Advising and Student Communication

Noel DeJarnette, University of Cincinnati
Mandy Knight, Marion Technical College
Deborah Smith, San Jacinto College

October 26, 2018
Symposium on Co-Requisite Approaches in Math
Co-Requisite Mathematics at the University of Cincinnati

Advising and Student Communication Panel

Noel DeJarnette

10/26/2018
### Overview – Current Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>MATH 1096</th>
<th>MATH 1060</th>
<th>MATH 1020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours</td>
<td>1</td>
<td>5 (4+1)</td>
<td>5 (5+0)</td>
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<tr>
<td>Grading</td>
<td>P/F</td>
<td>Letter (in Course)</td>
<td>Letter (in Course)</td>
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<tr>
<td>Time Commitment</td>
<td>80 min – 1/week</td>
<td>80 min – 2/week</td>
<td>80 min – 1/week</td>
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<tr>
<td>Content</td>
<td>Faculty Made Review</td>
<td>Faculty Made Review</td>
<td>Faculty Made Preview</td>
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<tr>
<td>Required</td>
<td>For Some Learning</td>
<td>Placement</td>
<td>Placement</td>
</tr>
<tr>
<td>Remediation</td>
<td>None</td>
<td>Some J.I.T. PreCalc</td>
<td>Some J.I.T. Algebra</td>
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<tr>
<td>Instructor</td>
<td>Peer Educator</td>
<td>Peer Educator</td>
<td>Peer Educator</td>
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<tr>
<td>Format</td>
<td>Active Learning</td>
<td>Active Learning</td>
<td>Active Learning</td>
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</table>
Overview – Fall 2018

<table>
<thead>
<tr>
<th>Course</th>
<th>Number of Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEM Prep Pathway I* (MATH 1020)</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra (MATH 1021)</td>
<td>8</td>
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<tr>
<td>STEM Prep Pathway I (MATH 1023)</td>
<td>3</td>
</tr>
<tr>
<td>STEM Prep Pathway II (MATH 1024)</td>
<td>1</td>
</tr>
<tr>
<td>PreCalculus (MATH 1026)</td>
<td>4</td>
</tr>
<tr>
<td>Applied Calculus I (MATH 1044)</td>
<td>7</td>
</tr>
<tr>
<td>Applied Calculus II* (MATH 1045)</td>
<td>3</td>
</tr>
<tr>
<td>Calc w/ Pre-Calc* (MATH 1060)</td>
<td>4</td>
</tr>
<tr>
<td>Calculus (MATH 1061)</td>
<td>11</td>
</tr>
<tr>
<td>Calculus II* (MATH 1062)</td>
<td>4</td>
</tr>
</tbody>
</table>

10 courses  
48 sections
~850 students

* – Required based on placement scores
! – All sections elective
Overview – Fall 2014

<table>
<thead>
<tr>
<th>Course</th>
<th>Number of Sections</th>
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<tbody>
<tr>
<td>PreCalculus (MATH 1026)</td>
<td>6</td>
</tr>
<tr>
<td>Calc w/ Pre-Calc* (MATH 1060)</td>
<td>7</td>
</tr>
<tr>
<td>Calculus (MATH 1061)</td>
<td>16</td>
</tr>
<tr>
<td>3 courses</td>
<td>48 sections ~418 students#</td>
</tr>
</tbody>
</table>

- PreCalculus and Calculus co-req’s carried no credit
- First course meeting after exam 1
- Heavily induced by extra credit

* – Required based on placement scores, carried 1 additional hour of credit
# – Attended at least one (300 “completed” the program)
Advising and Placement

• Key Demos
  • Math Placement Scores (Pre-Determined Cutoffs)
  • Major – Exploratory Studies (New in ’18)
  • Self-Selection
  • Low Test 1 (phasing out)
  • Need a mix of scores

• Recruiting
  • Advisors
    • Orientation
    • Class Scheduling (in sequence)
  • Instructors
  • Direct Summer Mailing (Goal, not yet implemented)
Advising and Placement

• Messaging
  • Semester Meetings with Advisors and Faculty
  • Advisor Listservs
  • Advisors
    • FAQ
    • Schedule
    • Stats
  • Faculty
    • Schedule
    • Pre-written recruitment email
• NOT REMEDIATION
  • Help to get desired grade, not just pass

• Scale
  • Math Department
    • Learning Commons
    • Full Support in Sequence
    • Stakeholder Colleges (Engineering, Business)
  • College of Arts and Sciences
Potential Next Steps

• Refine Supported Population
  • Move beyond self-selection and low math placement scores
  • ???

