Corequisite Models for Missouri Math Pathways
Math Pathways Corequisite Model
(Initiated: Fall 2014)

General Education Courses:
- MATH 1620 Contemporary Mathematics
- MATH 1820 Intro. to Mathematical Modeling
- MATH 1111 College Algebra
- ACST 1300 Basic Statistics

Co-Requisites:
- AE 1310 Specialized Math Lab
- AE 1320 Specialized Math Lab
- AE 1800 Specialized Math Lab (pilot phase)
- ACST 1100 Essential Skills

ACST 1300
Basic Statistics

ACST 1100
Essential Skills

AE 1800
Specialized Math Lab (pilot phase)

AE 1320
Specialized Math Lab

AE 1310
Specialized Math Lab

MATH 1620
Contemporary Mathematics

MATH 1820
Intro. to Mathematical Modeling

MATH 1111
College Algebra
Corequisite Model

College Level General Education Courses

- 3 credit hours, meeting on MWF
- The same course for students with or without learning support needs
- Blended class of students with and without learning support needs
- Sequence of topics is prescribed
- Housed in the School of Computer Science and Mathematics

Corequisite Support Lab

- 2 credit hours, meeting on TR
- Linked to specific sections of MATH courses; may include students from different sections of MATH courses when enrollment is low
- MATH corequisites housed in the Department of Academic Enrichment
- ACST corequisite housed in the School of Computer Science and Mathematics
Corequisite Models for Missouri Math Pathways
Current Math Sequence

Calculus Series

Trigonometry
3 credit Hours

College Algebra
(3 credit Hours)
ACT - 22

Emporium Model

MATH 103/153
Intermediate Algebra
(4 credit hours)
ACT - 18

Math 02 Transitional
Math 2
(4 credit hours)

Math for Elementary
Teacher
(4 credit hours)
ACT - 22

MATH 01 Transitional
Math 1
(4 credit hours)
Fall 2018

Calculus Series

Pre-Calculus B/TRIG
(3 credit Hours)

College Algebra for
Calculus
(3 credit Hours)

MATH 103/153
Intermediate Algebra
(4 credit hours)

Quantitative
Reasoning
(3 credit hours)

Math for Elementary
Teacher
(4 credit hours ACT 22)

Math 02 Transitional
Math 2
(4 credit hours)

MATH 01 Transitional
Math 1
(4 credit hours)

Denotes the changes from
the previous semester
Spring 2019

- **Calculus Series**
  - Pre-Calculus B/Trig (3 credit Hours)
  - College Algebra for Calculus (3 credit Hours)
  - MATH 103/153 Intermediate Algebra (4 credit hours)

- **Quantitative Reasoning** (3 credit hours)

- **Math for Elementary Teacher** (4 credit hours)

- **MATH 01/02 Combined Emporium**
  - Rename as MATH 02 only

Denotes the changes from the previous semester
Fall 2019

Calculus Series

Trigonometry
3 credit Hours

College Algebra for Calculus
(3 credit Hours)

Pre-Calculus
(5 credit Hours)

MATH 103/153
Intermediate Algebra
(4 credit hours)

Quantitative Reasoning
(3 credit hours)

Math for Elementary Teacher
(4 credit hours)

MATH 01/02 Combined Emporium
Rename as MATH 02 only

Denotes the changes from the previous semester
Final Plan

Calculus Series

- Trigonometry
  - 3 credit Hours

Pre-Calculus
- (5 credit Hours)

College Algebra for Calculus
- (3 credit Hours)

MATH 103/153
- Intermediate Algebra
  - (4 credit hours)

Quantitative Reasoning
- (3 credit hours)

Math for Elementary Teacher
- (4 credit hours)

MATH 01/02 Combined Emporium
- Rename as MATH 02 only
Corequisite Models for Missouri Math Pathways
Math Pathways Corequisite Model
(Implementation: Spring 2018)

Non-STEM
- Basic Algebra for those who want/need it
- Math Reasoning
- Math Reasoning with Support

STEM
- Basic Algebra for those who want/need it
- Intermediate Algebra for those who want/need it
- Precalc Algebra
- Precalc Algebra with Support
Terminal Courses

- Math Reasoning
  - 3 credit-hours
  - Population: Non-STEM students who feel they’re ready

- Math Reasoning with Support
  - 4 credit-hours
  - Population: Non-STEM students who want extra support

Available Prep Courses

- Basic Algebra
  - 3 credit-hours
Terminal Courses

• Precalculus Algebra
  • 3 credit-hours
  • Population: STEM students who feel they’re ready

• Precalculus Algebra with Support
  • 4 credit-hours
  • Population: STEM students who want extra support

