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Redesigning Community College Pathways To Increase Completion and Cost-Efficiency

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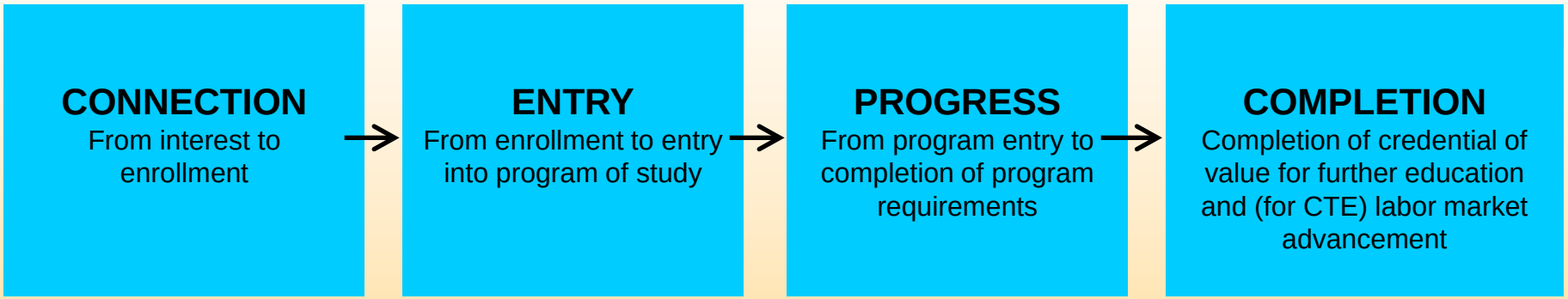
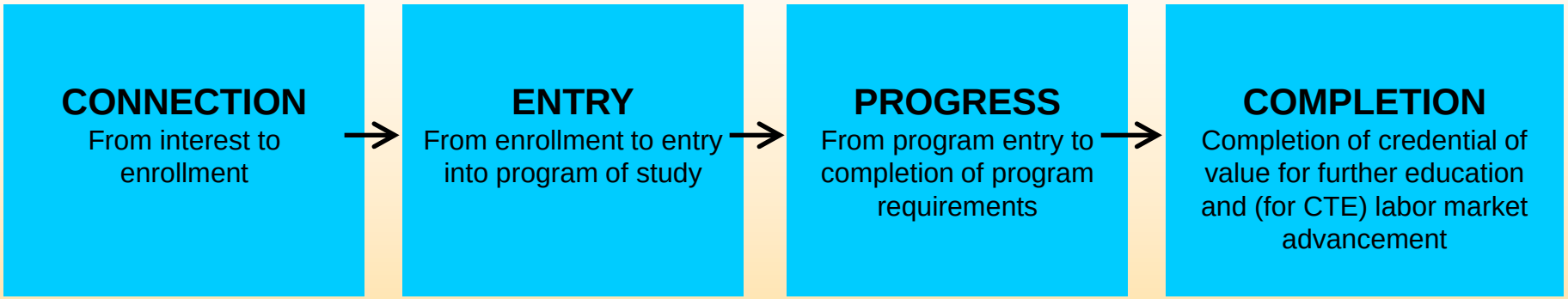
Loss-Momentum Framework



STUDENTS NEED TO "GET WITH THE PROGRAM"

- To earn a credential, students must first enter a coherent college-level program of study
- Many community college students enroll without clear goals for college and careers
- CCs offer lots of programs, but little guidance to help students choose and enter a program
- Few ccs track student progression into and through programs of study