• Refine Material
  • Improve “just-in-time” resources
  • Utilize known best practices (mixed recall over mass practice)
  • Include Metacognition or directly address non-content issues

• Refine Course Offerings
  • Make sure offerings match stakeholder priorities

Note: more faculty are implementing Active Learning strategies in their classrooms. This frees up the MATH 1096 program to really tailor its mission.
Who can participate in SRS (Math 1096)?

All students enrolled in one of the above classes can enroll in Math 1096.

We strongly encourage enrollment for students who have historically struggled with mathematics courses, or communicate an anxiety or intimidation surrounding mathematics courses. In addition, if a student’s MPT score or ACT math score meets the enrollment requirements, but is borderline, then we encourage enrollment in SRS as well.

What is covered in the SRS sections?

Course faculty develop weekly problem sets that are intended to emphasize key concepts necessary for successful course completion. The material is not remedial, nor is it necessarily covering the same concepts as weekly homework assignments or quizzes. These problem sets are provided to the SRS leaders, who then develop their own small-group facilitation and instruction plans.
What is an SRS (MATH1096)?

- You will be part of a small group working with a tutor once per week on problem sets designed by Faculty teaching your course.
- You will review essential prerequisite material, work on problems, present solutions, and discuss and correct solutions.
- Math 1096 is Pass/Fail Course graded on attendance. You must attend 9 out of 12 sessions to receive a P.
- Students who have found prior math classes challenging are strongly encouraged to enroll early, as seats are offered on a first-come, first-served basis.
- Sessions start Sunday January 14th. You can web register for MATH 1096 online until August 26th.
- Registration will remain open until Friday, January 19th. To “Late Add” during the second week attend the SRS session of your choice to get an add slip from the SRS leader. If the session you want to sign up for has passed, visit the MASS Center in 2133 French Hall West, 9am-5pm Monday-Friday.

### MATH 1061

<table>
<thead>
<tr>
<th>Section</th>
<th>Call #</th>
<th>Day</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>401</td>
<td>50874</td>
<td>Sunday</td>
<td>5:40-6:00pm</td>
<td>60WCHARL #115</td>
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<tr>
<td>402</td>
<td>50875</td>
<td>Monday</td>
<td>4:40-5:00pm</td>
<td>60WCHARL #140</td>
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<tr>
<td>403</td>
<td>50876</td>
<td>Tuesday</td>
<td>6:10-7:30pm</td>
<td>60WCHARL #273</td>
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<tr>
<td>404</td>
<td>50877</td>
<td>Wednesday</td>
<td>6:10-7:30pm</td>
<td>60WCHARL #140</td>
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<tr>
<td>405</td>
<td>55536</td>
<td>Tuesday</td>
<td>4:40-5:00pm</td>
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### MATH 1062

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<tbody>
<tr>
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<td>CLOSED</td>
<td>Sunday</td>
<td>3:30-4:50pm</td>
<td>60WCHARL #115</td>
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<tr>
<td>502</td>
<td>CLOSED</td>
<td>Monday</td>
<td>4:40-6:10pm</td>
<td>60WCHARL #270</td>
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<td>503</td>
<td>50880</td>
<td>Monday</td>
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<td>60WCHARL #270</td>
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<tr>
<td>504</td>
<td>50882</td>
<td>Tuesday</td>
<td>4:40-6:00pm</td>
<td>60WCHARL #215</td>
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<td>505</td>
<td>50883</td>
<td>Tuesday</td>
<td>6:10-7:30pm</td>
<td>60WCHARL #119</td>
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<tr>
<td>506</td>
<td>50884</td>
<td>Wednesday</td>
<td>4:40-6:10pm</td>
<td>60WCHARL #270</td>
</tr>
<tr>
<td>507</td>
<td>55537</td>
<td>Wednesday</td>
<td>6:10-7:30pm</td>
<td>French Hall West #266</td>
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### MATH 1026

