CCRC COMMUNITY COLLEGE RESEAROH OENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Redesigning College for Student Success

A Clearer Path

CASSL Colloquium

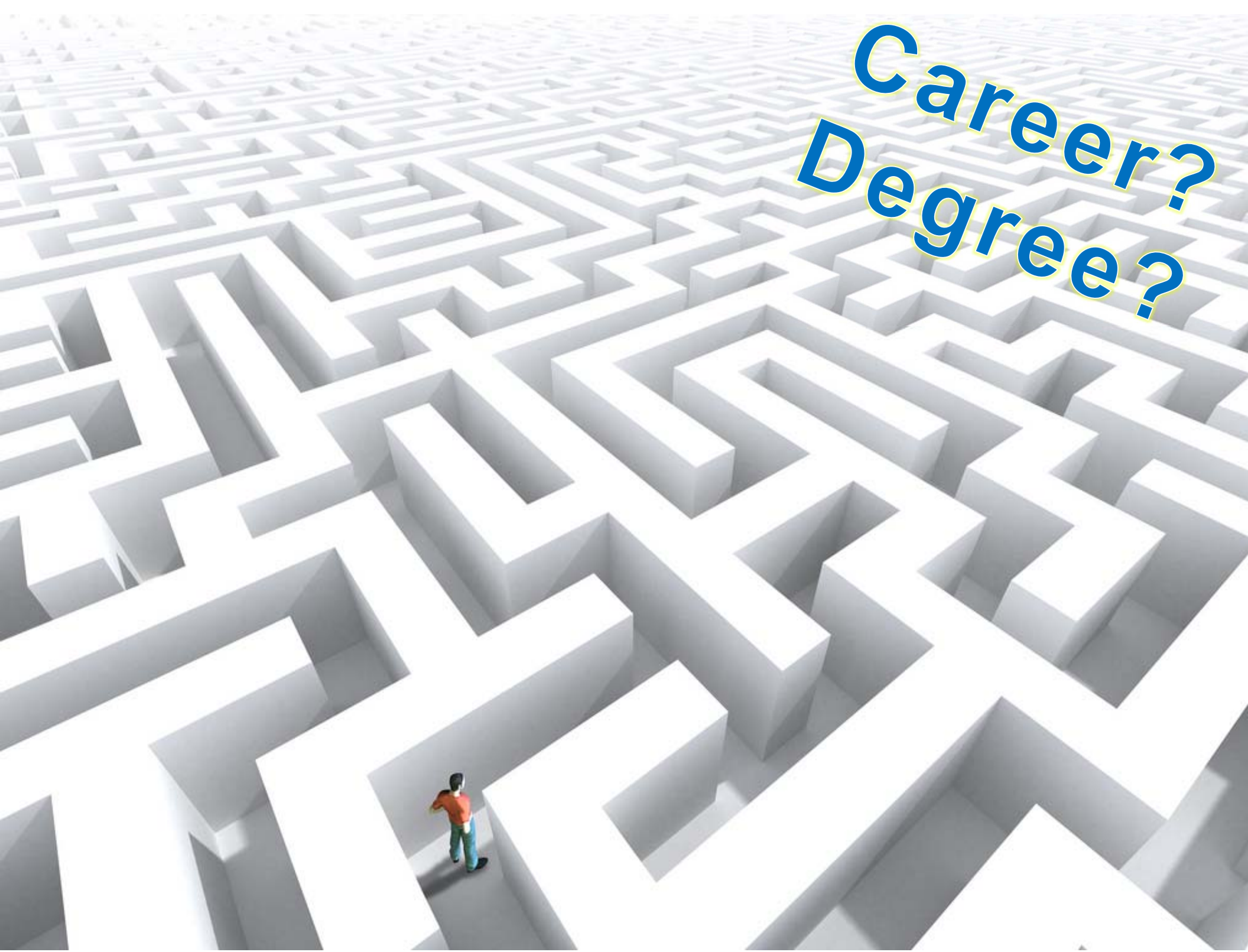
August 16, 2017

Davis Jenkins
Community College Research Center
Teachers College, Columbia University

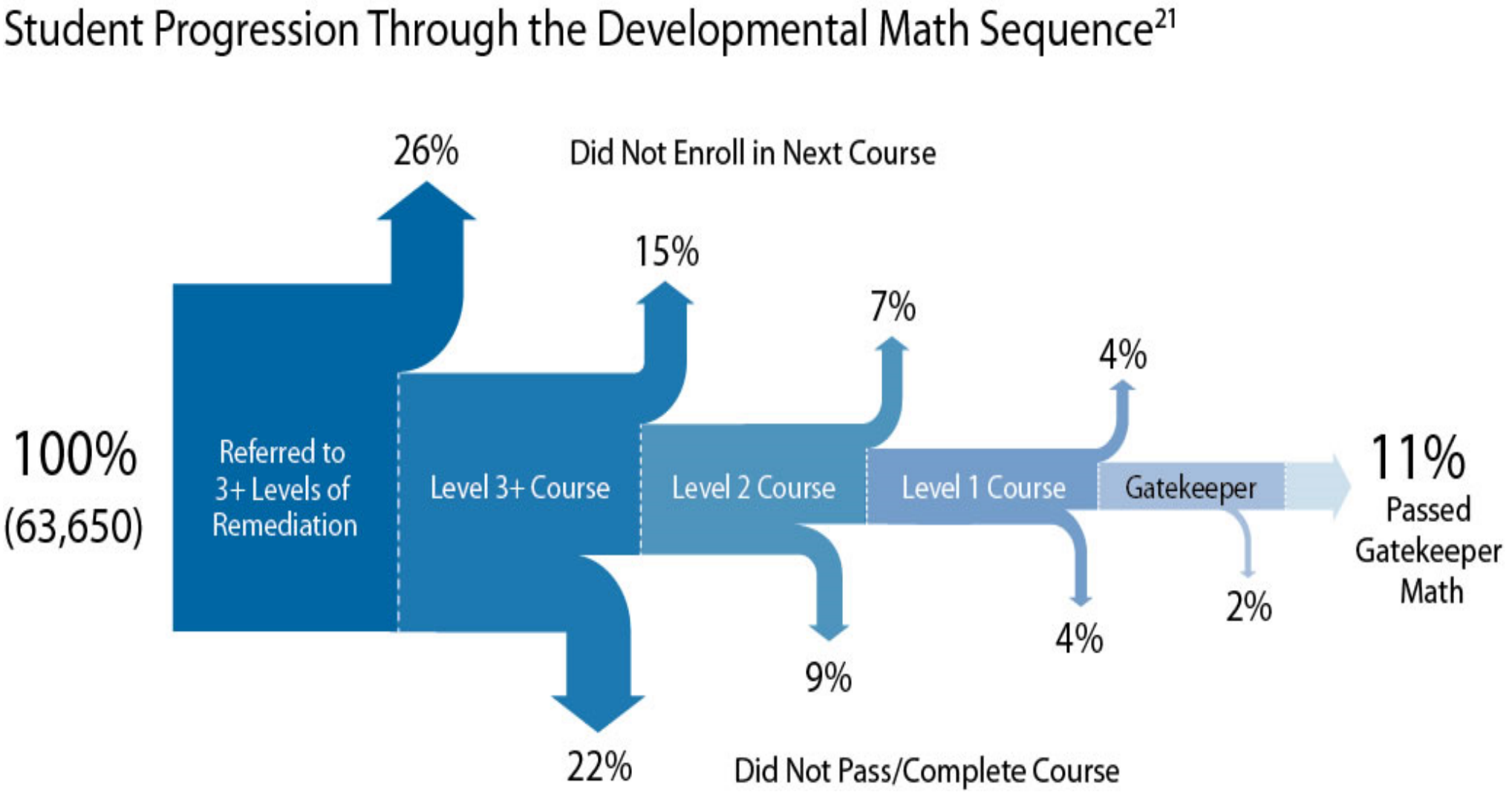
@CommunityCCRC
#RedesigningCCs

New Students Want to Know

- What are my career options?
- What are the education paths to those careers?
- What will I need to take?
- How long will it take and how much will it cost?
- Will my credits transfer?
- Who can I talk with to get good information?

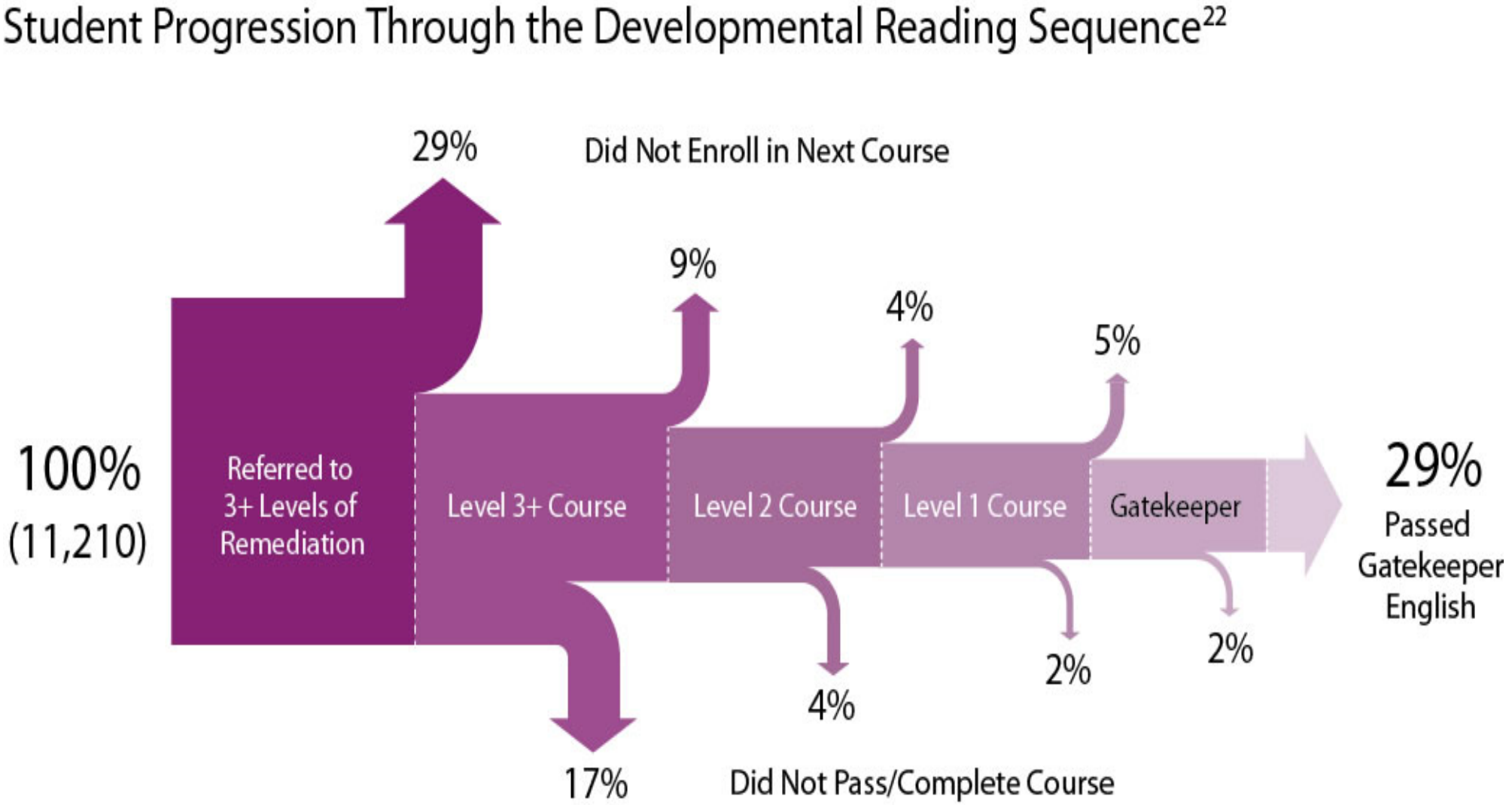

Career?
Degree?

