

2020-2021

Math Pathways

STEM PATHWAY

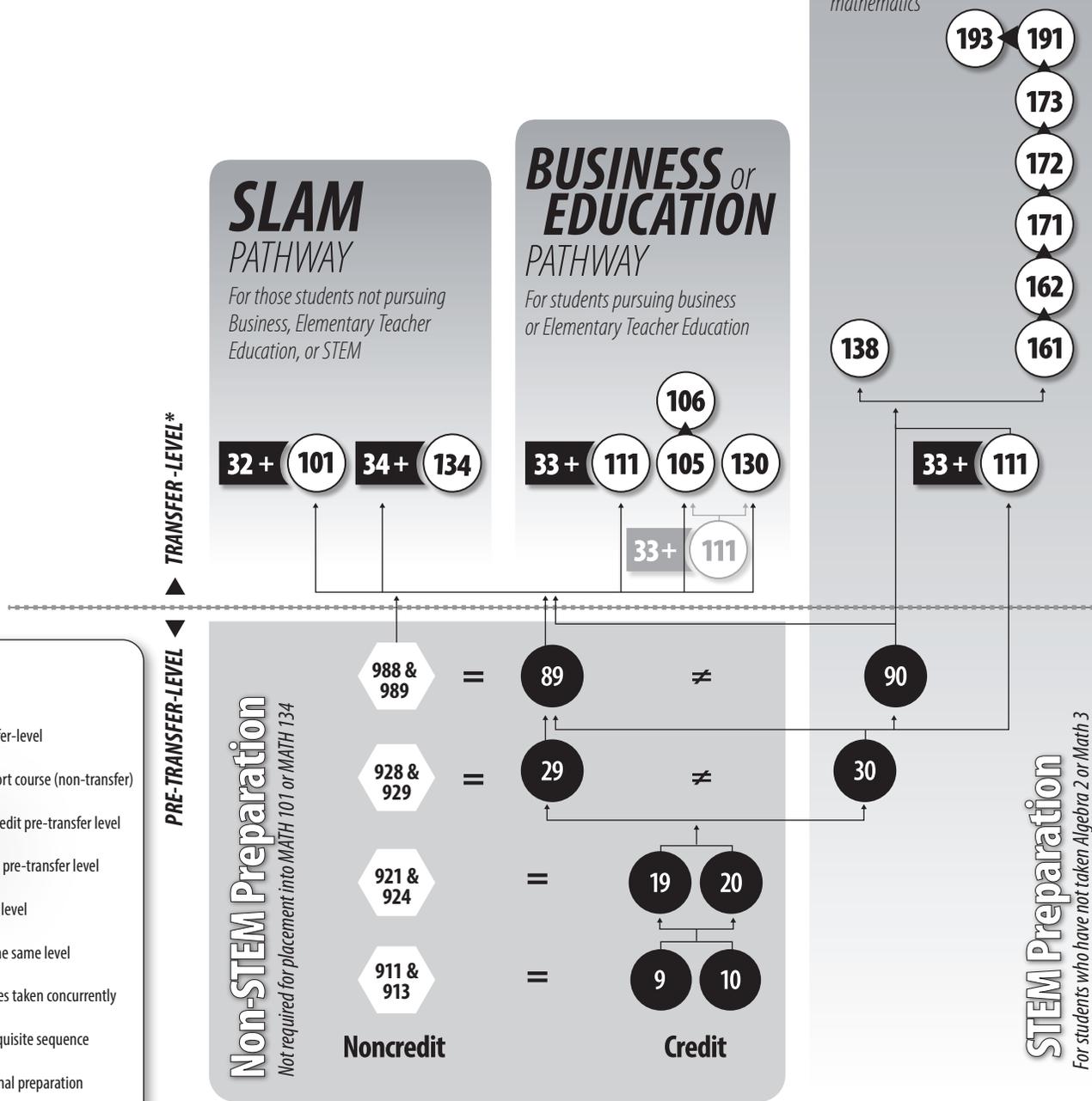
For students pursuing science, technology, engineering, or mathematics

SLAM PATHWAY

For those students not pursuing Business, Elementary Teacher Education, or STEM

BUSINESS or EDUCATION PATHWAY

For students pursuing business or Elementary Teacher Education



KEY

- Transfer-level
- Support course (non-transfer)
- Noncredit pre-transfer level
- Credit pre-transfer level
- $=$ Same level
- \neq Not the same level
- $+$ Courses taken concurrently
- \uparrow or \blacktriangle Prerequisite sequence
- Optional preparation