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<tbody>
<tr>
<td>101</td>
<td>50865</td>
<td>Monday</td>
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<td>60WCHARL #273</td>
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<tr>
<td>102</td>
<td>50865</td>
<td>Tuesday</td>
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<td>50866</td>
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### MATH 1024

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<td>601</td>
<td>55341</td>
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<td>5-6:20pm</td>
<td>60WCHARL #240</td>
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Math Co-Requisite Advising and Student Communication

October 26, 2018
Marion Technical College

Marion, Ohio

- Founded in 1970
- Public Two-Year College
- About 2,500 students enrolled
- Around 1,000 CCP students
Brief background...
Summer Term 2016
- Design new Math courses
- Create transition and communication materials
- Phone calls and letters to students

Fall 2016
- Training for advisors during Fall In-service
- Details of courses available for students and advisors

Spring 2017
- Full implementation of new and developmental courses
- Last term for “old” math courses (MTH1100 & BUS1100)

Summer 2017
- Full implementation of new college level math courses
Initial Concerns

- Too many obstacles ("rules")
  - Mastery-based learning
  - Mandatory Hours in Tutoring Center
  - Mandatory attendance
  - Placement
- Student reactions to "more" math
- How to "get" students to College Algebra
Student, Faculty, and Staff Communication

- Crosswalk flyer was created
  - Distributed at registration/advising, department meetings, hallways, poster signage, restrooms
- Email to current students needing to complete current math requirements
- Faculty asked to contact advisees needed current math requirements
- MTC website centralized math transition details page
- In-service focused on advising students
Mathematics Curriculum Changes

Beginning Spring 2017, Marion Technical College (MTC) is transitioning math courses to meet new state requirements and improve student success. Use this planning guide to see when courses are offered. Talk with your advisor about the best plan for earning your degree.

<table>
<thead>
<tr>
<th>Transition Chart</th>
<th>(x = course offering)</th>
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<tbody>
<tr>
<td>Status</td>
<td>Course</td>
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<tr>
<td>Phasing Out</td>
<td>MTH0980 Basic College Math</td>
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<tr>
<td></td>
<td>MTH0990 Pre-Algebra</td>
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<tr>
<td></td>
<td>MTH1100 Beginning Algebra</td>
</tr>
<tr>
<td></td>
<td>MTH1150 Intermediate Algebra</td>
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<tr>
<td></td>
<td>MTH1200 College Algebra (4 credits)</td>
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<td></td>
<td>BUS1100 Business Mathematics</td>
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<tr>
<td></td>
<td>BUS1500 Statistics</td>
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<tr>
<td>Continuing</td>
<td>MTH1120 Pre-calculus</td>
</tr>
<tr>
<td>Beyond</td>
<td>MTH1200 Calculus I</td>
</tr>
<tr>
<td>2016-17</td>
<td>MTH1200 Calculus II</td>
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<tr>
<td>New in</td>
<td>MTH0910 Mathematical Literacy</td>
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<tr>
<td>2017-18</td>
<td>MTH0920 Algebraic Literacy</td>
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<tr>
<td></td>
<td>MTH1230 Quantitative Reasoning</td>
</tr>
<tr>
<td></td>
<td>MTH1240 Statistics</td>
</tr>
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</table>

Our Three New Core College Mathematics Courses.

**MTH1230 Quantitative Reasoning (3 credits)**
Quantitative Reasoning is a course allowing students exploration in mathematical topics encountered on a day-to-day basis through real life problems and situations. Students will learn to communicate effectively with numbers. Topics include ratios, rates, percentages, units, descriptive statistics, linear and exponential modeling, correlation, logic, personal finance, and probability.

