critical thinking skills will receive tutoring to strengthen and master basic skills.

Noncredit Tutoring Courses (NTUT)