Program Pathway

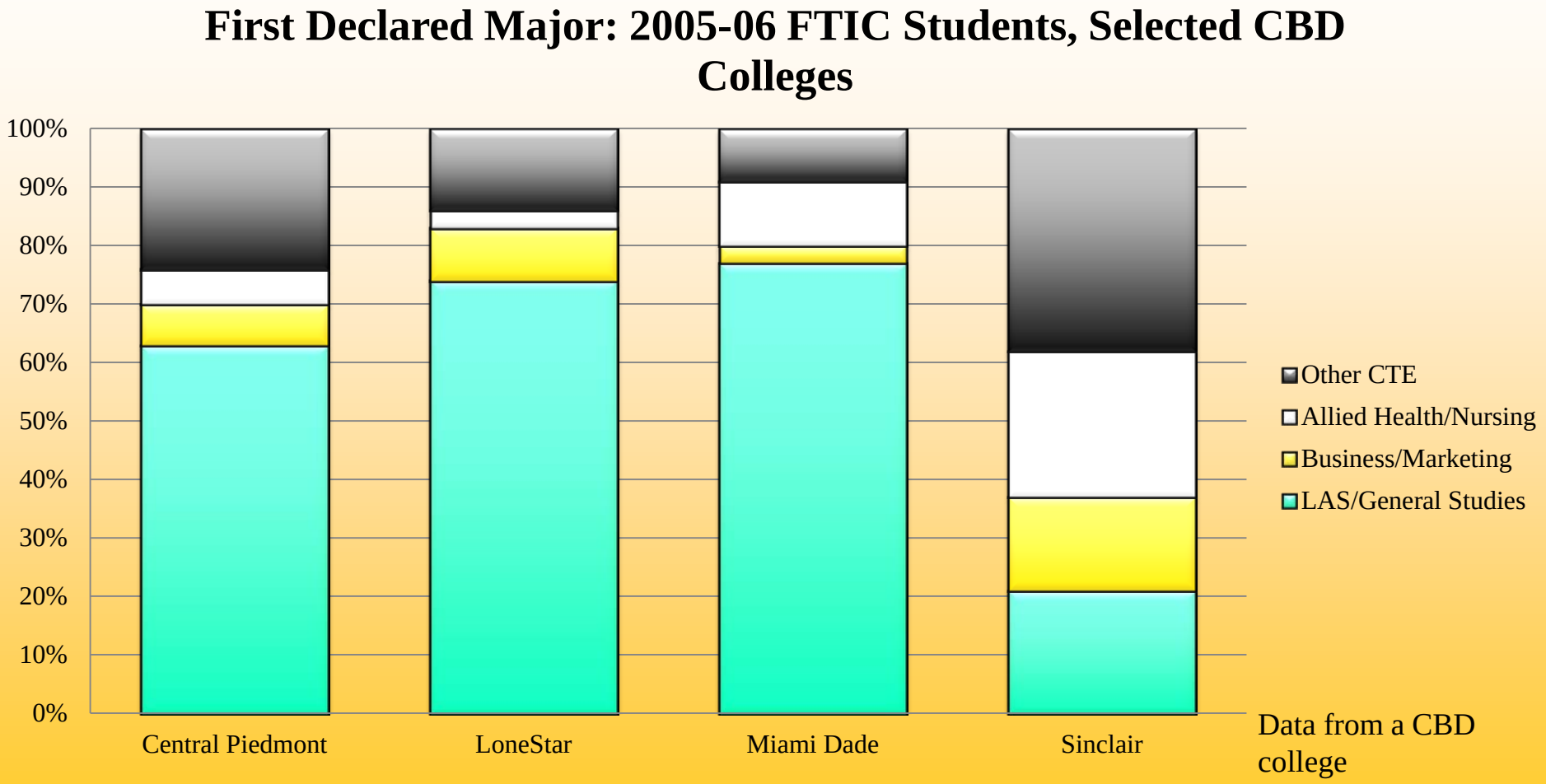


Consider College Education → **Enter Program of Study** → **Complete Program of Study**