Dev Ed Sorting System



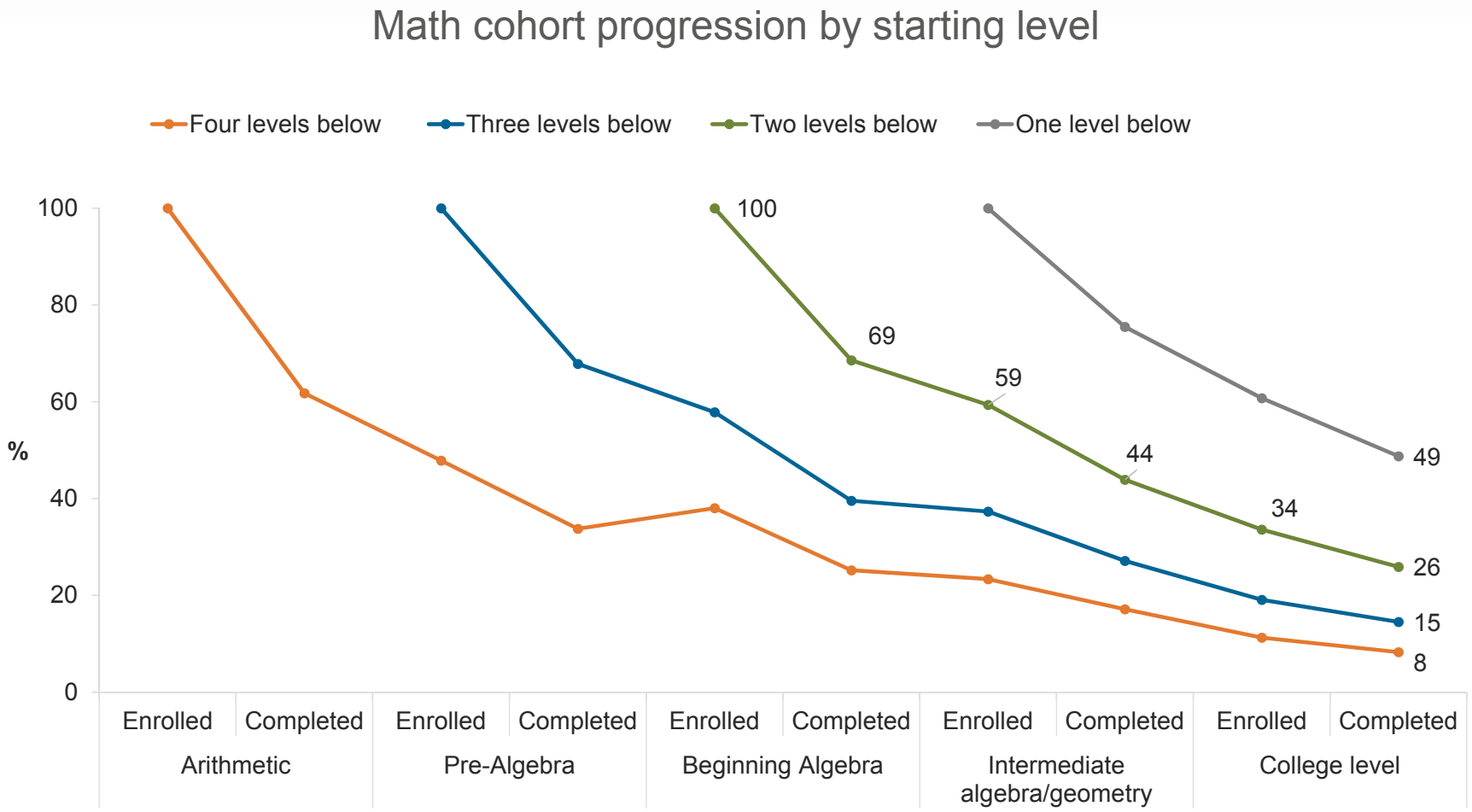
Source: Bailey, Jeong & Cho, 2010.

Dev Ed Sorting System



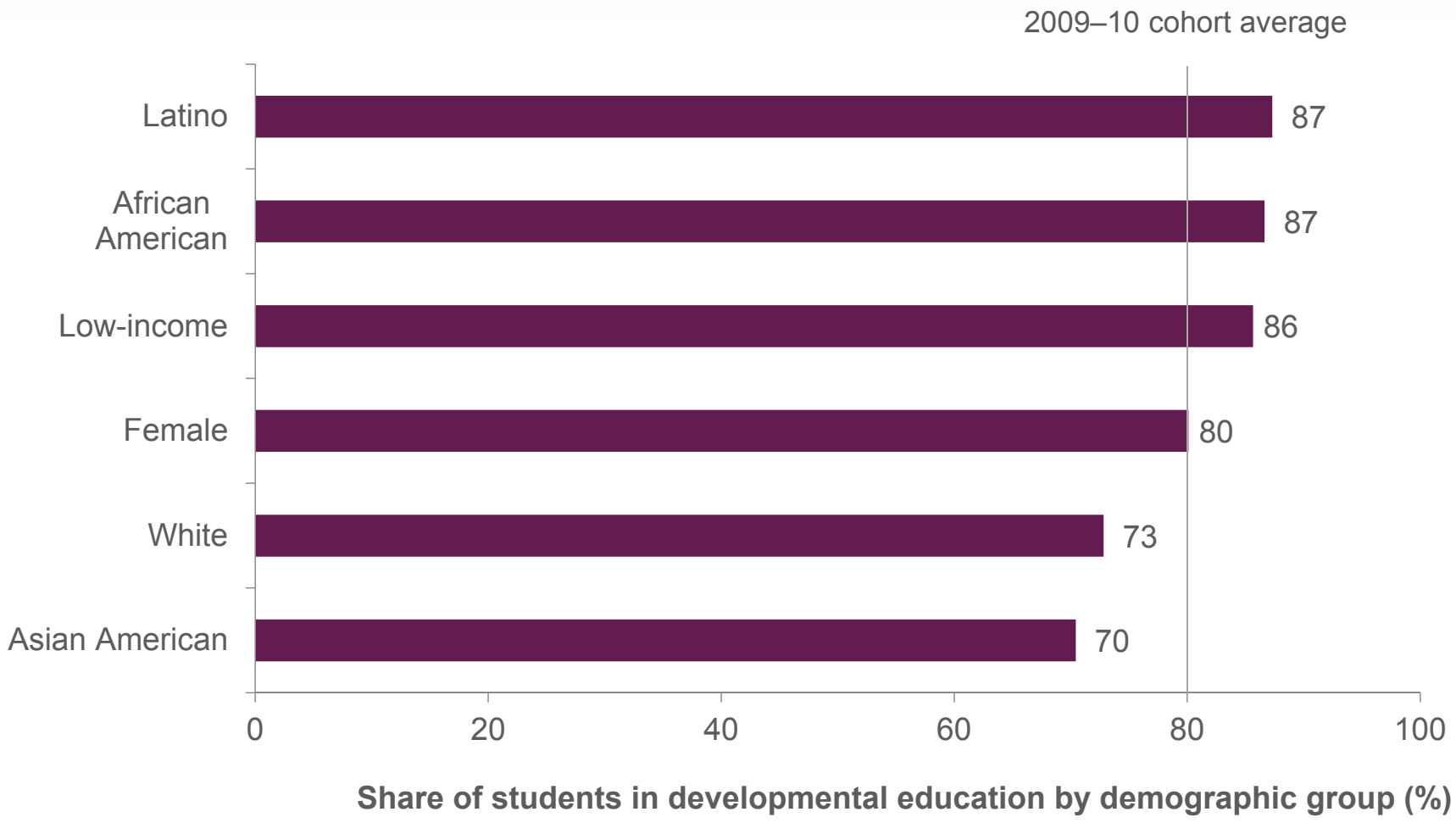
Source: Bailey, Jeong & Cho, 2010.

High attrition is a big concern



PPIC

Latino, African American, and low-income students are overrepresented in developmental education



PPIC

GENERAL EDUCATION REQUIREMENTS

(Select 12 courses from this list of more than 300)

Basic Liberal Studies Requirements: [2 courses must include the Diversity (D) overlay]

English Communication: 6 credits; 3 credits must be in a writing course

Writing (ECw): ELS 112, 122 (nonnative speakers); HPR 326; WRT 104, 105, 106, 201, 227, 235, 302, 303, 304(D), 305(D), 333.

General (EC): COM 100(D), 110(D); LIB 120; PHL 101.

Fine Arts and Literature (A): 6 credits; 3 credits in Fine Arts and 3 credits in Literature

Fine Arts: ARH 120(D), 251(D), 252(D); ART 101, 207; FLM 101(D), 203(D), 204(D), 205(D); HPR 105, 124, 201A, 202A, 324; LAR 201; MUS 101(D), 106(D), 111, 292(D), 293(D); PLS 233; SPA 320(D); THE 100, 181, 351(D), 352(D), 381, 382, 383.

Literature: AAF 247(D), 248(D); CLA 391(D), 395(D), 396(D), 397(D); CLS 160(D); ENG 110(D), 160(D), 241(D), 242(D), 243(D), 247(D), 248(D), 251(D), 252(D), 260(D), 262(D), 263(D), 264(D), 265(D), 280(D), 300(D), 302(D), 303(D), 304(D), 317(D), 355(D), 357(D), 358(D); FRN 309(D), 310(D), 320(D), 391(D), 392(D), 393(D); HPR 105, 125, 201A, 202A; RUS 391(D), 392(D); SPA 305(D), 306(D), 307(D), 308(D); WMS 317(D).

Language/Culture (FC): 6 credits

- Demonstration of competence through the intermediate level by examination or successfully completing through 104 (living language) or 302 (classical language)
- Two-course sequence (or one course at the 113 level) in a previously studied language through at the appropriate level (all D): ARB 103, 104; CHN 103, 104; FRN 103, 104; GER 103, 104; GRK 301, 302; HBW 103, 104; ITL 103, 104, 111; JPN 103, 104; LAN 193, 194; LAT 301, 302; POR 103, 104; RUS 103, 104; SPA 103, 104, 111, 113, 210.
- Two-course sequence (or one course at the 111 level) in a language not previously studied (or studied for less than two years in high school) through the beginning level: ARB 101, 102; CHN 101, 102; FRN 101, 102; GER 101, 102; GRK 101, 102; HBW 101, 102; ITL 101, 102; JPN 101, 102; LAN 191, 192; LAT 101, 102; POR 101, 102; RUS 101, 102; SPA 101, 102.
- Study abroad in an approved program for one semester
- Major in a foreign language
- Formerly registered international students, students with recognized immigrant status, or naturalized citizens (at Dean's discretion)
- Two courses in Cross-Cultural Competence: CPL 300(D); FRN 309(D), 310(D), 320(D), 391(D), 392(D), 393(D); HIS 132(D), 171(D), 172(D), 180(D), 311(D), 327(D), 374(D), 375(D); HPR 201F, 202F; LET 151L(D), 151Q(D), 151R; NRS 300; PHL 331(D); RLS 131(D); SPA 320(D), TMD 224(D); six credits of a full-semester approved Intercultural Internship in a foreign country through the Office of Internships and Experiential Education

Letters(L): 6 credits

AAF 150(D), 201(D), 355(D), 356(D); APG 327; BGS 392(D); CLS 160(D), 235; EGR 316(D); ENG 110(D), 160(D), 243(D), 251(D), 252(D), 280(D), 355(D), 356(D); FRN 391(D), 392(D), 393(D); HIS 111, 112, 113(D), 114(D), 116, 117, 118(D), 130(D), 132(D), 141(D), 142(D), 145(D), 146(D), 150(D), 160(D), 171(D), 172(D), 180(D), 304, 305, 310(D), 311(D), 314, 323(D), 327(D), 332(D), 333(D), 340(D), 341(D), 346(D), 351(D), 355(D), 356(D) , 374(D), 375(D); HPR 107, 201L, 202L, 307; JOR 110(D); LAR 202(D); LET 151L(D), 151Q(D), 151R(D); NUR 360(D); PHL 101, 103, 204, 210(D), 212(D), 215, 217(D), 235, 314, 316(D), 321, 322, 323(D), 325(D), 328(D), 331(D), 346, 355; PSC 341, 342; PSY 310; RLS 111(D), 125, 126, 131(D); WMS 220(D), 315(D), 320(D)

Mathematics(MQ): 3 credits satisfied by MTH 141

BUS 111, CSC 101, 201; HPR 108, 201M, 202M; MTH 106, 107, 108, 109, 111, 131, 141; PSC 109; STA 220.

Natural Sciences(N): 6 credits; satisfied by PHY

AFS 190, 210, 211; APG 201(D); AST 108, 118; AVS 101(D); BCH 190; BIO 101, 102, 105, 106, 286(D); BPS 201; CHM 100, 101, 103, 112; GEO 100, 102, 103, 110, 113, 120; HPR 109, 201N, 202N; MIC 190; NFS 207; NRS 190; OCG 110, 123, 131; PHY 109, 111, 112, 140, 185, 186, 203, 204, 205, 273, 274, 275; PLS 150, 190; TMD 113

Social Sciences(S): 6 credits

APG 200(D), 202, 203(D), 301(D); CPL 202(D); ECN 100(D), 201, 202, 306, 381(D); EDC 102(D); EEC 105, 310, 356; GEG 101(D), 104(D), 202(D); HDF 225; HPR 110(D), 201S, 202S; HSS 130; JOR 110(D); KIN 123(D); LIN 200(D); MAF 100; NUR 150(D); PSC 113(D), 116(D), 274(D), 288; PSY 103(D), 113(D), 232(D), 235(D), 254(D), 255(D); SOC 100(D), 212(D), 230(D), 240(D), 242(D), 274(D); TMD 224(D), WMS 150(D)

Menu

Catalog

General Information

Graduation Requirements

Areas of Study

Download

PSLO

Looking for Archives?
Catalogs from past years can be found on our Download page.

Graduation Requirements

A. **Satisfactory completion of 60 units of collegiate work:** Must earn an overall 'C' (2.0 grade point average) in a curriculum that LRCCD accepts toward the degree & meet Graduation Competency Requirements (see Table 1 below). At least 12 units must be earned at Cosumnes River College.

B. **Major:** Complete one of the degree programs listed in this catalog with a minimum of a 'C' grade in each course for the CRC major.

C. **Demonstrate Graduation Competencies**, as listed in Table 1 below.

D. Complete General Education (GE) requirements listed in Table 2 below.

E. Complete Ethnic/Multicultural Studies as listed in Table 3 below. Courses approved for General Education may also be use to satisfy this requirement.
See courses marked with a "#" in Table 2.

TABLE 1: GRADUATION COMPETENCY REQUIREMENTS

Demonstrate college-level competence in reading, in written expression and in mathematics by completing the following:

1. **Reading Competency - a.** Completion with a grade of 'C' or better in ENGRD 200, 310 or 312 or an equivalent college reading course at a regionally accredited college **OR** Obtain a satisfactory score on a college level reading examination administered in the Los Rios District. **OR b.** Complete either CSU-GE Breadth or IGETC; **OR c.** Students who possess an AA/AS degree or higher shall be deemed competent in reading.
2. **Written Expression Competency** - Completion with a grade of 'C' or better in ENGWR 300, ENGWR 480, ESLW 340, HONOR 375, or BUS 310 or an equivalent course at an accredited college.
3. **Mathematics Competency - a.** Completion with a grade of "C" or better in MATH 110, 120, 125, 144, OR designated higher level mathematics/statistics course, OR ECON 310, OR PSYC 330, OR college math course at a regionally accredited college. **OR b.** Obtain a satisfactory score on a mathematics competency examination used district-wide for graduation.

