



# GE AND GUIDED PATHWAYS: SEQUENCING AND SCHEDULING OF GE COURSES TO FACILITATE STUDENT SUCCESS

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Curriculum Institute, Riverside, July 13, 2018

# Overview

- Guided Pathways
  - Student Success
- General Education (GE)
  - Requirements
  - Unit Value Considerations
- Course Sequencing
  - Requirements
  - Scheduling
- Discussion throughout...



# Guided Pathways (GP)

- America Association of Community Colleges (AACCC) describes its pathways model as “an **integrated, institution-wide** approach to student success based on **intentionally designed**, clear, coherent and structured educational experiences, **informed by available evidence**, that **guide each student** effectively and efficiently from her/his **point of entry** through **to attainment** of high-quality postsecondary credentials and careers with value in the labor market.”



The Four Dimensions or “Pillars” of GP



# CCC Guided Pathways (GP)

- State grant program
- \$150 million in one-time funds available to all CCCs
  - First allocations received spring 2018
- Progress towards Guided Pathways implementation expected to be made by early 2020s
- All 114 colleges eligible to participate and receive funding
  - Completed self-assessment
  - Submitted a GP Workplan
- **Guided Pathways is not a “one-size-fits-all” initiative...**

# CCC Guided Pathways



Create clear curricular pathways to employment and further education.



Help students choose and enter their pathway.



Help students stay on their path.



Ensure that learning is happening with intentional outcomes.

# General Education Requirements (Title 5)

## **Title 5 §55063 (b)**

(1) Students receiving an associate degree shall complete a minimum of **18 semester or 27 quarter units** of general education coursework which includes a minimum of three semester or four quarter units in each of the areas specified in paragraphs (A), (B) and (C) and the same minimum in each part of paragraph (D). The remainder of the unit requirement is also to be selected from among these four divisions of learning or as determined by the local option:

- (A) Natural Sciences.
- (B) Social and Behavioral Sciences.
- (C) Humanities.
- (D) Language and Rationality.

(2) Ethnic Studies will be offered in at least one of the areas required by subdivision (1).

# General Education Requirements (Accreditation)

## Standard II.A.12:

The institution requires of all of its degree programs a component of general education based on a carefully considered philosophy for both associate and baccalaureate degrees that is clearly stated in its catalog. The institution, relying on faculty expertise, determines the appropriateness of each course for inclusion in the general education curriculum, based upon student learning outcomes and competencies appropriate to the degree level. The learning outcomes include a student's preparation for and acceptance of responsible participation in civil society, skills for lifelong learning and application of learning, and a broad comprehension of the development of knowledge, practice, and interpretive approaches in the arts and humanities, the sciences, mathematics, and social sciences.

# General Education: Unit-Value Considerations

## **Title 5 §55002 (a)(2)**

(B) Units. The course grants units of credit based upon a relationship specified by the governing board between the number of units assigned to the course and the number of lecture and/or laboratory hours or performance criteria specified in the course outline. The course also requires a minimum of three hours of student work per week, including class time for each unit of credit, prorated for short-term, extended term, laboratory and/or activity courses.



# General Education: Unit-Value Considerations

- High-unit courses may include more content and in-class time for practice and review, but this comes at a cost to students
  - Difficult to complete all requirements
  - Consume financial aid resources
  - Make it difficult for students to juggle work, family, school
- Good data will help in addressing this issue: Review history of courses that have increased units over the years; what was the rationale and has it contributed significantly to success/retention?

# Course Sequencing

## Requirements – Accreditation

Standard II.A.5: The institution's degrees and programs follow practices common to American higher education, including appropriate length, breadth, depth, rigor, **course sequencing**, time to completion, and synthesis of learning. The institution ensures that minimum degree requirements are 60 semester credits or equivalent at the associate level, and 120 credits or equivalent at the baccalaureate level.