CBD Program Pathway Analysis Findings

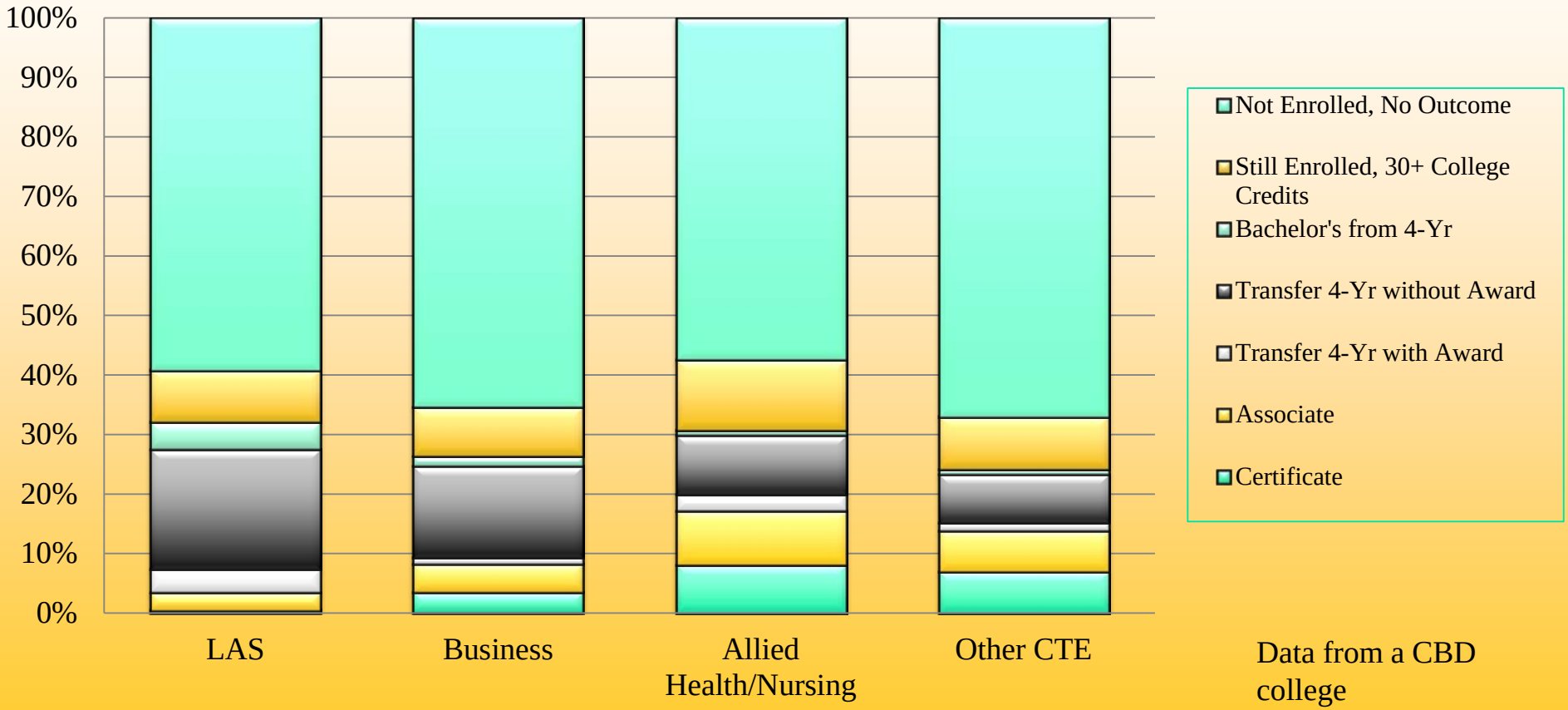
- Most students in most ccs in LAS, business or "pre-health" program areas
- Program entry and completion rates lower in LAS and business vs. CTE
- Many students leave after first term; among those who stay, course-taking patterns highly varied
- Many LAS/business students transfer without an associate degree; others linger, earning credits but no credential

WHAT ARE THEIR TOP DECLARED PROGRAMS OR "MAJORS"?



What are their 5-year outcomes by declared program?

