

MATH LITERACY WITHOUT A MATH PREREQUISITE

Mark Chapman and Jack Rotman,
With Jon Margules
(Lansing Community College)

WHAT'S GOING TO HAPPEN ...

- ◉ What is “math literacy”, and why offer it?
- ◉ Our Math106 course
background and details
- ◉ A sample lesson from Math106

WHAT IS “MATH LITERACY”

- ◉ A college course
- ◉ “the goal is to have the student be conversant, and show understanding”
- ◉ At the level of beginning algebra ... but better
- ◉ Content ... numerical reasoning, proportional reasoning, algebraic reasoning & functions

[“New Life” project Math Literacy content handout available]

WHAT IS “MATH LITERACY” ... MORE

- Part of a national movement
- Related to Carnegie Statway™ and Quantway™, and to Dana Center “Foundations of Mathematical Reasoning” (FMR)
- Designed to be good prep for statistics and quantitative reasoning courses
- We also use it for STEM-bound students ... if needed

WHY OFFER MATH LITERACY?

- ◉ Think about why your college should offer a Math Literacy course
- ◉ Write a couple of notes down
- ◉ Then ... discuss the ideas with a neighbor or two

OUR MATH106 COURSE

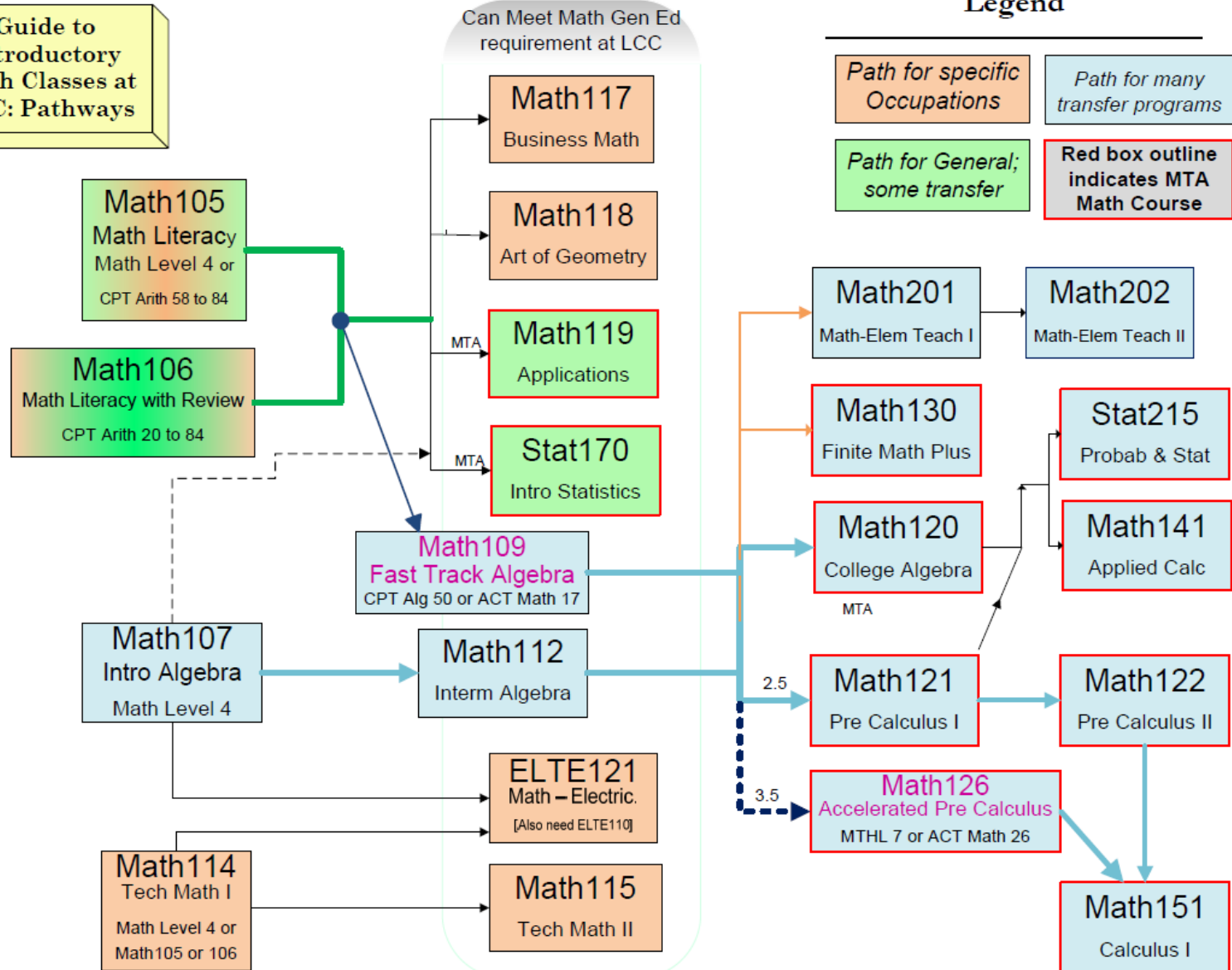
- ◉ We already had Math105 (Mathematical Literacy)
- ◉ LCC discontinued our pre-algebra course (Summer 2016) due to financial aid issues
- ◉ So ... LCC had no course for students not qualified for Math Lit or beginning algebra
- ◉ Math106 “Math Literacy with Review” was designed for students placing at pre-algebra