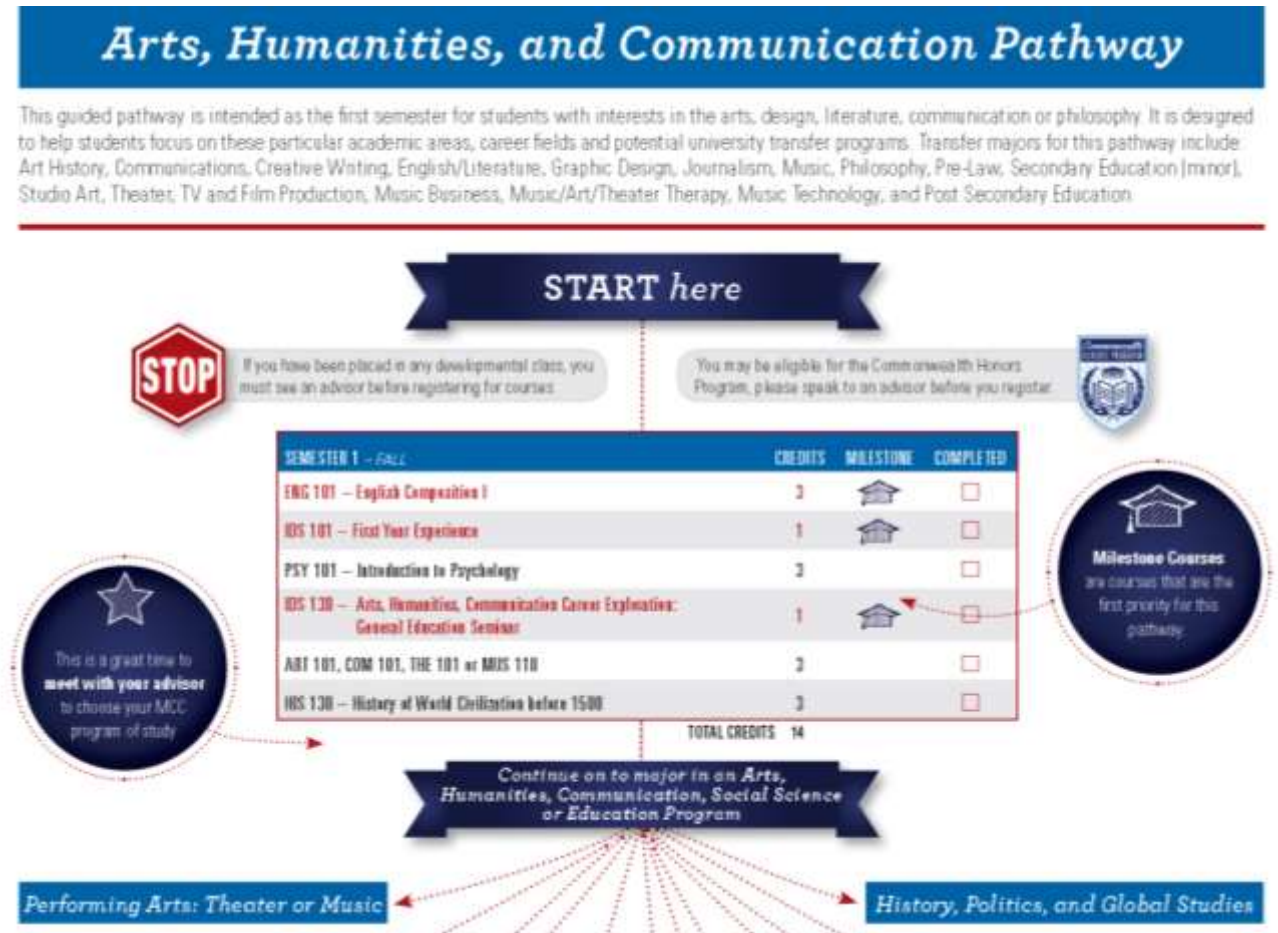
# Course Sequencing

## Scheduling – Accreditation

Standard II.A.6: The institution **schedules courses** in a manner that allows students to complete certificate and degree programs within a period of time consistent with established expectations in higher education.

# Would Program Mapping Help Clarify Requirements?

- Academic or Program Mapping
- Maps sequence of courses required to complete the degree
  - Term-by-term or
  - Unit-based





## Science, Technology, Engineering, and Mathematics Pathway

This pathway provides access to a wide range of programs in STEM (Science, Technology, Engineering and Mathematics). If you are unsure of which area you want to pursue, you may follow either of two pathway sequences. The pathways are intended as the first semester of a STEM major. You will take courses designed to move you forward to a degree and also explore career options in STEM.

The Science, Engineering and Mathematics Sequence is aligned with degrees for students who want to be engineers, scientists, science or mathematics teachers, or computer scientists, or who have interest in pursuing research in science or mathematics. These degrees are all designed to transfer to four-year colleges or universities. The Technology Sequence is aligned with degrees in fields that prepare students for direct entry into work and also offer transfer opportunities. Degrees from this sequence offer employment opportunities in the fields of biotechnology, energy, mechanical design, and IT/Cybersecurity.

### START here



If you have been placed in any developmental class, you must see an advisor before registering for classes.

You may be eligible for the Commonwealth Honors Program, please speak to an advisor before you register.