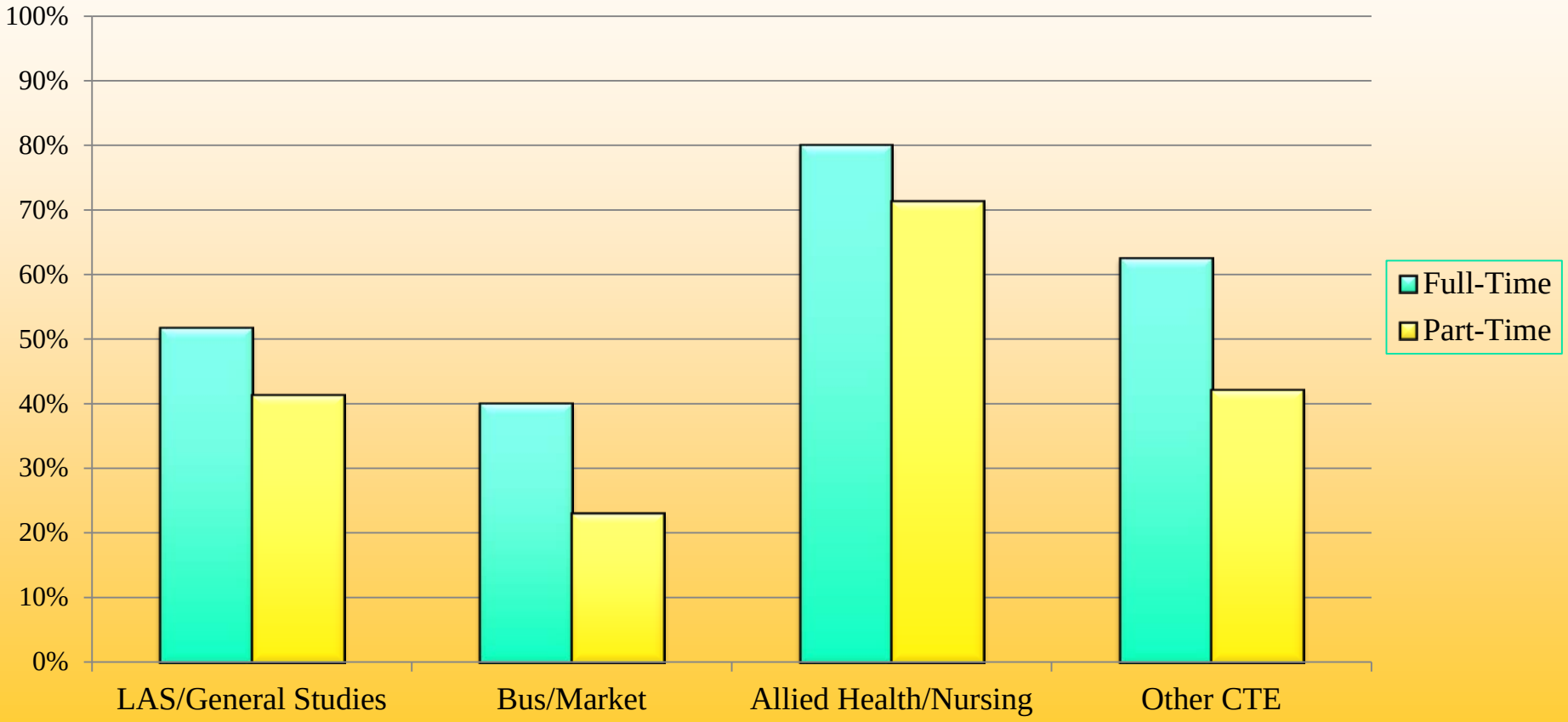
5-year Highest Outcomes by Declared "Major"
Credit Program Students



Data from a CBD college

How many make progress in a concentrated set of courses?

Five-Year Concentrator Rate by Declared "Major": Full-time vs. Part-time Credit Students