Note: Effective beginning summer 2004, students who possess a BA/BS or higher degree from a regionally accredited college or university in the United States are deemed to have met the General Education and Graduation Competency Requirements for an AA/AS degree.

TABLE 2: GENERAL EDUCATION REQUIREMENTS FOR AA/AS DEGREES

I: Humanities – One course from the following (3 units minimum)
ARCH 310, 332; ART 300, 301, 304, 320, 323, 324, 330, 338, 361, 362, 364, 370, 372, 394, 430; ARTH 300, 303, 307, 309, 311, 312, 324#, 325#, 328#, 332#, 333; ARTNM 324; ARTPH 301, 342; DEAF 310, 312, 314, 316; ENGCW 480; ENGLT 303, 310, 311, 320, 321, 330, 336#, 340#, 341, 343#, 345#, 360#, 370, 402; 488; ENGWR 301; FMS 300, 305, 310, 320, 488, 489; GEOG 481; HIST 364*, 365*; HONOR 350, 352, 360, 378, 382; HUM 300, 301, 310, 320, 324#, 331#, 332#, 484, 486; MUFHL 300, 308, 310, 311, 315, 330#; MUP 357, 358, 360, 362; MUSM 334, 370; PHIL 304#, 310, 330, 331, 338, 350, 352#, 356; PHOTO 301, 302, 420; RTVF 302, 305, 368; SPAN 101, 102, 401, 402, 411, 412, 413, 415, 425, 426, 427; TA 300, 302, 303, 306#, 350, 401; VIET 401, 402, 411, 412

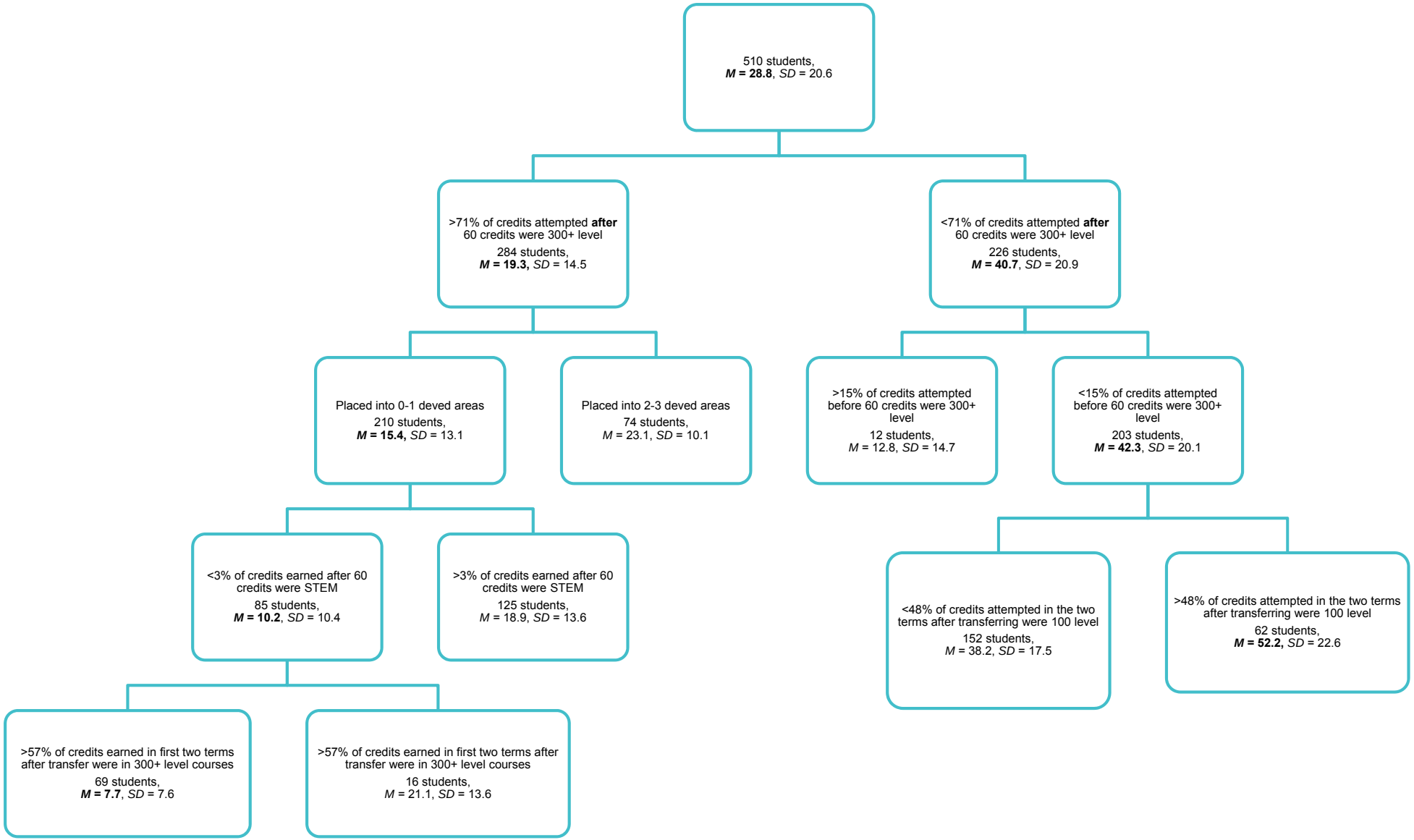
II: Languages and Rationality - To include at least one course from 'a.' and one course from 'b.' (total of 6 units minimum)
a. English Composition (3 units minimum) BUS 310; ENGED 305; ENGWR 300, 341, 480; ESLW 340; HONOR 375
b. Communication and Analytical Thinking (3 units minimum)
ACCT 101, 301; CISC 310*; CISP 300, 350, 360, 370, 400; COMM 301, 311, 315, 331, 361, 363; ECON 310; ENGCW 400, 410, 420, 430; ENGLT 488; ENGRD 310; ENGWR 302; HONOR 378; JOUR 300; MATH 110, 120, 125, 144, 300, 310, 335, 341, 343, 350, 351, 370, 400, 401, 402, 410, 420; PHIL 300, 320, 325; PSYC 330, 335; RTVF 306; SOC 305*; STAT 300

III: Living Skills - To include at least one course from 'a.' and one course from 'b.' (total of 3 units minimum)
a. One course (minimum) from any of the following designators (physical education activity courses)**
ADAPT; DANCE; FITNS; PACT; SPORT; TMACT
b. One course (minimum) from Life Development Skills (2 units minimum)
BUSTEC 302, 306; CISC 302, 310; COMM 321; ECE 312, 314, 322, 350, 415, 430#; ENGED 320; FCS 322, 324; HCD 110, 112, 122, 132, 310, 340, 346; HEED 300, 350; HSER 302; INDIS 313; JOUR 330; KINES 300, 301, 330, 416; LIBR 318, 325; MATH 315; NUTRI 300, 303, 322, 331; PSYC 340*, 356, 371; SGVT 300, 315; SOC 310; Work Experience Courses: Any courses numbered 198, 298, or 498
Note: The 3-unit requirement for this category, Living Skills can also be fulfilled by Military Service Credit (Honorable discharge) with a minimum of one (1) year active duty service. Please submit a copy of form DD214 to the Admissions Office as verification.

IV: Natural Sciences – To include at least one course from the following (3 units minimum)
ANSC 300, 301; ANTH 300, 303*, 374*; ASTR 300; BIOL 100, 102, 300, 307, 310, 342, 350, 351, 352, 400, 410, 420, 430,

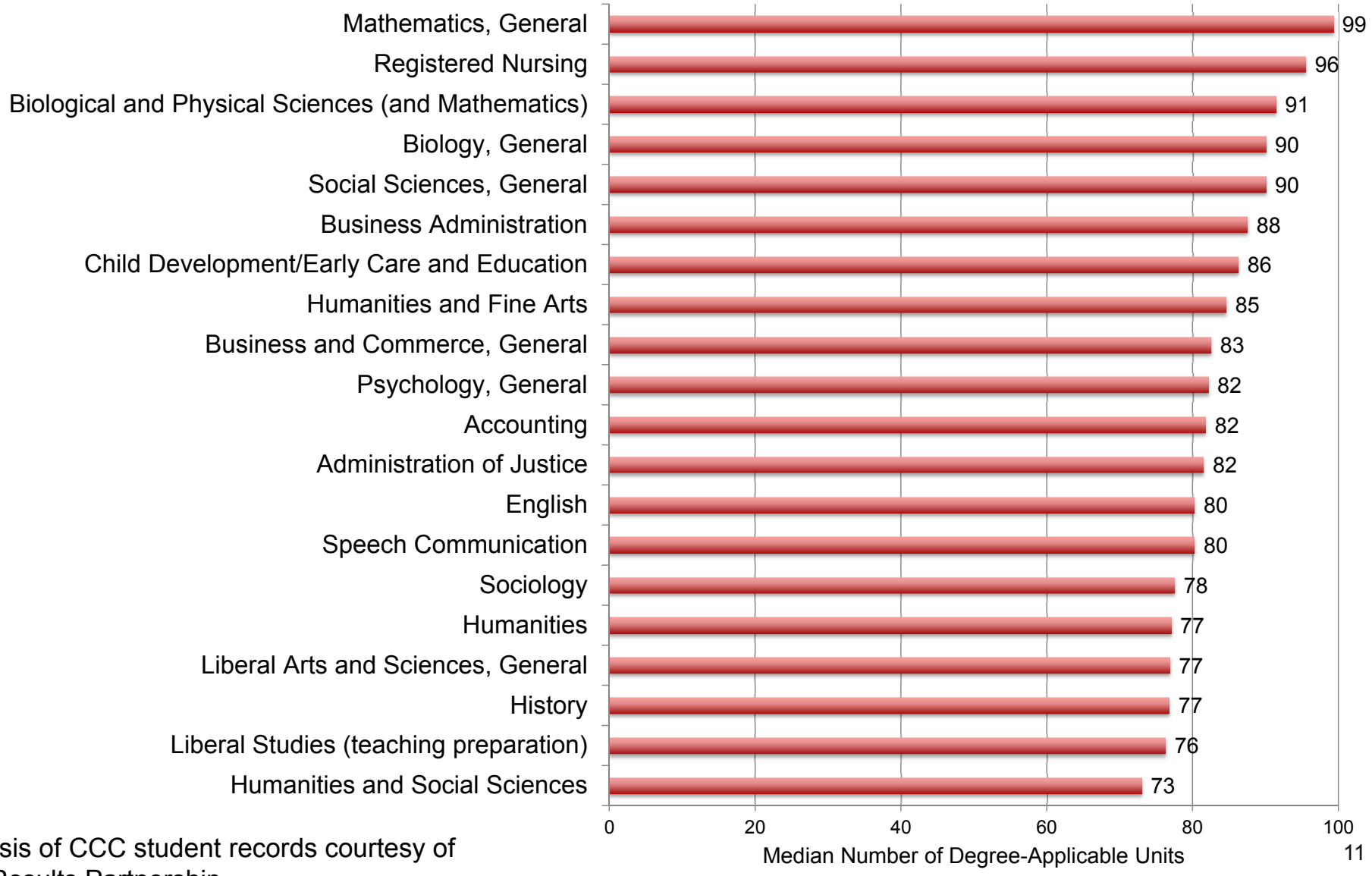
Simplified Partition Tree:

State A, **2-year Entrants**, Excess Credits Attempted



Source: Fink, Kopko, Ran, & Jenkins. “Course-level Indicators of Two- to Four-Year College Credit Transfer Efficiency,” Paper presented at APPAM 2016, Washington, DC.