**MTH1240 Statistics (3 credits)**
Statistics is an introduction to descriptive and inferential statistical methods including point and interval estimation, hypothesis testing, and regression. Real data and appropriate technology will be used.

**MTH1245 College Algebra (3 credits)**
College Algebra emphasizes the use of algebra and functions in problem solving and modeling. Appropriate use of technology and applying mathematics to real-world situations is emphasized. Topics include relations, functions, graphs, polynomial functions, rational functions, exponential functions, logarithmic functions, analytical geometry, and systems of equations.

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**Math Pathways**

**QR Pathway**
- MTH1230 Quantitative Reasoning (QR)
- MTH0930 QR Co-Req

**Stats Pathway**
- MTH1240 Statistics
- MTH0940 Stats Co-Req

**STEM Pathway**
- MTH0250 Calculus II
- MTH0200 Calculus I
- MTH1250 Pre-Calculus

**Students can enter a math pathway at any course, based on placement guidelines.**
Please refer to the math placement guidelines to determine the best starting point for entry into a Math Pathway.

**All College-level Courses are transferrable!**
All mathematics courses at a 1200 level and higher will be designed to satisfy Ohio Transfer Module requirements. They will be guaranteed to transfer.

**What is Co-Requisite Remediation?**
Co-require remediation increases student success and reduces time to graduation. This allows students who would typically be required to complete a developmental course prior to enrolling into a college level course to enroll in a college level math course with the appropriate co-requisite course. These students take both courses concurrently. Not every student will take the co-requisite course.

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Marion Technical College
STEM Pathways: New MTC Path

Figure B: STEM Pathway

ABLE Dev Edu → Math Literacy Dev Edu → Algebraic Literacy Dev Edu → College Algebra → Precalculus → Calculus I → Calculus II

Figure B: Non-STEM Pathway

ABLE Dev Edu → Math Literacy Dev Edu → QR or Statistics → QR or Statistics Co-req → Co-Requisite
Paths Shortened: STEM

Figure A: STEM Pathway

Old

- ABLE Dev Edu
- Dev Ed Math 1
- Dev Ed Math 2
- Beginning Algebra
- Int. Algebra
- College Algebra
- Precalculus
- Calculus I
- Calculus II

New

- ABLE Dev Edu
- Math Literacy Dev Edu
- Algebraic Literacy Dev Edu
- College Algebra
- Precalculus
- Calculus I
- Calculus II

Co-Requisite
Placement Guidelines Changed and continue to change…

- Added Multiple Measures
  - High School Transcript
  - ACT
  - AccuPlacer Score
- Shelf life of 5 years for placement indicators (New)
- Changed from Compass to AccuPlacer
  - Continued option to retest
  - Math Boot Camp offered Fall 2018
Math Pathways

QR Pathway
- MTH1230 Quantitative Reasoning (QR)
- MTH0930 QR Co-Req

Stats Pathway
- MTH1240 Statistics
- MTH0940 Stats Co-Req

STEM Pathway
- MTH2050 Calculus II
- MTH2000 Calculus I
- MTH1250 Pre-Calculus

Advanced College Courses
Core College Courses
Developmental Courses

MTH0910 Mathematical Literacy
MTH0920 Algebra Literacy
MTH0945 Algebra Co-Req
# First Term Completion Data

<table>
<thead>
<tr>
<th></th>
<th>Before Co-requisite Courses</th>
<th>After Co-requisite Courses</th>
<th>KEY</th>
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<tbody>
<tr>
<td></td>
<td>Summer 16</td>
<td>Fall 16</td>
<td>Summer 17</td>
</tr>
<tr>
<td>Number of New General Students Admitted</td>
<td>64</td>
<td>276</td>
<td>72</td>
</tr>
<tr>
<td>Took a MTH Course in 1st Semester</td>
<td>10 (16%) (100%)</td>
<td>97 (35%) (100%)</td>
<td>6 (8%) (100%)</td>
</tr>
<tr>
<td>Enrolled in a Standalone Developmental MTH Course</td>
<td>9 (14%) (90%)</td>
<td>77 (28%) (79%)</td>
<td>2 (3%) (33%)</td>
</tr>
<tr>
<td>Completed a Gateway MTH Course in 1st Semester (D or Higher)</td>
<td>1 (2%) (10%)</td>
<td>14 (5%) (14%)</td>
<td>2 (3%) (33%)</td>
</tr>
</tbody>
</table>