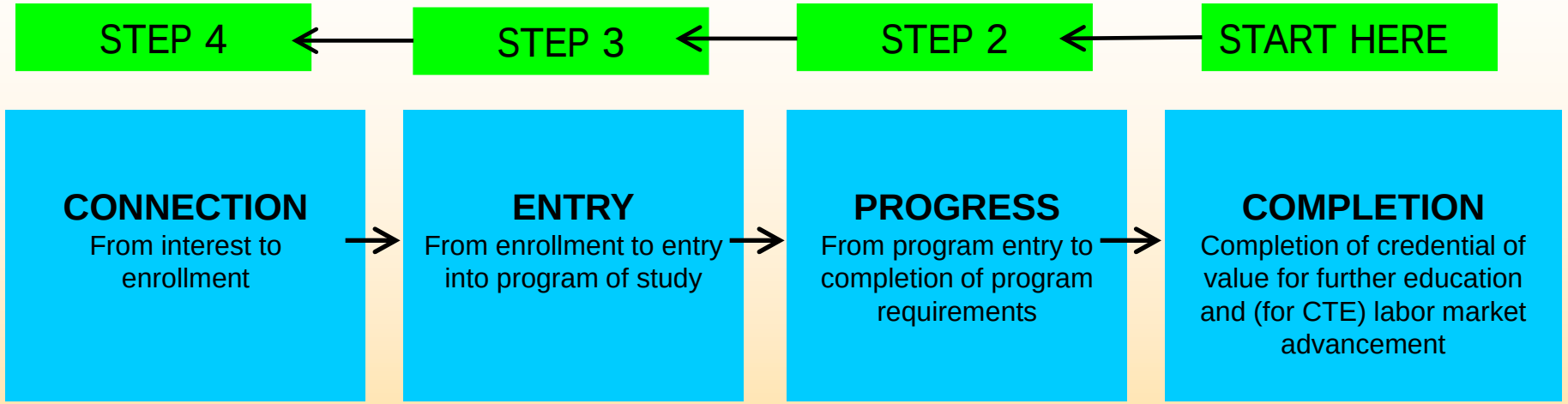
Status Quo Pathway Design (example AA in LAS or Gen Studies)

- AA requirements not aligned with requirements for junior standing in a major at transfer institutions
- Lack of clear pathways to transfer in a major for cc students; too many choices
- Students progress toward AA and transfer not tracked; little on-going guidance, support
- No mechanism to inform choice of major pathway
- Dev ed narrowly focused on math and English, not customized to particular program areas

Pathway Redesign Principles

1. Accelerate entry into coherent, prescribed programs of study
2. Minimize time required to get college-ready
3. Ensure students know requirements to succeed
4. Customize and contextualize instruction
5. Integrate student supports with instruction
6. Continually monitor student progress and provide feedback
7. Reward behaviors that contribute to completion
8. Leverage technology to improve learning and program delivery

Pathway Redesign Process



- Market program paths
- Build bridges from high school and adult ed. into program streams (e.g., strategic dual enrollment, I-BEST)

- Help students choose program pathway and track entry
- Build prescribed "on-ramps" customized to largest program streams

- Clearly define and prescribe program paths
- Monitor students' progress and provide feedback and supports JIT
- Incentivize progress

- Align academic program outcomes with requirements for success in further education and (for CTE programs) in the labor market

Model Pathway Design

- Program learning goals clearly defined and aligned with the requirements for transfer with junior standing in major and (for CTE programs) career advancement
- Program pathways well structured and prescribed, with electives only as needed to achieve learning goals
- Students' progress toward meeting requirements is monitored and feedback and support provided "just-in-time"
- "On-ramps" to help students choose a program of study and customized to accelerate entry into specific program streams

Measuring Pathway Cost

- Cost of all courses taken by each student at a college in a given period
- Each course is individually costed out
  - What is needed – credit hours or FTE by budget code and all expenditures by budget code
- Initially used instructional cost data from an actual college
- More recently added other costs and revenues

Accounting (A25100) Program Requirements

2008-09

Course	Hours	Cost per Credit Hour	Total Cost	FTE repay
required courses				$100.84
ACC120	4	$60.95	$243.80	$403.36
ACC121	4	$60.95	$243.80	$403.36
ACC129	3	$60.95	$182.85	$302.52
ACC130	3	$60.95	$182.85	$302.52
ACC149	2	$60.95	$121.90	$201.68
ACC150	2	$60.95	$121.90	$201.68
ACC220	4	$60.95	$243.80	$403.36
ACC221	4	$60.95	$243.80	$403.36
ACC225	3	$60.95	$182.85	$302.52
ACC240	3	$60.95	$182.85	$302.52
ACC269	3	$60.95	$182.85	$302.52
BUS115	3	$50.08	$150.24	$302.52
BUS121	3	$60.95	$182.85	$302.52
BUS225	3	$60.95	$182.85	$302.52
CIS110	3	$49.16	$147.48	$302.52
ECO251	3	$49.86	$149.58	$302.52
technical electives				
ACC140	2	$60.95	$121.90	$201.68
COE112	2	$60.95	$121.90	$201.68
Gen Ed				
ECO252	3	$49.86	$149.58	$302.52
ENG 111	3	$41.59	$124.77	$302.52
ENG 114	3	$41.59	$124.77	$302.52
MAT 161	3	$37.28	$111.84	$302.52
COM 231	3	$58.02	$174.06	$302.52
HUM	3	$41.59	$124.77	$302.52
Total	72		$3,999.90	$7,260.48
Cost to CPCC		profit	$3,260.58	