Median credits earned by associate degree completers
20 CCC programs with the most completers in 2015-16

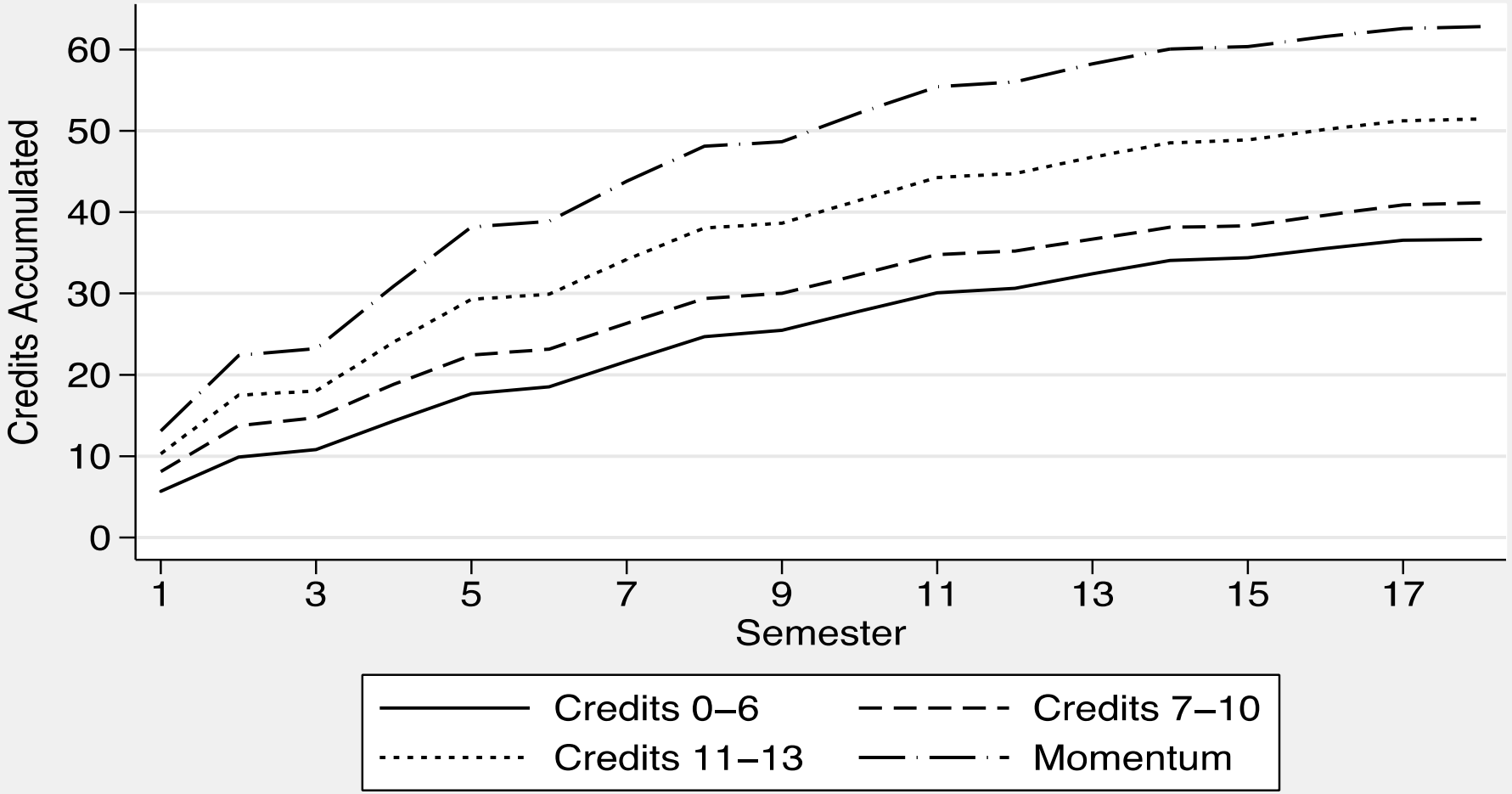


Data. Analysis of CCC student records courtesy of Education Results Partnership

Momentum Works for CC Students

Figure 1. Credits Accumulated by Semester

Community College Students



TBR data, fall 2008 cohort.

Source: Belfield, Jenkins, Lahr, 2016.

Momentum Pays for CC Students

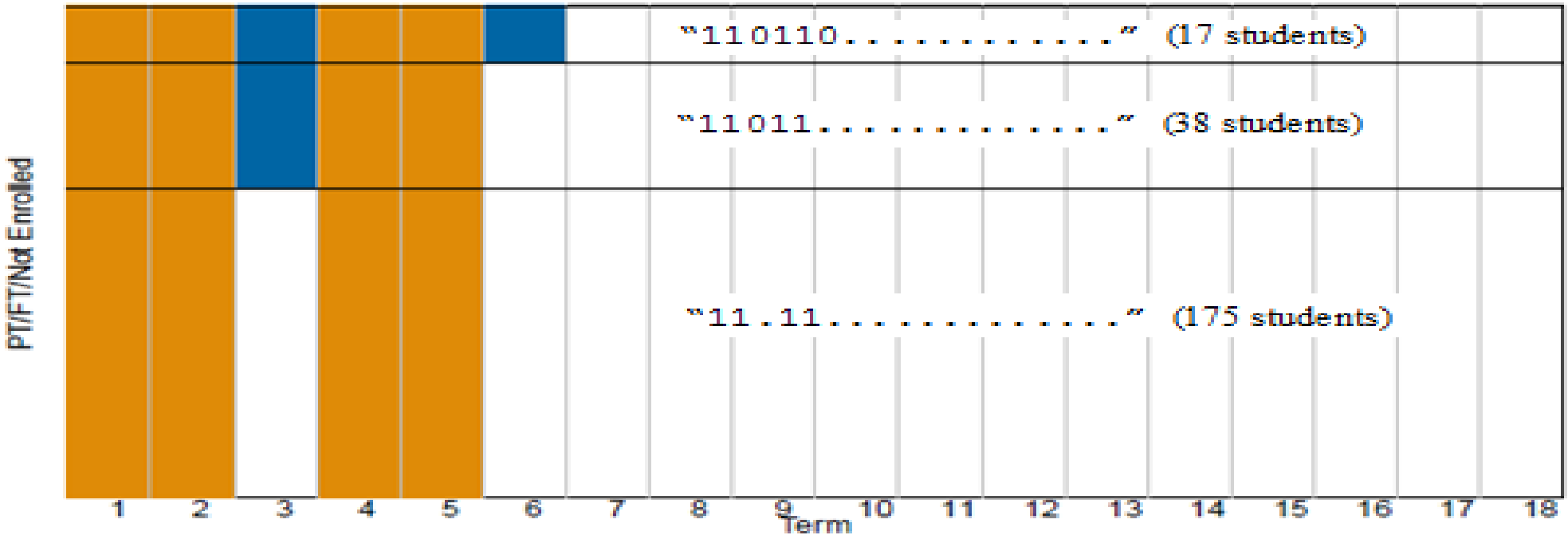
Effects* of Momentum on Six-Year Outcomes
Tennessee Community Colleges, FTEIC Fall 2008 Cohort

	1st semester momentum	1st year momentum
Additional credits earned	8	22
Probability of degree attainment	7pp (27% vs. 34%)	18pp (25% vs. 43%)
Tuition and fees per degree	-9%	-20%
Expenditures per degree	-9%	-14%
Tuition and fees avg.	+$620	+$1,740

*Adjusted results, controlling for student characteristics

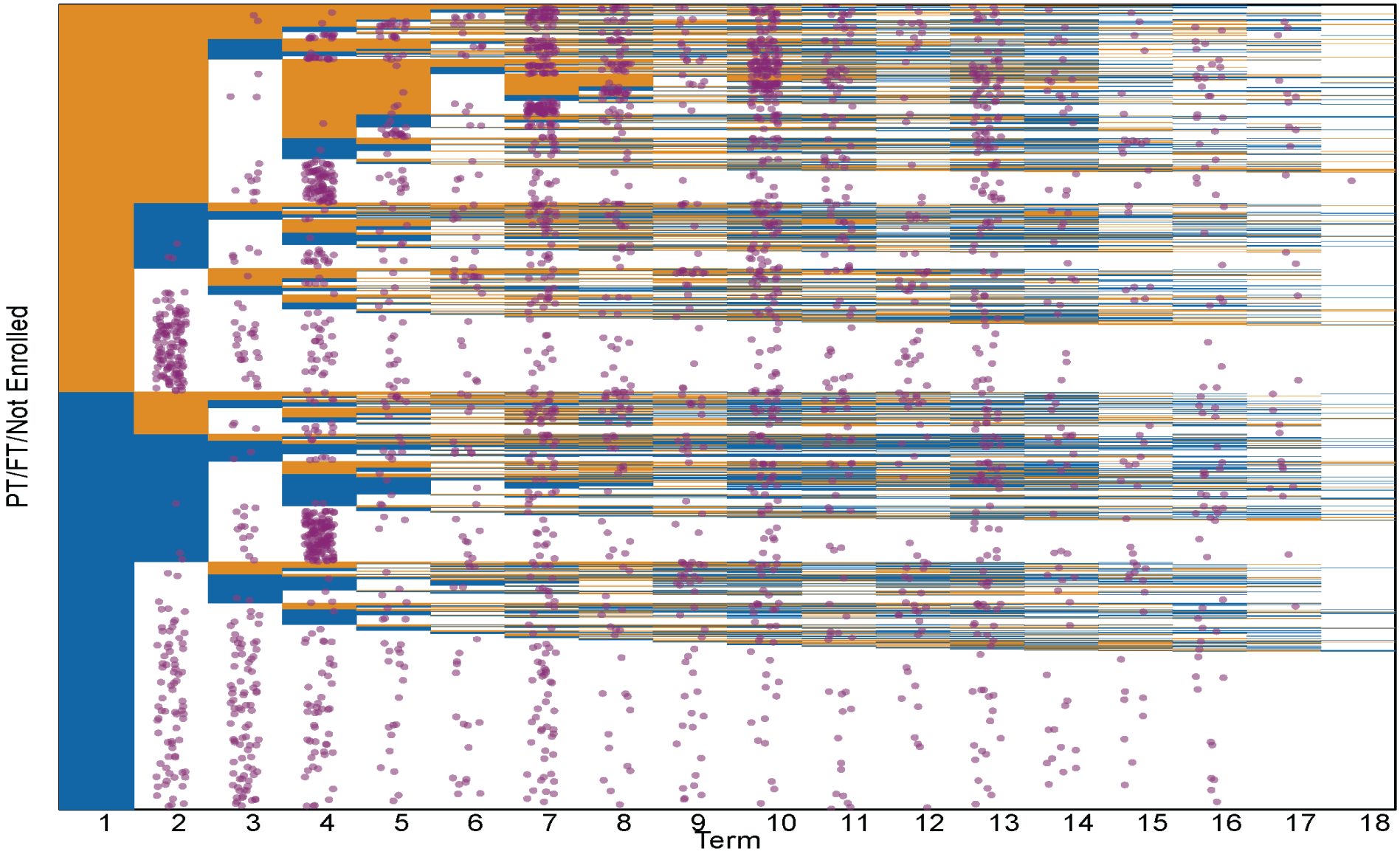
Source: Belfield, Jenkins, Lahr, 2016.

Ideal CC Student Pathways



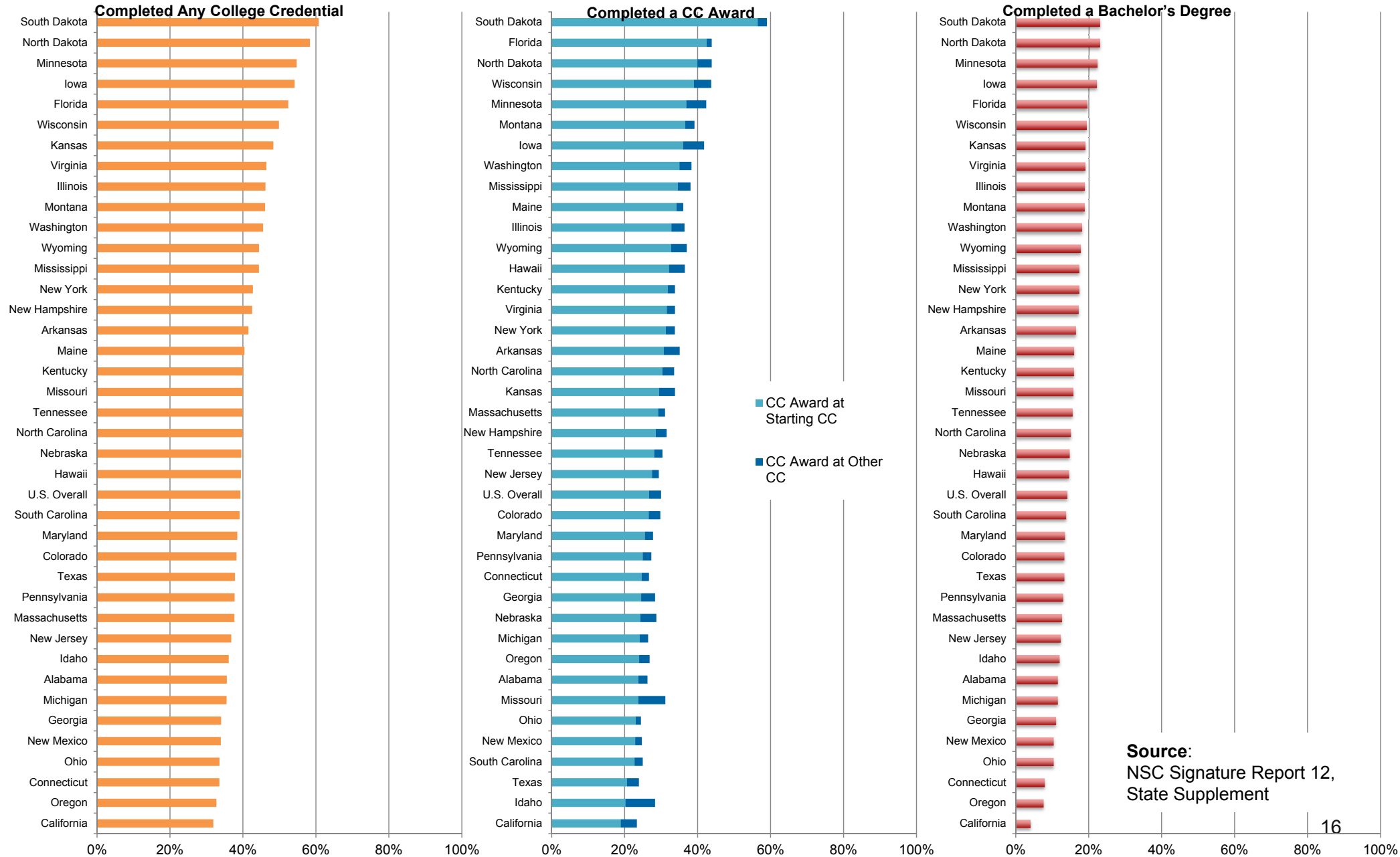
Source: Crosta, 2013.