- Frequency (% of New General Students Admitted)
- (% of Students Who Took a MTH Course in 1st Semester)

*Percentages Rounded to Nearest Percent*
Tyler Maley
Assistant Professor of Mathematics
(740) 386.4116
maleyt@mtc.edu

Mandy Knight
Transfer & 1st Year Advisor
(740) 725.4019
knight@mtc.edu

Marion Technical College
Math Co-requisites

Deborah Smith, Dean of Student Development
San Jacinto College
Established 1962

Serving over 30,000 students and seven Independent School Districts

Central Campus – 1961
North Campus – 1975
South Campus – 1979
Maritime Center – 2016
30,509 Unduplicated

Fall 2017 Enrollment

- 76.8% Part-Time
- 23.2% Full-Time
Faculty Created/Designed

Mathematics Research and Development Team

- College preparatory and academic level mathematics team; including Advisors
- Tasked to create new courses that lead to acceleration and increase in course completion/success
- Results: AIM, ASAP, ACM, ABS, DE Foundation Courses, New two semester models
Math Redesign

- Designed Algebraic and Non-Algebraic Pathways
- Developmental Education Foundation Course for each Pathway.

**Two Semester Model**

First Semester: Foundation math  
Second Semester: College-level math

**Accelerated Model**

Co-enrolled in Developmental Education foundations course and college level course. Two instructors at all time and scaffold learning.
Current Math Courses

36 – 61% participation

REGISTER NOW
ACCELERATION IN MATHEMATICS
Aiming for Success

AIM
MATH 0314 / MATH 1314
College Algebra

ABS
MATH 0324 / MATH 1324
Math for Business or Social Sciences

ACM
MATH 0332 / MATH 1332
Contemporary Math

ASAP
MATH 0342 / MATH 1342
Statistics

For more information, please see your advisor.
San Jacinto College District

**Two Semester Model**

- *4 week NCBO if needed Math 0104
- 12 or 16 Week DE Foundation Course 0314
- Algebraic
  - 12 or 16 Week DE Foundation Course 0324
- Non-Algebraic
  - 12 or 16 Week DE Foundation Course 0342
  - 12 or 16 Week DE Foundation Course 0332
- College Level Math 1314 Algebra
- College Level Math 1324 Finite
- College Level Math 1342 Statistics
- College Level Math 1332 Quant. Reasoning

**One Semester Model**

- Algebraic
  - AIM 0314-1314
  - ABS 0324-1324
  - ASAP 0342-1342
  - ACM 0332-1332
- Non-Algebraic
- *Students Scoring Less Than 336 on TSIA

An Equal Opportunity Institution
Communication

- On-going Advisor training
- Communication between Student Services Staff & Instructional Faculty
- Consistency in placement decisions
- Relational vs. Transactional
Advising Process

- Mandatory advising hold on all new students
- Place into gateway courses (English & Math) in first semester
- Math course is dependent on student’s pathway
Advising Challenges

- Students who don’t know what they want to do
- Students resistant to 2 math classes
- Majority of math classes offered are in algebra
- Students unable to attend 4-5 days/week
- One size doesn’t fit all
- Transferability with Universities
Advising and Communication: Participant Discussion

• What placement, advising, or communications issues still remain for scaling on your campus?
• If your campus has addressed its issues, what lessons would you share with your peers?

✓ Clarifying questions before discussion
✓ Discuss at your tables
✓ Have someone take notes
✓ Feel free to list questions for panel or comments to share after discussion period
THANK YOU TO OUR PANEL

Noel DeJarnette, University of Cincinnati
Mandy Knight, Marion Technical College
Deborah Smith, San Jacinto College