### Science, Engineering, or Math

SEMESTER 1	COURSE	CREDITS	REQUIREMENT	COMPLETED
	ENG 101 – English Composition I	3		<input type="checkbox"/>
	MAT 115 – Pre-Calculus or higher	4		<input type="checkbox"/>
	DS 101 – First Year Experience	1		<input type="checkbox"/>
	DS 125 – Career Exploration	1		<input type="checkbox"/>
	DS 115 – STEM Exploration	1		<input type="checkbox"/>
	CHE 155 – General Chemistry for Engineering & Science	4		<input type="checkbox"/>
	ETH 101 – Ethics and Society	1		<input type="checkbox"/>

TOTAL CREDITS: 17

### Continue on to major in a Science, Engineering or Mathematics Transfer Program



### Technology

SEMESTER 1	COURSE	CREDITS	REQUIREMENT	COMPLETED
	ENG 101 – English Composition I	3		<input type="checkbox"/>
	MAT 177 – Statistics	3		<input type="checkbox"/>
	DS 101 – First Year Experience	1		<input type="checkbox"/>
	DS 125 – Career Exploration	1		<input type="checkbox"/>
	DS 115 – STEM Exploration	1		<input type="checkbox"/>
	CHE 121 – College Chemistry 1	4		<input type="checkbox"/>
	ETH 101 – Ethics and Society	1		<input type="checkbox"/>

TOTAL CREDITS: 18

### Continue on to major in a Technology Program



To learn more, call us at 1-800-818-3434 or visit [www.middlesex.mass.edu](http://www.middlesex.mass.edu)

# Biological Sciences AS - Cell and Molecular Track

## Program Description

Biological Sciences covers all aspects of the scientific study of life and emphasizes both the unity and diversity of living things. The structure, function, and behavior of organisms are studied at the molecular, cellular, organismal and environmental levels. The biology program serves three areas of: a broad background of studies for the biology major preparing for transfer to a four-year institution; support courses in human anatomy, human physiology, and general microbiology, which may be used to satisfy prerequisites for nursing programs and other allied-health fields; and courses in natural sciences to fulfill general education requirements. The Associate in Science Degree requires the completion of 32.0 units.

## Student Learning Outcome

Interpret, analyze, and evaluate Biological knowledge using the scientific method.

## Recommended Course Sequence

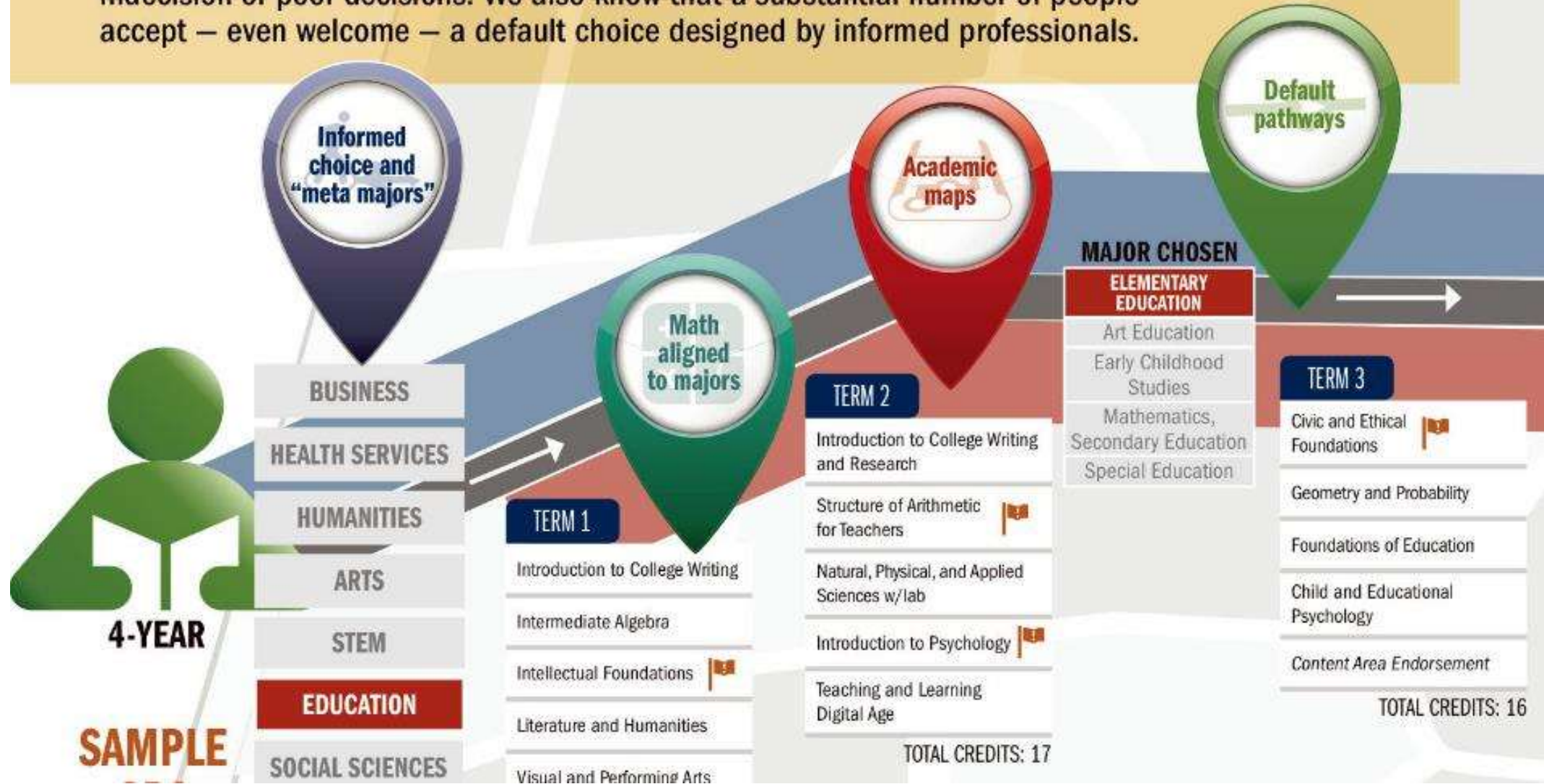
Fall Semester			
Course	Title	Units	GE Area
MATH 070	Intermediate Algebra	5.0	Pre-requisite / Language & Rationality
ENGL 101	English Composition	3.0	Language & Rationality / CSU GE
CHEM 151	Preparatory General Chemistry	4.0	Major
HIST 111 OR 112 OR HIST 120	US History I OR US History II OR The Role of Women in the History of the United States	3.0	American Institutions