Available Prep Courses

• Basic Algebra
  • 3 credit-hours

• Intermediate Algebra
  • 4 credit-hours
Corequisite Models for Missouri Math Pathways
Math Pathways Corequisite Model
(Implementation: Fall 2018)

Meta Major

- Social Sciences: MATH 180 Introductory Statistics
- Humanities: MATH 161 Applications of College Mathematics
- STEM: MATH 185 Pre-calculus

General Education Math Course

- MATH 0XX Statistical Principles Taught as a Corequisite

Learning Support

- MATH 0XX College Math Principles Taught as a Corequisite
- MATH 140 Intermediate Algebra Taught as a Prerequisite
College Level: MATH 180

- 4 credit hours
- The same course for students with or without learning support needs
- Blended class of students with and without learning support needs
- Sequence of topics is prescribed

Corequisite: MATH 0XX

- 2 credit hours
- May contain students from several different sections of MATH 180
Corequisite Model for Quantitative Reasoning: Structure

College Level: MATH 161

- 4 credit hours
- The same course for students with or without learning support needs
- Blended class of students with and without learning support needs
- Sequence of topics is prescribed

Corequisite: MATH 0XX

- 2 credit hours
- May contain students from several different sections of MATH 161
Corequisite Models for Missouri Math Pathways
Corequisite Models for Missouri Math Pathways
Math Pathways Corequisite Model

Pathway
- PreCalculus Algebra
- Mathematical Modeling and Reasoning
- Statistics (Starting F18)

General Education Math Course
- MAT116 College Algebra
- MAT112 Finite Mathematics
- MAT110(E) Contemporary Problem Solving
- MAT111(E) Elementary Statistics

Learning Support
- MAT110E Lab
- MAT111E Lab
Corequisite Model

- Students with an ACT 18 – 21 or Math Placement Exam score of 40% - 69% can enroll in MAT110E together with a corequisite component (lab).

- Students enroll in MAT110E for 4 credit hours and a MAT110E lab section. (Students who are able to enroll directly in MAT110 w/o lab receive 3 credit hours.)

- Students choose lab that best fits with their schedule – may have different instructors for lab and lecture section.

Requirements to pass the lab:
1. Complete 10 of 12 homework banks (80%) on WebWork with an 80% or higher and attend and engage in 11 of 14 first class days each week, OR
2. Complete the Math Placement Exam with a 70% or higher.

*Students who fail the lab will receive no higher than a D in the credit bearing course.
Corequisite Models for Missouri Math Pathways
Math Pathways Model
(Implementation: Fall 2018)

- **MATH 95 (5 hr)**
  - Algebra Principles
  - MATH 120
    - College Algebra

  - **STEM**

- **MATH 31**
  - Pre-College Mathematics

- **non-STEM**

  - **MATH 85**
    - Mathematical Literacy
    - MATH 115
      - Statistics
    - MATH 119
      - Mathematical Reasoning and Modeling
Math Corequisites
(Piloted via Title III: Fall 2014 & Fall 2016)
Corequisite Models for Missouri Math Pathways
Math Pathways (Fall 2018)

STEM non-STEM

- Fundamentals of Mathematics
  - Intermediate Algebra
    - Precalculus Algebra (3 c.h.)
      - Precalculus Trigonometry (3 c.h.)
        - Calculus 1

- Non-credit course
  - Elementary Statistics (3 c.h.) PATHWAY
    - Corequisite for Elementary Statistics
  - Quantitative Reasoning (3 c.h.) PATHWAY
    - Corequisite for Quantitative Reasoning
  - Precalculus (5 c.h.) PATHWAY
College-Level General Education Courses

- 3 credit hours (with the exception of 5 c.h. Precalculus)
- The same course for students with or without corequisite needs
- Blended class of students with and without corequisite needs
- Textbook and curriculum are consistent across all sections
- Same instructor for both college-level and corresponding corequisite course

Corequisite Courses

- Credit hours are yet to be determined (1-3 c.h.)
- Course-specific corequisites for Elementary Statistics and Quantitative Reasoning
- Same instructor for both college-level and corresponding corequisite course
Corequisite Models for Missouri Math Pathways
Math Pathways and Corequisites
(Fall 2018)

Note: The ACT scores listed on the flow chart are referring to ACT Math subscores.
Plan for Fall

- Gateway and developmental taken simultaneously
- Students enroll in each course separately and receive two grades
- Developmental teachers also teach gateway course
- Number and Operations for Educators (childcare, early childhood, elementary education majors)
  - Number and Operations for Educators lab
- Survey of Mathematics (liberal arts majors)
  - Survey of Mathematics lab
- Statistical Reasoning (nurses, communications disorders, criminal justice)
  - Statistical Reasoning lab
- PreCalculus A with Integrated Review (STEM, Business)
  - PreCalculus A
  - PreCalculus B
  - PreCalculus
Corequisite Models for Missouri Math Pathways
Math Pathways Corequisite Model
(Initiated Fall 2017)
Corequisite Model