Actual CC Student Pathways



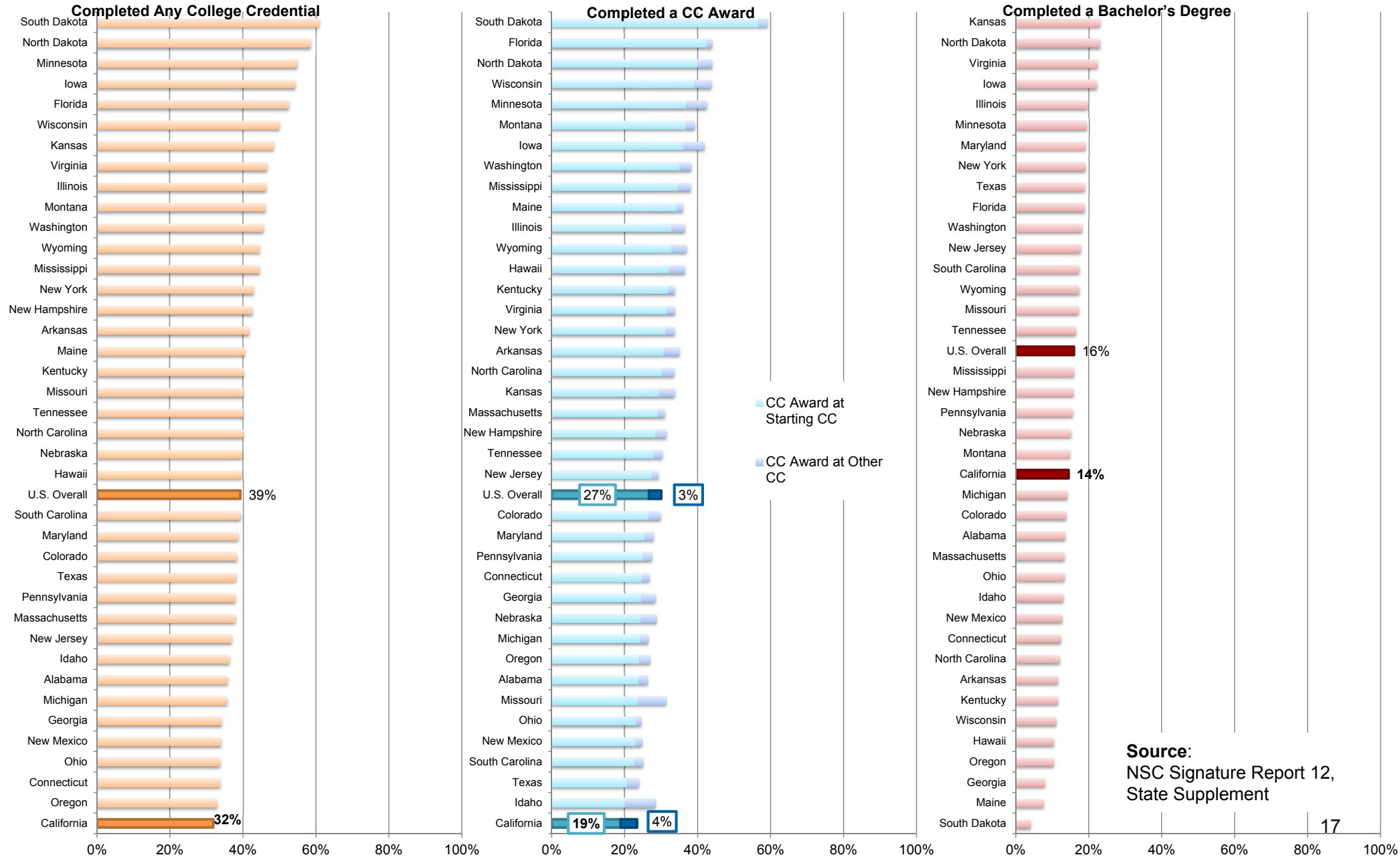
Source: Crosta, 2013.

Six-Year Outcomes, Fall 2010 Community College Entrants



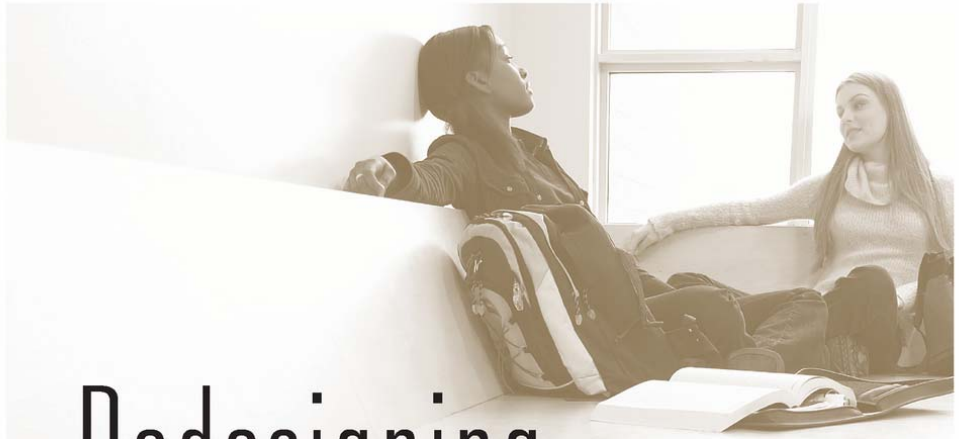
Source:
NSC Signature Report 12,
State Supplement

Six-Year Outcomes, Fall 2010 Community College Entrants



Source:
NSC Signature Report 12, State Supplement

THE STUDENT EXPERIENCE



Redesigning America's Community Colleges

Thomas R. Bailey

Shanna Smith Jaggars

Davis Jenkins

A CLEARER PATH TO STUDENT SUCCESS

Cafeteria College

Paths to career goals unclear

+

Intake sorts, diverts students

+

Students' progress not monitored

+

Learning outcomes not defined and assessed across programs

=

↑ *Churning*

↑ *Early transfer*

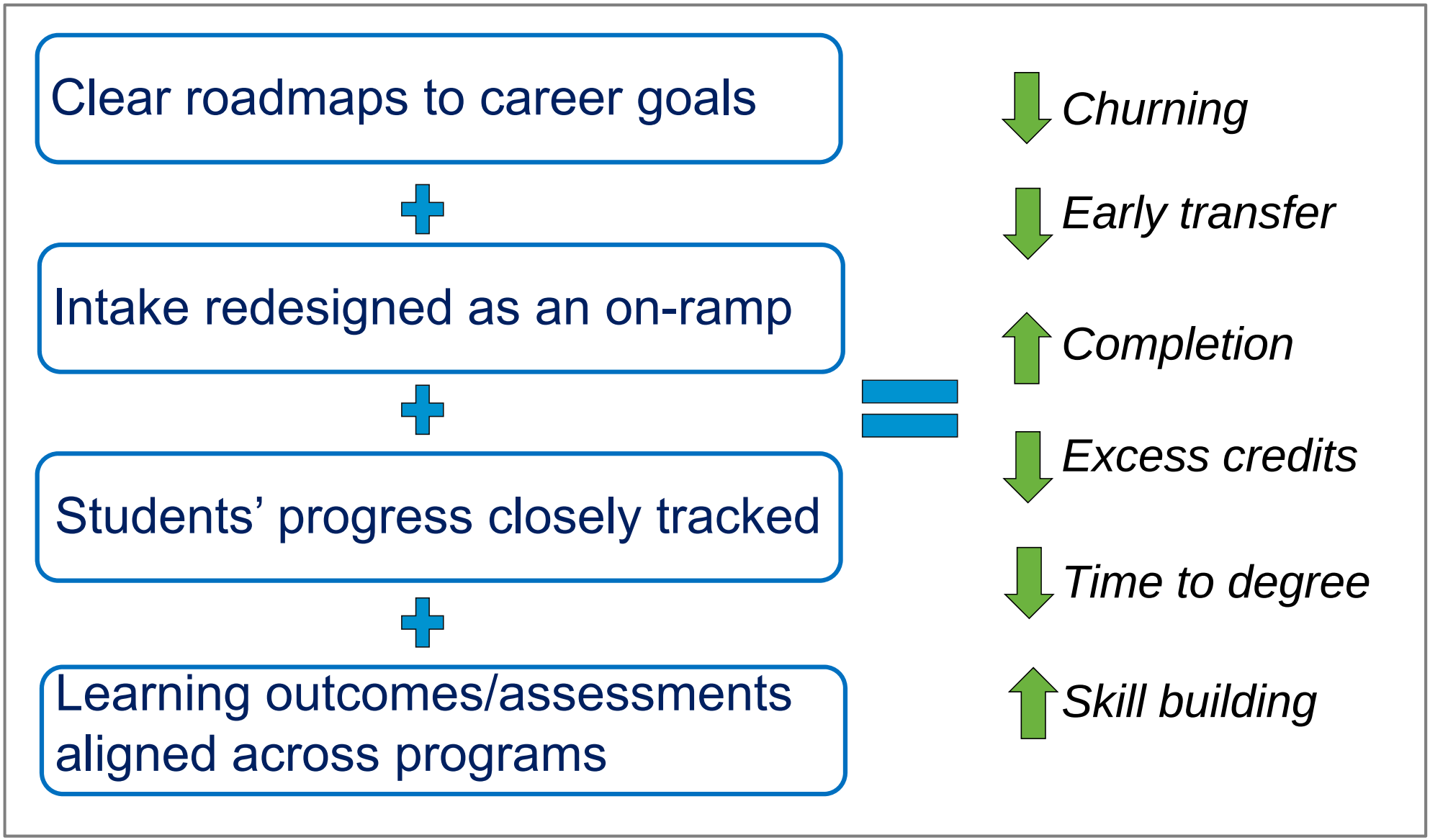
↓ *Completion*

↑ *Excess credits*

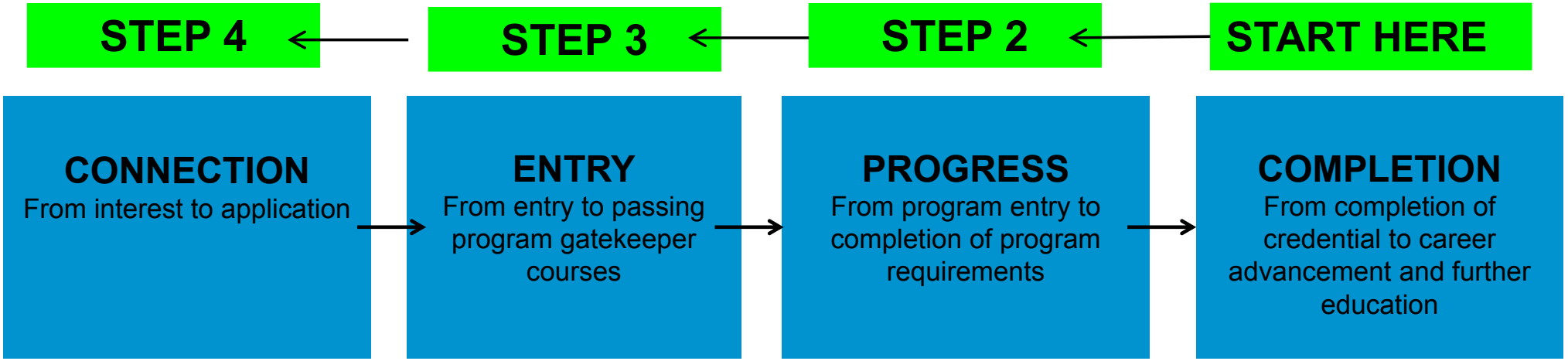
↑ *Time to degree*

↓ *Skill building*

Guided Pathways College



Start with the End in Mind



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

- Require exploratory or "meta-majors" for undecided students
- Integrate basic skills instruction into introductory college courses

- Clearly map out program paths
- Rethink advising around maps
- Use "eAdvising" to monitor student progress, provide feedback and support as needed

- Align program outcomes with requirements for success in further education and the labor market

Guided Pathways: Planning, Implementation, Evaluation

Creating guided pathways requires managing and sustaining large-scale transformational change. The work begins with thorough planning, continues through consistent implementation, and depends on ongoing evaluation. **The goals are to improve rates of college completion, transfer, and attainment of jobs with value in the labor market — and to achieve equity in those outcomes.**

PLANNING

ESSENTIAL CONDITIONS

Make sure the following conditions are in place – prepared, mobilized, and adequately resourced – to support the college's large-scale transformational change:

- Strong change leadership throughout the institution
- Faculty and staff engagement
- Commitment to using data
- Capacity to use data
- Technology infrastructure
- Professional development
- Favorable policy (state, system, and institutional levels) and board support
- Commitment to student success and equity

PREPARATION/AWARENESS

Understand where you are, prepare for change, and build awareness by:

- Engaging stakeholders and making the case for change
- Establishing a baseline for key performance indicators
- Building partnerships with K–12, universities, and employers
- Developing flowcharts of how students choose, enter, and complete programs
- Developing an implementation plan with roles and deadlines

SUSTAINABILITY

Commit to pathways for the long term and make sure they are implemented for all students by:

- Determining barriers to sustainability (state, system, and institutional levels)
- Redefining the roles of faculty, staff, and administrators as needed
- Identifying needs for professional development and technical assistance
- Revamping technology to support the redesigned student experience
- Reallocating resources as needed
- Continuing to engage key stakeholders, especially students
- Integrating pathways into hiring and evaluation practices

IMPLEMENTATION

CLARIFY THE PATHS

Map all programs to transfer and career and include these features:

- Detailed information on target career and transfer outcomes
- Course sequences, critical courses, embedded credentials, and progress milestones
- Math and other core coursework aligned to each program of study

HELP STUDENTS GET ON A PATH

Require these supports to make sure students get the best start:

- Use of multiple measures to assess students' needs
- First-year experiences to help students explore the field and choose a major
- Full program plans based on required career/transfer exploration
- Contextualized, integrated academic support to help students pass program gateway courses
- K–12 partnerships focused on career/college program exploration

HELP STUDENTS STAY ON THEIR PATH

Keep students on track with these supports:

- Ongoing, intrusive advising
- Systems for students to easily track their progress
- Systems/procedures to identify students at risk and provide needed supports
- A structure to redirect students who are not progressing in a program to a more viable path

ENSURE STUDENTS ARE LEARNING

Use these practices to assess and enrich student learning:

- Program-specific learning outcomes
- Project-based, collaborative learning
- Applied learning experiences
- Inescapable student engagement
- Faculty-led improvement of teaching practices
- Systems/procedures for the college and students to track mastery of learning outcomes that lead to credentials, transfer, and/or employment

EARLY OUTCOMES

Measure key performance indicators, including:

- Number of college credits earned in first term
- Number of college credits earned in first year
- Completion of gateway math and English courses in the student's first year
- Number of college credits earned in the program of study in first year
- Persistence from term 1 to term 2
- Rates of college-level course completion in students' first academic year
- Equity in outcomes

Revisit conditions, sustainability, and implementation. Continuously improve pathways by building on elements that work and adjusting or discarding elements that are not serving all students well.