Surgical Technology (A45740) Program Requirements

2009-2010

Course	hrs	Cost/hr	Total Cost	FTE repay
required courses				$99.77
SUR 110	3	$232.70	$698.11	$299.31
SUR 111	7	$232.70	$1,628.93	$698.39
SUR 122	6	$232.70	$1,396.22	$598.62
SUR 123	7	$232.70	$1,628.93	$698.39
SUR 134	5	$232.70	$1,163.52	$498.85
SUR 135	4	$232.70	$930.82	$399.08
SUR 137	1	$232.70	$232.70	$99.77
SUR 210	2	$232.70	$465.41	$199.54
SUR 211	2	$232.70	$465.41	$199.54
BIO 163	5	$44.74	$223.70	$498.85
BIO 175	3	$44.74	$134.22	$299.31
Gen Ed				
ENG 111	3	$42.53	$127.59	$299.31
ENG 112	3	$42.53	$127.59	$299.31
COM 110	3	54.64	$163.92	$299.31
ECO 151	3	$56.25	$168.75	$299.31
CIS 111	3	48.35	$145.05	$299.31
MAT 121	3	$39.60	$118.80	$299.31
PSY 150	3	44.02	$132.06	$299.31
HUM	3	$42.53	$127.59	$299.31
BUS 137	3	$67.65	$202.95	$299.31
Total	72		$10,282.26	$7,183.44
Cost to CPCC		loss	($3,098.82)	

PATHWAYS DIFFER IN THEIR COSTS

- Pathways with excess credits and more developmental education will cost more
- Pathways with high dropout rates will cost more per degree
- Each credit does not cost the same amount:
  - Upper level courses cost more
  - Lab classes cost more
  - Smaller classes cost more

PATHWAY COSTS HAVE TO BE RELATED TO OUTCOMES

- Nursing programs are very expensive, but they have high graduation rates
- Liberal Arts programs are cheaper, but they have low graduation rates
- College-ready students do not require developmental education courses and they graduate at higher rates

Estimating Cost-Efficiency of Pathway Redesign Strategies

Connection/Entry Strategy	Improvement Goal	Instructional Costs	College Completions	College Efficiency
• More clearly define program paths • Provide program options & info upfront • Re-think dev ed as prep for particular program paths • Require educational plan	Increase program concentration rates by 20%	↑8%	↑11%	↑3%

Calculations by Jenkins, Belfield, & Crosta

Estimating Cost-Efficiency of Pathway Redesign Strategies

Progress/Completion Strategy	Improvement Goal	Instructional Costs	College Completions	College Efficiency
• Structured program pathways with limited electives • Electronic progress-tracking & guidance for majors • Required advising at key milestones	Increase program-concentrators' completion by 20%	↑4%	↑13%	↑9%
• "Automatic graduation" • Required advising at key milestones	Increase "lingerer" completion by 33%	↑1%	↑16%	↑13%
• Strengthened articulation agreements • State policy requiring transfer of all gen-ed credits from AA	Among transfers, increase credential rate by 20%	↑6%	↑19%	↑11%

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NCPR IS FUNDED BY THE INSTITUTE OF EDUCATION SCIENCES OF THE U.S. DEPARTMENT OF EDUCATION
and is a partnership of the Community College Research Center, Teachers College, Columbia University; MDRC; the Curry School of Education at the University of Virginia; and faculty at Harvard University.