College Level General Education Courses: Quantitative Reasoning and Elementary Statistics

- 3 credit hours, typically meeting 2 days per week
- The same course for students with or without learning support needs
- Blended class of students with and without learning support needs
- Sequence of topics is prescribed

Corequisite Support Course

- 2 credit hours, typically meeting 2 days per week
- May contain students from several sections of the general education course
Corequisite Models for Missouri Math Pathways
Math Pathways

STEM & Music Industry Pathway

Math 20 → Math 30 → Math 130 & 135 or Math 140 → Math 150
- No ACT score or Math ACT score less than 19
- Math ACT score of 19, 20, or 21
- Math ACT score of 22-26
- Math ACT score of 27 or higher (students need to have taken a trigonometry class in HS)

Business Pathway

Math 20 → Math 30 → Math 129
- No ACT score or Math ACT score less than 19
- Math ACT score of 19, 20, or 21
- Math ACT score of 22 or higher

Elementary & Middle School Pathway

Math 20 → Math 119 → Math 120
- No ACT score or Math ACT score less than 19
- Math ACT score of 19 or higher

Note: K-12 and Secondary Ed majors have math requirements determined by the major department. This pathway may not apply to those students (e.g. K-12 Physical Education).

Standard Pathway

Math 20 → Math 125
- No ACT score or Math ACT score less than 19
- Math ACT score of 19 or higher
Students with a Math ACT of 19 or above can enter directly in credit bearing Contemporary Math or the two-semester sequence for the Education, STEM or Business Pathway.

Students with Math ACT of 18 or below can obtain college credit on the Contemporary Math Pathway in the two-semester model.

Plans to pilot a one-semester coreq version of Contemporary Math in FA19.
Corequisite Models for Missouri Math Pathways
Math Pathways

Non-STEM Pathway

Pre Algebra (3 credits)

Intermediate Algebra w/ Review (5 credits)

OR DEPENDING ON PLACEMENT

Intermediate Algebra (3 credits)

Mathematical Reasoning and Modeling, Statistical Reasoning, or Contemporary Math (3 credits each)

Non-STEM Pathway

Pre Algebra (3 credits)

Corequisite (2 credits)

AND

Mathematical Reasoning and Modeling, Statistical Reasoning, or Contemporary Math (3 credits each)

OR DEPENDING ON PLACEMENT

Intermediate Algebra W/ Review (5 credits)

STEM Pathway

Pre Algebra (3 credits)

Intermediate Algebra W/ Review (5 credits)

OR DEPENDING ON PLACEMENT

Intermediate Algebra (3 credits)

Precalculus A (3 credits)

Precalculus B (3 credits)

Fall 2018
Corequisite Models for Missouri Math Pathways
Math Pathways Model

General Education
- Statistical Reasoning
  - General Statistics
- STEM
  - Precalculus Algebra

Aligned Corequisites
- Strategies for General Statistics
- Strategies for Precalculus Algebra

Mathematical Reasoning
- Concepts of Mathematics
- Mathematical Modeling

Strategies for Concepts of Mathematics
Strategies for Mathematical Modeling
College Level General Education Courses

- Blended sections allow for interaction between students with and without learning support needs
- Faculty collaborate on course outline when multiple instructors teach the same course

Corequisite “Strategies” Courses

- Students not meeting the prerequisite for Precalculus (ACT Math score or 22 or high school cum. GPA of at least 3.5) must defer to Precalculus Algebra.
- For all other courses, students are automatically enrollment in co-requisite courses if ACT Math score is below 22 and high school cum. GPA is below 3.0.
- Students enroll in 1-2 credit-hours for corequisite.
- Credit-hours vary depending on whether the course is terminal for specific degree programs
- Corequisite sections include students from different sections of credit-bearing courses
- Corequisites are taught by mathematics faculty who also teach at least one section of the aligned, credit-bearing course
- Faculty are assisted in corequisite courses by department paid, student study-group leaders. Study-group leaders also host evening, homework support sessions.
Corequisite Models for Missouri Math Pathways
Math Pathways Corequisite Model
(Implementing Fall 2018)

General Education Courses

Quantitative Reasoning M-W-F

Elementary Statistics M-W-F

College Algebra

PreCalculus

Co-Requisites

Support for Quantitative Reasoning T-Th

Support for Elementary Statistics T-Th

Prerequisite

Intermediate Algebra