EVALUATION

Contributors to this model for Guided Pathways are: American Association of Community Colleges (AACC), Achieving the Dream (ATD), The Aspen Institute, Center for Community College Student Engagement (CCCSE), Community College Research Center (CCRC), Complete College America, The Charles A. Dana Center, Jobs for the Future (JFF), National Center for Inquiry and Improvement (NCII), and Public Agenda.

FEB. 17

AACC Pathways Project Colleges

Research Methods

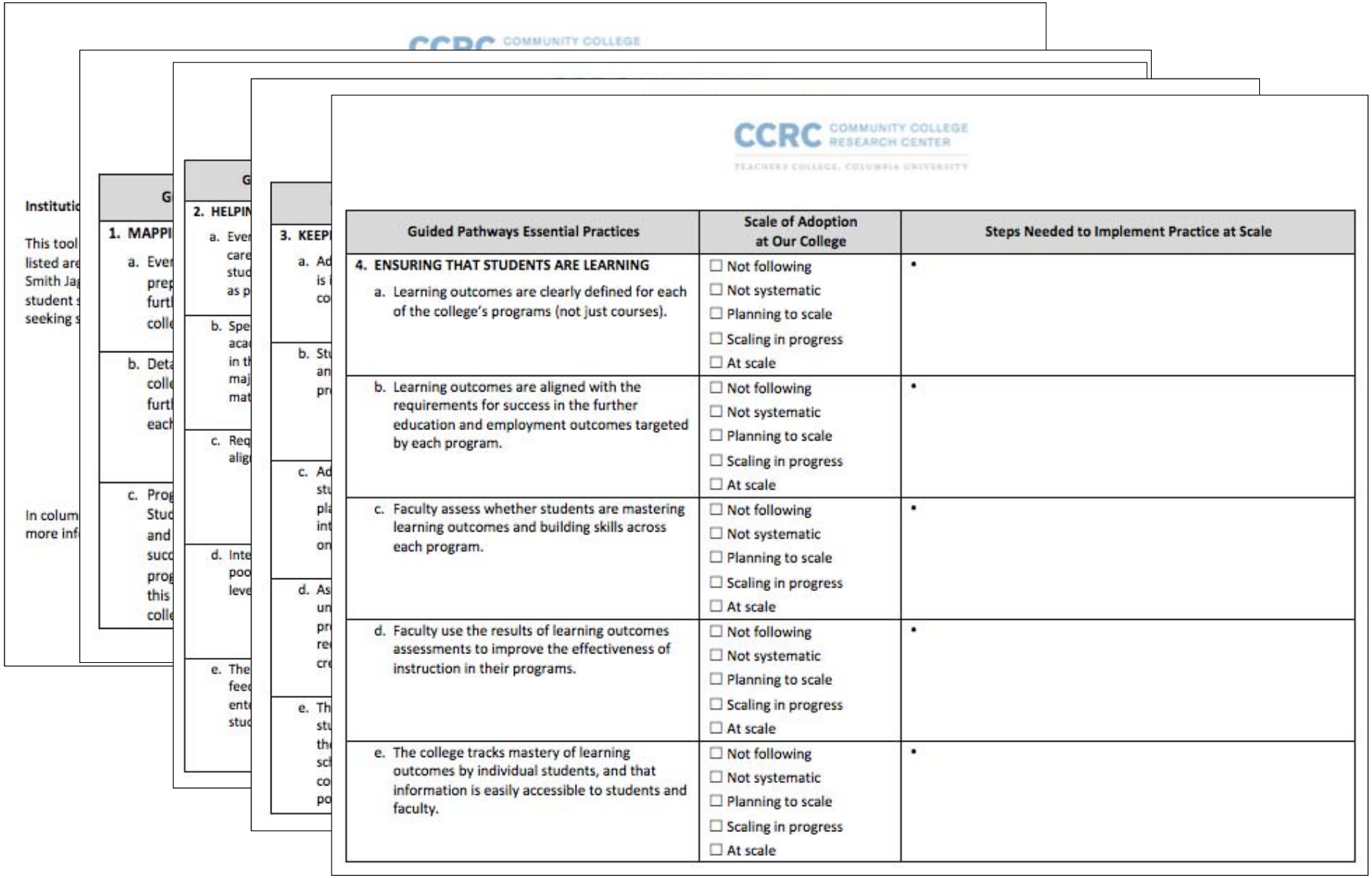
- Colleges filled out CCRC "Scale of Adoption Assessment" (spring and fall 2016)
- Follow-up calls with all 30 colleges (spring and fall 2016)
- 2-day site visits to 6 colleges (fall 2016)
  - Individual interviews & focus groups

Interview and Focus Group Participation

		Focus Group Participants			
College	**Interviews**	**Faculty**	**Advisors**	**Students**	**Total**
Cleveland State Community College	7	5	0[a]	15	27
Community College of Philadelphia	18	6	6	7	37
Front Range Community College	27	7	4	8	46
Indian River State College	23	6	7	6	42
Jackson College	17	7	7	5	36
San Jacinto College	38	9	6	7	60
Total	**130**	**40**	**30**	**48**	**248**

[a] At Cleveland State, faculty serve as academic advisors.

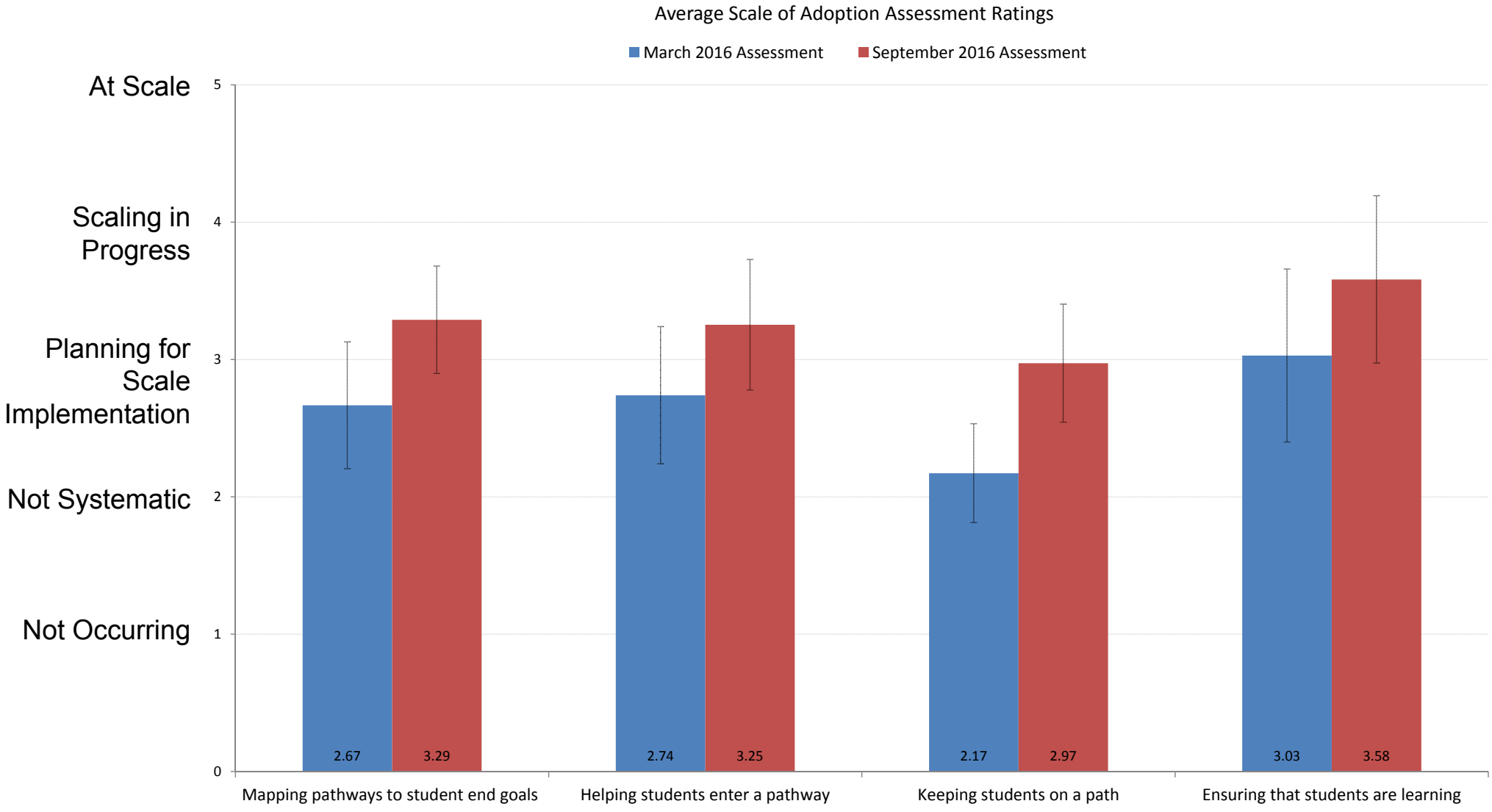
Guided Pathways Scale of Adoption



CCRC COMMUNITY COLLEGE RESEARCH CENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

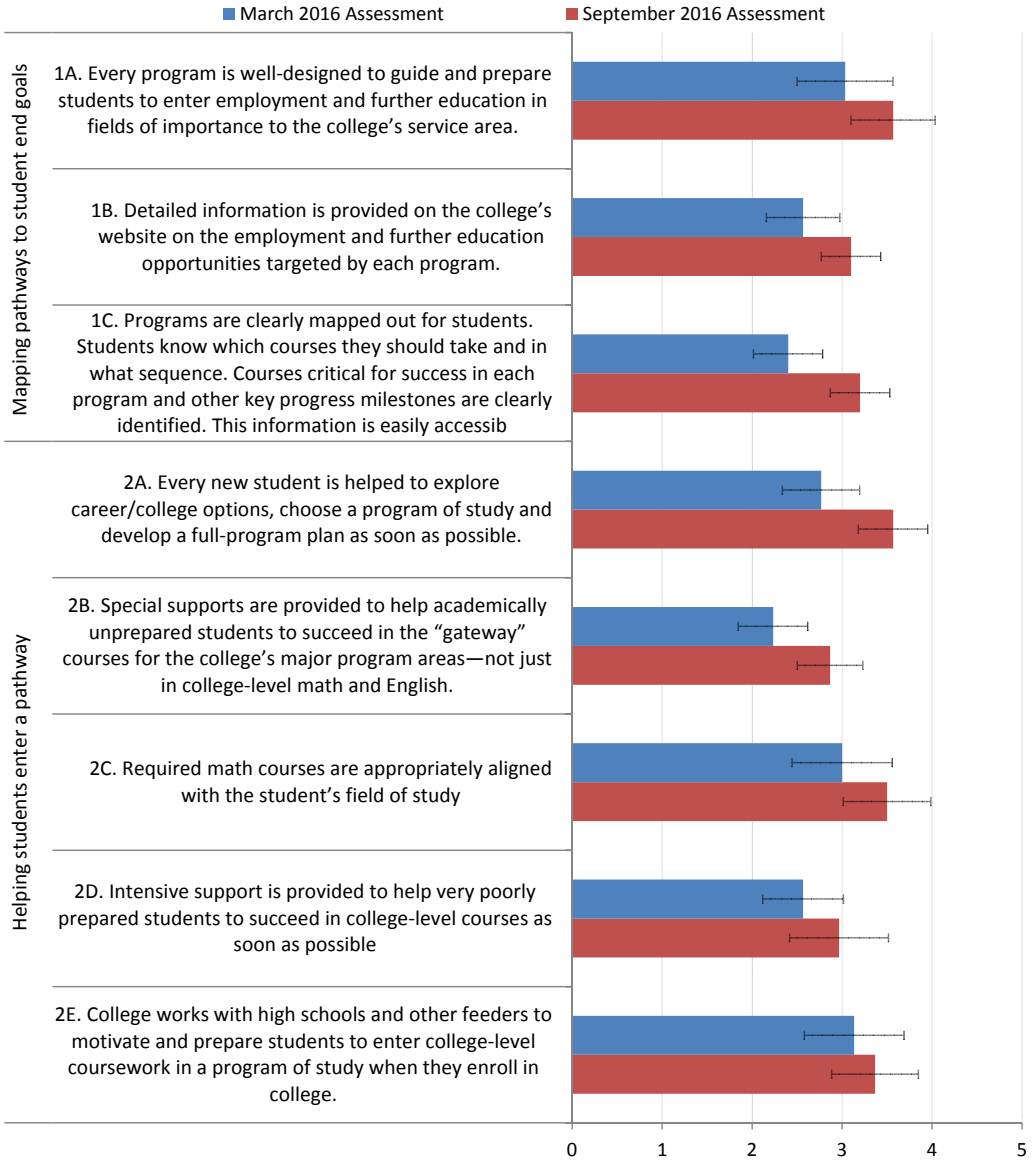
Guided Pathways Essential Practices	Scale of Adoption at Our College	Steps Needed to Implement Practice at Scale
4. ENSURING THAT STUDENTS ARE LEARNING a. Learning outcomes are clearly defined for each of the college's programs (not just courses).	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•
b. Learning outcomes are aligned with the requirements for success in the further education and employment outcomes targeted by each program.	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•
c. Faculty assess whether students are mastering learning outcomes and building skills across each program.	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•
d. Faculty use the results of learning outcomes assessments to improve the effectiveness of instruction in their programs.	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•
e. The college tracks mastery of learning outcomes by individual students, and that information is easily accessible to students and faculty.	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•