OUR MATH106 COURSE ... MORE

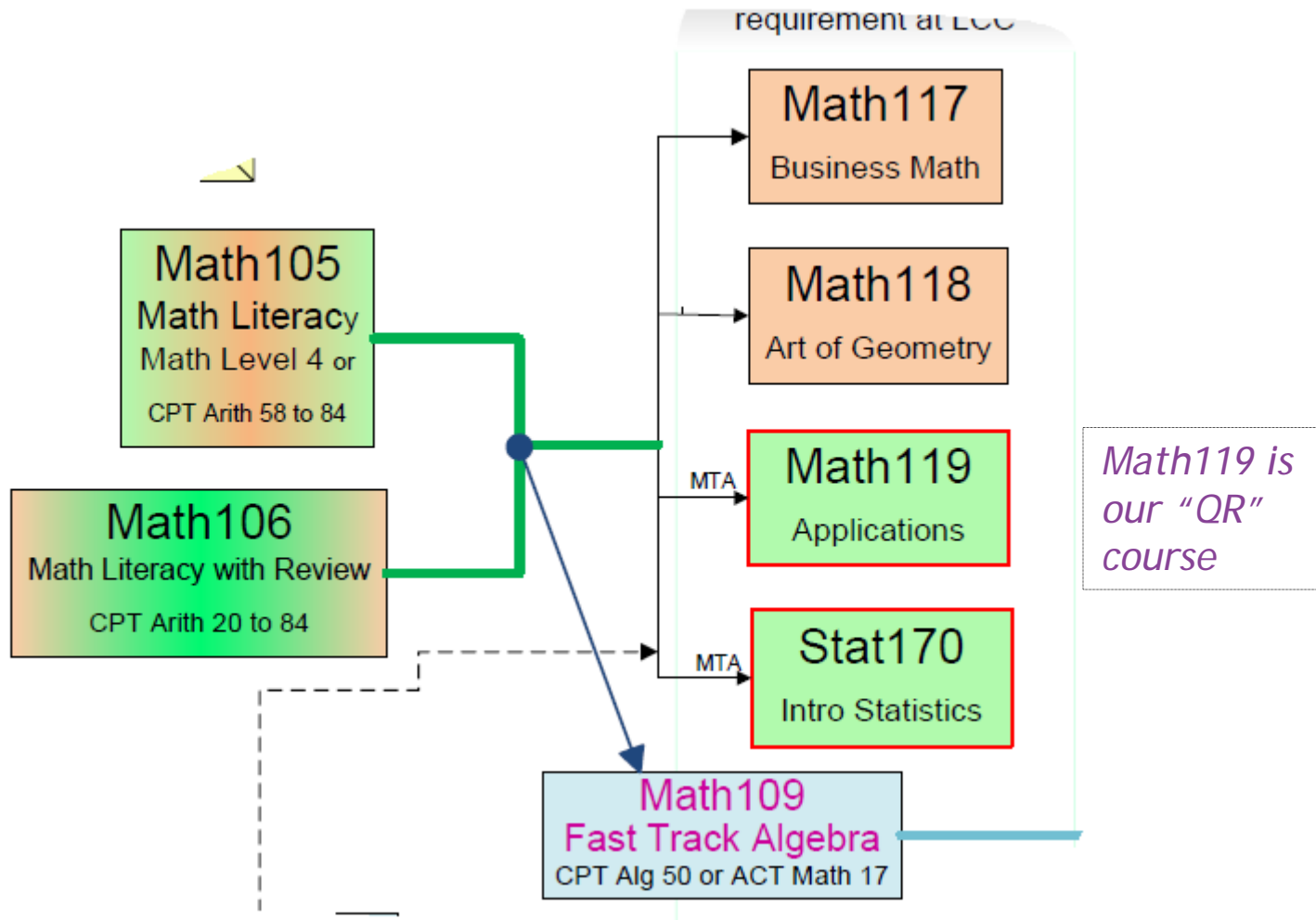
- ◉ We had already dropped our basic arithmetic class (about 15 years ago)
- ◉ Until this year, we did not have a course for students placing at that level
- ◉ Math106 was designed to fill that void (students who 'needed' arithmetic)