* Support courses, while illustrated above at "transfer level", do not transfer but support students in completing the content of the transfer course

Courses

MATH 9	Accelerated Intro to Math (2 units)	MATH 101	Mathematical Ideas and Appl (3 units)	MATH 191	Linear Algebra (3 units)
MATH 10	Introduction to Math (4 units)	MATH 105	Structure of Mathematics 1 (3 units)	MATH 193	Ordinary Differential Equations (3 units)
MATH 19	Accelerated Pre-Algebra (4 units)	MATH 106	Structure of Mathematics 2 (3 units)	MATH 911	Whole Numbers (0 units)
MATH 20	Pre-Algebra (5 units)	MATH 111	College Algebra (3 units)	MATH 913	Decimals and Percents (0 units)
MATH 29	Elem Alg. for Non STEM (4 units)	MATH 130	Finite Mathematics (3 units)	MATH 921	Integers (0 units)
MATH 30	Elementary Alg for STEM Mjrs (4 units)	MATH 134	Elementary Statistics (4 units)	MATH 924	Graphing and Measurement (0 units)
MATH 32	Support Course for MATH 101 (3 units)	MATH 138	Calculus for Business & Soc. Sci. (3 units)	MATH 928	Elementary Alg for Non-STEM Majors 1 (0 units)
MATH 33	Support Course for MATH 111 (3 units)	MATH 161	Trigonometry (4 units)	MATH 929	Elementary Alg for Non-STEM Majors 2 (0 units)
MATH 34	Support Course for MATH 134 (3 units)	MATH 162	Precalculus (4 units)	MATH 988	Intrmdt Alg for Non-STEM Majors 1 (0 units)
MATH 89	Intermediate Alg for Non-STEM Mjrs (4 units)	MATH 171	Calculus: First Course (4 units)	MATH 989	Intrmdt Alg for Non-STEM Majors 2 (0 units)
MATH 90	Intermediate Alg for STEM Mjrs (5 units)	MATH 172	Calculus: Second Course (4 units)		
		MATH 173	Calculus: Third Course (4 units)		

Transfer-Level Math

Research suggests many students can succeed with support.

Transforming Math at MJC

California Assembly Bill 705 (2017) changed how community colleges prepare students for university transfer-level math—from how to determine math competence and course placement, to the courses offered, to what happens in the classroom.

Streamlined Skills Development in Mathematics

Research has shown that students *who meet certain criteria* do better in transfer-level math when provided the right **corequisite support**. Rather than facing a long string of prerequisites to prepare them for transfer-level curriculum, AB705 allows such students to enroll directly in transfer-level math while also enrolling in a **support course** that provides “just in time” support in learning the transferable course content. With corequisite support, some students have the opportunity to satisfy transfer-level math requirements in *a single semester*.

Support courses include:

- MATH 32 (for MATH 101)
- MATH 34 (for MATH 134)
- MATH 33 (for MATH 111)

Make an Informed Choice

Choosing the appropriate mathematics pathway is an essential first step in educational planning. Mathematics requirements vary by major and transfer institutions. To ensure that students enroll in right mathematics course, students should talk with a counselor before selecting any pathway to ensure they are adequately prepared for their chosen major.

Changes to Math Placement

Instead of placement tests measuring student ability in math, MJC now uses “multiple measures” to do the same, such as algebra 2 completion and a strong high school GPA. Research has shown that these measures more accurately predict students’ capability than a single test score. Students who lack high school data, or whose data is more than 10 years old can complete Guided Self-Placement to determine math placement.

STEM vs. Non-STEM Pathways

STEM (Science Technology Engineering & Mathematics) prepares students for calculus and fields such as medicine, engineering, biology, mathematics, computer programming, and some business programs. To ensure proper coursework for those fields, students are encouraged to talk to a counselor. Non-STEM fields include majors like nursing, humanities, history, and psychology, where calculus or precalculus is not required for transfer. Students can move from Non-STEM to STEM by taking MATH 111 (or MATH 90).

Build Skills in Noncredit Courses

The MATH 900 noncredit courses are free, open entry/open-exit skill-building modules that show students are competent in the content of the credit course equivalent. 900-level courses are completed in a lab setting using ALEKS, an online, adaptive system that covers a broad spectrum of math topics. To determine what a student needs, ALEKS does a diagnostic knowledge check to identify the student’s knowledge on specific topics, then teaches the student the topics he/she is most ready to learn.