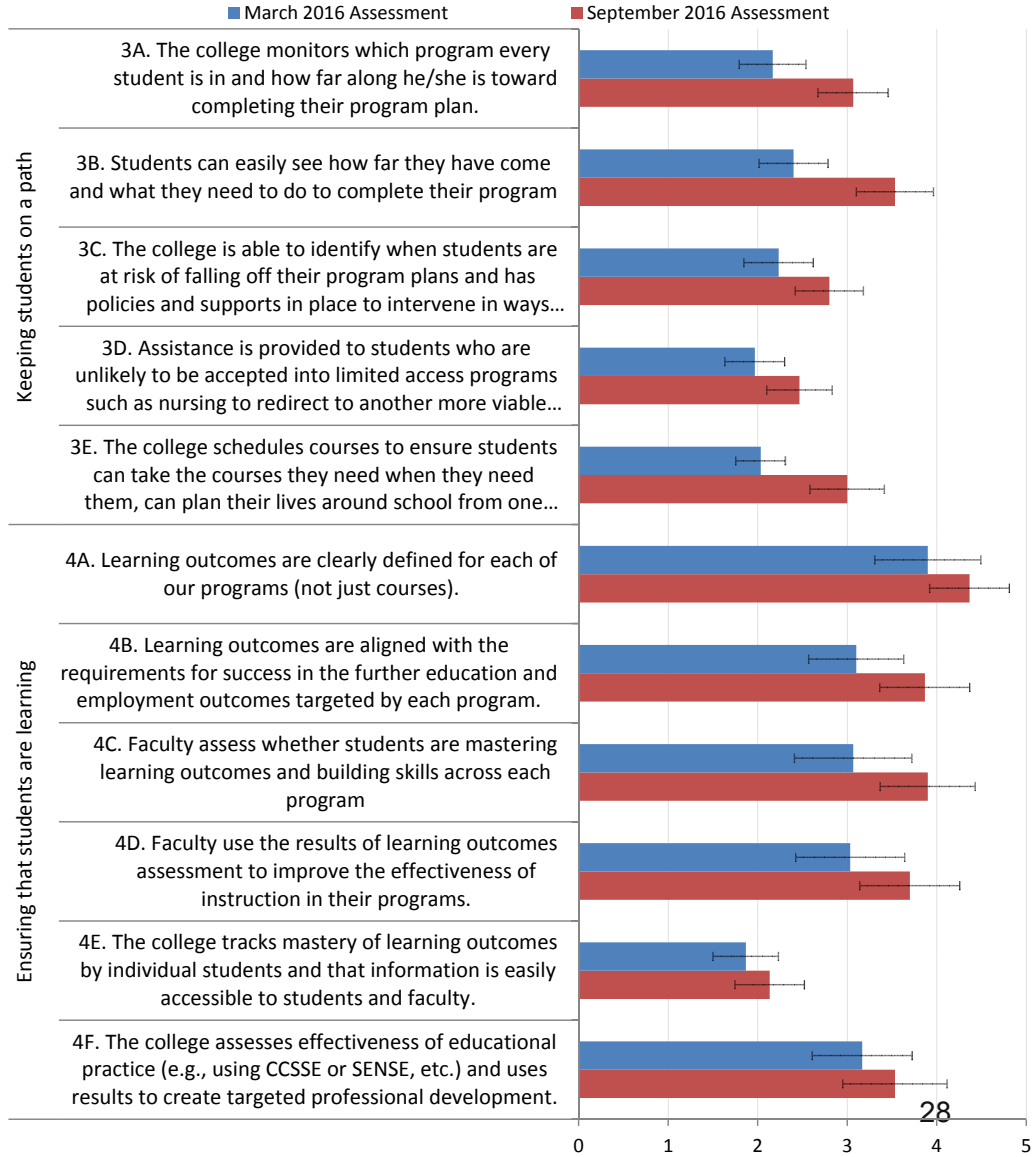
AACC Pathways Colleges Progress in Adopting Guided Pathways Practices, March – September 2016



AACC Pathways Colleges Progress in Adopting Guided Pathways Practices, March – September 2016

Average Scale of Adoption Assessment Ratings





Mapping Paths to Student End Goals

Rethinking Mapping Programs

From:	*To:*
Alphabetical program list	Academic / career communities ("meta-majors")
A lá carte courses (distribution requirements and electives)	Program maps with course sequences, critical courses, co-curricular requirements
Algebra as default math path	Program/field-specific math paths
Certificates vs. degrees	Degree pathways with embedded certificates/certifications
Connections to careers & transfer unclear	Career & transfer opportunities/ requirements clearly specified

CHOOSE A PROGRAM

- Area of Interest
- Certificate & Degree Programs
- Class Offerings & Catalogs
- Course Descriptions
- Macomb University Center
- Notify Me About Upcoming Events
- Online Learning
- Professional Development
- Secondary School Outreach
- Study Abroad
- Transfer Programs
- Personal Interests
- Youth Programs

Home » Future Students » Choose a Program

LIST OF PROGRAMS

We make it easy for you to explore the programs we offer! Each of our programs has been assigned to an Area of Interest, 10 total. You can compare those with similar characteristics and find the one that's right for you. Get started now!

Accounting
Administrative Assistant Professional Certificate#
Advanced Processes-CNC
Anthropology
Applied Technology and Apprenticeship
Arabic Language and Culture
Architectural Technology - Civil Construction
Architectural Technology - Commercial Design
Art
Astronomy
Automated Systems Technology - Mechatronics
Automotive Technology
Basic Computer Skills Certificate Program#
Behavioral Sciences
Biological Sciences
Business Communications
Business Management
Certified Medical Reimbursement Specialist#
Certified Nurse Assistant#
Certified Personal Fitness Trainer#
Certified Professional Coder#
Chemistry
Chinese Language and Culture
Civil Technology
Climate Control Technology
College Success Skills
Community Leadersip Certificate Program
Computer Aided Design
Construction: Builder's Pre-License (Segment 1&2) Certificate Program#
Construction Technology
Construction Technology - Renewable Energy Specialist
Court Reporting Certificate Program#
Culinary Arts
Diagnostic Medical Sonography Reciprocal
Drafting and Design
Economics

Education
- Education: Early Childhood Studies

Electronic Engineering Technology
Emergency Medical Services - Emergency Medical Technician-Paramedic
Emergency Medical Services - Paramedic/Firefighter
English*
English for Academic Purposes
Entrepreneurship Certificate Program#
Entrepreneurship Innovation
Entrepreneurship & Small Business
Entertainment Arts Program#
Environmental Horticulture Certificate Program#
Environmental Science
Finance
Fire Science
Fire Science with Fire Academy
Floral Design Certificate Program#
Fluid Power Technology
French Language
General Business
Geography
Geology
German Language
Global Supply Chain Management
Health Information Technology
History
Home Care Assistant Certificate Program#
Home Inspection Certificate Program#

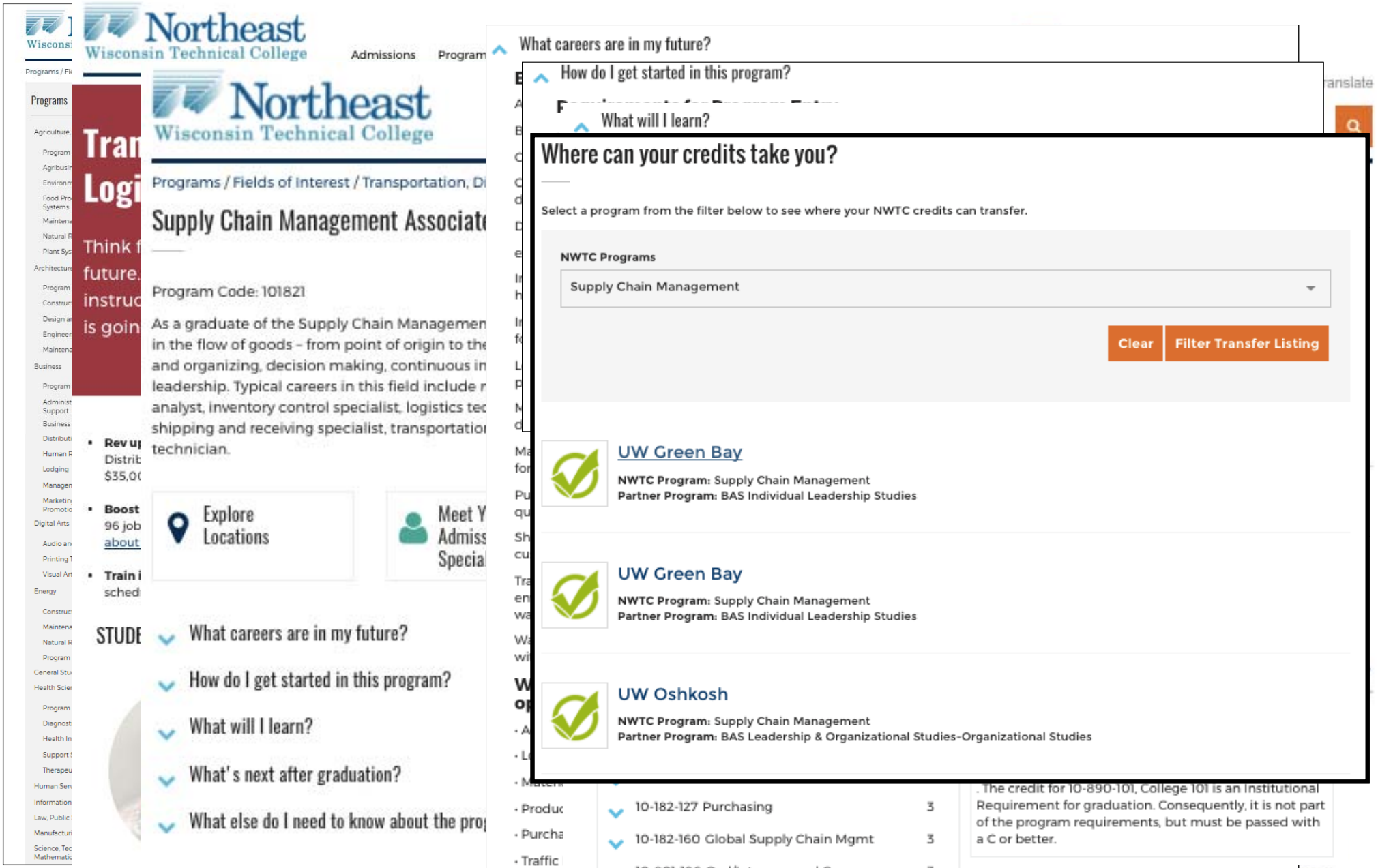
International & Global Studies
- Europe
- International Studies

Italian Language
Jewelry Trades Certificate Program#
Journalism
Laboratory Assistant#
Landscape Design Certificate Program#
Land Surveying Technology Office Technician
Law Enforcement
Law Enforcement with Police Academy
Legal Assistant
Life Career Development
Maintenance Technology
Manufacturing Engineering
Manufacturing Engineering Technology
Marketing
Mathematics

Media and Communication Arts
- Collaborative Media
- Creative Imaging & Illustration
- Design & Layout
- Interactive Web Media
- Motion Design
- Photographic Technology
- Video Production
- 3D Animation

Medical Assistant
Molecular Biotechnology
Music Performance
Nursing
Occupational Therapy Assistant
Pastry Arts
Pharmacy Technician#
Phlebotomy#
Philosophy
Photographic Arts Certificate Program#
Physical Science
Physical Therapist Assistant
Physics
Plumbing and Pipe Fitting
Police Academy
Political Science
Pre-Engineering
Pre-Social Work
Product Development
Product Development - Digital Sculptor
Project Management Certificate Program#
Psychology
Radiologic Technology
Radiologic Technology - Reciprocal Programs
Reading
Renewable Energy Technology
Respiratory Therapy
Restaurant Management
Robotics
Social Media Certificate Program#
Social Science
Sign Language
Sociology
Spanish Language

Speech Communications Arts
- Intercultural/Interpersonal Communication


Northeast
Wisconsin Technical College
Admissions
Programs / Fields of Interest / Transportation, D
Supply Chain Management Associate
Program Code: 101821
As a graduate of the Supply Chain Management
in the flow of goods – from point of origin to the
and organizing, decision making, continuous in
leadership. Typical careers in this field include
analyst, inventory control specialist, logistics tec
shipping and receiving specialist, transportatio
technician.
Explore Locations
What careers are in my future?
How do I get started in this program?
What will I learn?
What's next after graduation?
What else do I need to know about the pro
Where can your credits take you?
Select a program from the filter below to see where your NWTC credits can transfer.
NWTC Programs
Supply Chain Management
Clear
Filter Transfer Listing
UW Green Bay
NWTC Program: Supply Chain Management
Partner Program: BAS Individual Leadership Studies
UW Green Bay
NWTC Program: Supply Chain Management
Partner Program: BAS Individual Leadership Studies
UW Oshkosh
NWTC Program: Supply Chain Management
Partner Program: BAS Leadership & Organizational Studies-Organizational Studies
10-182-127 Purchasing 3
10-182-160 Global Supply Chain Mgmt 3
10-801-196 Oral/Interpersonal Comm 3
SEMESTER TOTAL 18
. The credit for 10-890-101, College 101 is an Institutional Requirement for graduation. Consequently, it is not part of the program requirements, but must be passed with a C or better.