OUR COURSE MAP NOW

Guide to Introductory Math Classes at LCC: Pathways



HOW MATH106 FITS ...



AFTER PASSING MATH106 ...

- ◉ Many students will take Math119 (“Math: Applications for Living”) [QR]
- ◉ Many students will take Stat170 (“Intro Statistics”)
- ◉ Students can also “go STEM” ... take Math109 (“Fast Track Algebra”)
- ◉ Math106 also leads to business math, technical math, and the ‘art of geometry’ course

MATH106 PREREQUISITES

- Prereq: Math Level below readiness for beginning algebra
[Accuplacer Arithmetic below 84]
- Prereq: “College ready” reading skills
(Level 5 at LCC) OR Concurrent Reading170
- Prereq: Writing skills “level 2” (quite low)

FALL 2016 'LAUNCH'

- ◉ Math105 ... 9 sections about 180 students
- ◉ Math106 ... 9 sections about 225 students
- ◉ Seat max: 25 students
- ◉ Both courses use the same book (\$68 to \$84 printed book and access card)

OVERVIEW OF MATH106 STUDENTS

- About 50% have very low placement test scores (<39 on Accuplacer Arithmetic)
- About 95% have a higher 'writing level' than required ... half at 'college ready'
- In Math105, about 60% are 'beginning algebra ready'

INSTRUCTIONAL DESIGN

- ◉ Math105 ('regular') meets 4 hours per week ... a 4 credit class; one instructor
- ◉ Math106 ('with review') meets 6 hours per week ... a 6 credit class; one instructor PLUS one embedded tutor (professional tutor)
- ◉ Bi-weekly meetings for faculty (instructors and tutors) from both courses

EMBEDDED TUTOR MODEL

- ◉ Origin in the Structured Learning Assistance (SLA) model
- ◉ Professional tutor (bachelor's degree, often in mathematics)
- ◉ Tutor Training PLUS specialized training
- ◉ Work with the instructor during class time
- ◉ Scheduled help sessions outside of class
- ◉ Individual student follow-up

SAMPLE LESSON

- ◉ This page launches a sample lesson as done in Math106
- ◉ [Math106 clifford section 2.1 class](#)

WRAP UP

- ◉ Our emails are on the handout
- ◉ We welcome your further questions ... or visits

- ◉ THANKS for being here!