Spring Semester			
Course	Title	Units	GE Area
BIOSCI 106	Organismal & Environmental Biology	4.0	Major / Natural Sciences
CHEM 201	General Chemistry I	6.0	Major
MATH 083	Geometry	5.0	Pre-requisite
ENGL 103	Critical Reading, Writing and Thinking	3.0	Transfer Prep

Fall Semester			
Course	Title	Units	GE Area
BIOSCI 107	Molecular and Cellular Biology	4.0	Major
CHEM 202	General Chemistry II	5.0	Major
MATH 102	Trigonometry	3.0	Pre-requisite
COMS 105	Fundamentals of Public Speaking	3.0	Humanities
HLHSCI 100	Health Education	3.0	PE & Wellness

Spring Semester			
Course	Title	Units	GE Area
BIOSCI 180 OR 140 OR BIOSCI 130 OR BIOSCI 132	Biology of Cancer OR Principles of Human Genetics OR Contemporary Issues in Environmental Biology OR Concepts of Evolution	3.0	Elective

Behavioral economics tells us that too much choice – especially uninformed choice – leads to indecision or poor decisions. We also know that a substantial number of people accept – even welcome – a default choice designed by informed professionals.



# Considerations for Program Mapping

- Who will lead the creation & implementation?
  - Committee? Taskforce?
  - Who should be involved?
- How do you bring in student voice?
- Which other stakeholders need to know about this?
- How does the college's broader environment (e.g., state or college policy) support or inhibit the work?



# Analysis for Program Mapping

- What is the full scope of programmatic offerings at the college?
- Do the college's programs align to the local labor market and/or university transfer partner?
- Which GE courses align best to each major and/or meta-major?
- What are the common courses across all programs?
- What is the required core within a particular meta-major that allows students to branch off into various majors without losing any credits?

# Analysis and Implementation Questions

- Which courses will introduce students to relevant faculty and career information early in their academic careers?
- Which courses might not be included, and who needs to be involved in that decision?
- How will the college present mapped pathway requirements to students?
- Will mapped pathways be presented to students as their *default* registration?

# Course Sequencing and Program Mapping

- **Essential questions regarding Scheduling...**
  - Can a student easily complete GE requirements within a reasonable period of time, while completing major requirements as well?
  - Does the scheduling of a significant number of GE courses in one area overlap with those in another?
  - For a given program of study or group of programs, do the GE offerings coordinate with one another or are they scheduled independently of one another?

# Course Sequencing

- More questions regarding Scheduling...
  - How are course schedules generated?
  - Who oversees the process?
  - How are conflicts resolved?
- Faculty Involvement
  - ASCCC Resolution 17.01 (F17) *Faculty Involvement in Scheduling of Courses*
  - “Resolved, That the Academic Senate of California Community Colleges urge local senates to continue to assert their purview in the development of procedures for scheduling classes and the faculty role in determining which courses are offered within programs to support student achievement of their academic goals.”

Questions?



# Resources

- Accrediting Commission for Community and Junior Colleges (ACCJC):  
<http://accjc.org>
- Rebecca Eikey ([Rebecca.eikey@canyons.edu](mailto:Rebecca.eikey@canyons.edu))
- LaTonya Parker ([LaTonya.Parker@mvc.edu](mailto:LaTonya.Parker@mvc.edu))
- Thais Winsome ([thais.winsome@missioncollege.edu](mailto:thais.winsome@missioncollege.edu))