INDIAN RIVER STATE COLLEGE

Guided Pathway Programs

Guided Pathway Programs

Associate in Arts Degree

Search by Interest — Choose Your Meta Major

Computer Information Technology

Are you ready for a well-paying career in a rapidly growing worldwide industry? You'll focus on the latest advances in network security and web development, IT support and related fields. You'll study computer programming and develop web programming skills to design and maintain websites using Dynamic HTML, XML and scripting languages.

Continue with a Bachelor's Degree in IT Management and Cyber Security to gain advanced skills in building, operating and maintaining computer networks and ensuring the safety and security of the data moving through these networks. You will be ready to manage the technology and people associated with IT operations.

- **A.A. Degree —** Complete your first two years of college at IRSC, and you're guaranteed the right to transfer as a junior to a Bachelor's program at a Florida state university — or continue to a Bachelor's degree at IRSC.
- **A.S. Degree —** Gain management and technical skills in many high-demand career fields, with the option to continue toward a Bachelor's degree at IRSC.
- **Technical Certificates —** Earn valuable Technical Certificates at the same time you're completing an A.S. Degree — get double the value and additional credentials by completing these blocks of courses.
- **Bachelor's Degree —** Increase your earning power and build on your Associate Degree with more than twenty 2+2 Bachelor's Degree options at IRSC.

GUIDED PATHWAYS (Full-Time Students):

- Computer and Information Sciences — AA
- Computer Engineering — AA
- Information Technology Management and Cyber Security — AA
- Computer Information Technology — AS
- Technical Certificates (Earn while completing your AS Degree):
  - Cisco Certified Network Associate
  - Computer Programming Specialist
  - Information Technology Support Specialist
  - Office Specialist
  - Web Production
- Information Technology Management and Cyber Security — BS

GUIDED PATHWAYS (Part-Time Students):

- Computer and Information Sciences — AA
- Computer Engineering — AA
- Information Technology Management and Cyber Security — AA
- Computer Information Technology — AS
- Technical Certificates (Earn while completing your AS Degree)
- Information Technology Management and Cyber Security — BS

For course descriptions, view the college catalog.

Science, Technology, Engineering and Mathematics

This meta major is known as STEM and represents some of the fastest-growing high-tech fields. This is the meta major you should choose to pursue a career as an engineer,

INDIAN RIVER STATE COLLEGE

PROGRAM AA - Information Technology Management & Cybersecurity Track

Meta Major: Science, Technology, Engineering, and Mathematics

2016-2017 Guided Pathway

11510 Credit Hours 74

First Semester				
Check when complete	Course Number	Title	Credit Hours	Prerequisite
☐				
☐				
☐				
☐				
☐				
☐				

INDIAN RIVER STATE COLLEGE

PROGRAM AA - Information Technology Management & Cybersecurity Track

Meta Major: Science, Technology, Engineering, and Mathematics

2016-2017 Guided Pathway

11510 Credit Hours 74

Third Semester				
Check when complete	Course Number	Title	Credit Hours	Prerequisite
☐	PHI2100	Introduction to Logic	3	
☐	Foreign Language I*	Foreign Language - Level I	4	
☐	STA2023	Elementary Statistics I	3	MAT1033 ("C" or higher) or higher
☐	CTS1334	Windows Server	3	
☐	AST1002	General Astronomy	3	
☐				
		Total Semester Credit Hours	**16**	

Fourth Semester				
Check when complete	Course Number	Title	Credit Hours	Prerequisite
☐	PSC1121	Survey of Physical Science	3	
☐	PHI1010	Introduction to Philosophy	3	
☐	ECO2023	Principles of Economics Micro	3	
☐	AMH2020	American History: Reconstruction to the Present	3	
☐	Foreign Language II*	Foreign Language - Level II	4	
☐				
		Total Semester Credit Hours	**16**	

*If student took 2 years of Foreign Language in High School, not required to take foreign language in college

IRSC INDIAN RIVER STATE COLLEGE

Career Coach

Career Coach

Sort by relevance
Sort alphabetically

Computer Information Tech

Information Technology Management and Cyber Security — BS (1)

All career data is set to your current geographical area: up to 100 miles away from 34981

☆ Bookmark | Program Webpage

Contact Info

Contact Us
(772) 462-4772
info@irsc.edu
Go to Contact Website

Business Partners

This program is not associated with any businesses.

Description

Gain advanced skills in building, operating and maintaining computer networks and ensuring the safety and security of data moving through these networks.

Related Careers

☆ Computer and Information Systems Manager
$61.41 Hourly Wage **6,706 Currently Employed**
Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.

☆ Computer Operator
$19.22 Hourly Wage **1,329 Currently Employed**
Monitor and control electronic computer and peripheral electronic data processing equipment to process business, scientific, engineering, and other data according to operating...

☆ Document Management Specialist
$34.70 Hourly Wage **4,171 Currently Employed**
Implement and administer enterprise-wide document management systems and related procedures that allow organizations to capture, store, retrieve, share, and destroy electronic...

☆ Information Technology Project Manager
$34.70 Hourly Wage **4,171 Currently Employed**
Plan, initiate, and manage information technology (IT) projects. Lead and guide the work of technical staff. Serve as liaison between business and technical aspects of projects...

Program Info

Program:
Computer Information Technology

Macomb

Home » Future Students » Choose a Program » Biological Sciences

BIOLOGICAL SCIENCES PROGRAM

Catalogs

Career Information

College Viewbo

It will be the convergence of evolutionary biology, developmental biology and cancer biology that the answer to cancer will lie. -Paul Davies, Physicist, Astrobiologist and Arizona State University Profe

What are the Biological Sciences?

Finding a cure for cancer is just one of the important scientific breakthroughs that the Biological Sciences are uniquely posed to make. Involved in the study of living organisms, the Biological Sciences include neurobiology, ecology, astrobiology, microbiology, botany and zoology among the many branches. Through laboratory and field research, the Biological Sciences help us better understand and adapt to the natural world.

The Biological Sciences Program at Macomb

The Biological Sciences Program at Macomb provides you with the basic competencies, knowledge and skills necessary to transfer to a Bachelor's Degree Program in Biological Sciences.

Biological Sciences Courses at Macomb

In Macomb's Biological Sciences Program, your required courses will include:

- General Biology 1 & 2
- General Chemistry 1 & 2
- Analytic Geometry & Calculus
- General Microbiology
- College Physics 1 & 2
- Organic Chemistry 1 & 2

Career Opportunities with an Associate of Science Degree in Biological Sciences

With an Associate of Science Degree in Biological Sciences, you will be qualified for positions that include biotechnologist, medical & clinical laboratory technician and environmental technician.

Transfer Pathways to Advanced Degrees in Biological Sciences

Career opportunities in the Biological Sciences increase at every level of education you complete, with a doctoral degree required for work as a Biological Scientist engaged in independent or academic research. The credits earned in Macomb's Program transfer to many colleges and universities in Michigan.

If you intend to transfer and pursue advanced degrees in Biological Sciences, speak with a Macomb counselor or academic advisor as soon as possible after you have applied to Macomb to plan the best pathway.

How do I find out more about Macomb's Biological Sciences Program

For more information about the Biological Sciences Program at Macomb, contact the Associate Dean at Center Campus: 586.286.2147 or AandS.center@macomb.edu, or at South Campus: 586.445.7354 or AandSsouth@macomb.edu.

for Continuing Ed Classes Apply Now

MATH

LIFE AND PHYSICAL SCIENCES

CAREER OPPORTUNITIES

Begin your adventure with an Associate of Science Degree that will give you the basic knowledge and skills essential to transfer to a baccalaureate degree program.

Biological Sciences — Associate of Science
Job titles such as Biotechnologist, Medical and Clinical Laboratory Technician, and Environmental Technician are attainable upon completion of this course of study.

To learn more from a career specialist, visit the Office of Career Services at either campus or explore online at www.onetonline.org

America's Career Infonet (www.acinet.org) identifies dozens of occupations for which a science student may qualify. They include:

- Natural Sciences Manager
- Agricultural and Foods Sciences Technician
- Life, Physical and Social Sciences Technician
- Food Scientist and Technologist
- Atmospheric and Space Scientist
- Conservation Scientist
- Hydrologist
- Physicist
- Biochemist and Biophysicist
- Aerospace Engineer
- Health and Safety Engineer
- Medical Scientist
- Chemist
- Environmental Scientist

In chemistry, I finally found the passion for my future. The (science) faculty at Macomb has truly changed my life…and I could not be happier.

—Eric Kuhns, former business major

LOOKING FOR A JOB?

Contact Career Services
586.445.7321
careerservices@macomb.edu

TRANSFERRING IS EASY

Talk to a Macomb counselor or academic advisor before registering for classes.
Center Campus: 586.286.2228
South Campus: 586.445.7211
Email: answer@macomb.edu

FOR MORE INFORMATION

For the most current information on the Science Program, or any program at Macomb Community College, visit the College's website: www.macomb.edu or call 866.Macomb1 (866.622.6621).

EMPLOYMENT OUTLOOK

Career choices in this field will be influenced by a student's chosen path of study. With an associate degree in life sciences from Macomb, you will be qualified for careers including lab assistant. Median salary for these careers is $41,510 in Michigan with 11 percent growth in openings expected through 2024. Continuing your education and earning a bachelor's degree will qualify you for careers like science teacher, biological technician, and environment health and safety specialist.

Two years at Macomb equals a tremendous savings—about $18,000—compared to attending a Michigan four-year public university. 80 percent of our students leave DEBT FREE!

Macomb Community College
Education • Enrichment • Economic Development
Discover. Connect. Advance.

1702_17

Information Technology

Public Safety

Science & Math

Social &

Undecided

- Econor
- Environ
- Geolog
- Physica
- Physics
- Radiolo
- Wellnes
- Discove

ACADEMIC CALENDAR

June 2017

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24

Macomb Community College
Education • Enrichment • Economic Development
Discover. Connect. *Advance.*

Home | About Macomb | Make

Future Students | Current Students | Business

Choose a Program | Visit our Campuses | Apply for Admission | Paying for Colle

AREA OF INTEREST

- Applied Technology & Skilled Trades
- Arts, Humanities and Communication
- Business, Hospitality and Culinary Arts
- Education and Human Services
- Engineering, Technology and Design
- Health
- Information Technology
- Public Safety
- Science and Math
- Social and Behavioral Sciences
- List of Programs

ACADEMIC CALENDAR

June 2017

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24

Home » Future Students » Area of Interest

AREA OF INTEREST

All of us at Macomb are committed to guiding you toward an educational goal, an
debating between two, three or four. To help you make the best choice, we've co
providing pathways toward a variety of related careers. Take the first step by cho

Already know which program is for you? Go to our **list of programs now!**

- Applied Technology & Skilled Trades
- Arts, Humanities, Communication
- Business, Hospitality, Culinary
- Education & Human Services
- Engineering, Technology & Design
- Health
- Information Technology
- Public Safety
- Science & Math
- Social &
- Undecided

Exploring Your Pathways to Success

Your career choice is among the most important decisions you will make. Your career will affect your:

- **Earning potential**
- **Lifestyle**
- **Quality of life**
- **Self-esteem**

Choosing a career is a process. Learning the steps of this process, and the tools that can support you, will allow you to make an informed career decision with confidence.

Taking the necessary steps and allowing sufficient time to work through these steps are crucial to making a satisfying decision.

Your Macomb counselor can guide you through this process by introducing a variety of tools to assist you along the way.

Make an appointment with one of Macomb's licensed professional counselors. Let us help you explore your career options.

Counseling & Academic Advising Services
South Campus J160
Center Campus H103
Phone: 586.445.7999
(Choose the "Counseling and Academic Advising" option)
Email: answer@macomb.edu

Career Services
South Campus S147
Center Campus H109
Phone: 586.445.7321
Email: careerservices@macomb.edu

Macomb Community College
Education • Enrichment • Economic Development
Discover. Connect. *Advance.*

Discover.
Learning About Myself
Interests • Values
Skills • Strengths

Connect.
Exploring My Areas of Interest & Narrowing My Choices
College Programs/Majors
Career Profiles • Salaries
Employment Outlook
Education/Training (Time & Costs)
Evaluating Pros/Cons

Advance.
Making a Decision & Developing a Plan
Evaluate Possibilities
Choose Among Alternatives
Goal Setting • Action Planning

Your Future Career

CAREER + ACADEMIC COMMUNITIES

at St. Petersburg College

Start your journey today! Choose from one of the ten career and academic communities to see what opportunities await after you graduate. Take the first step now by going to **spcollege.edu**

* SPC's Honors Program and Global Citizen Distinction options are also available through the Career and Academic Communities.

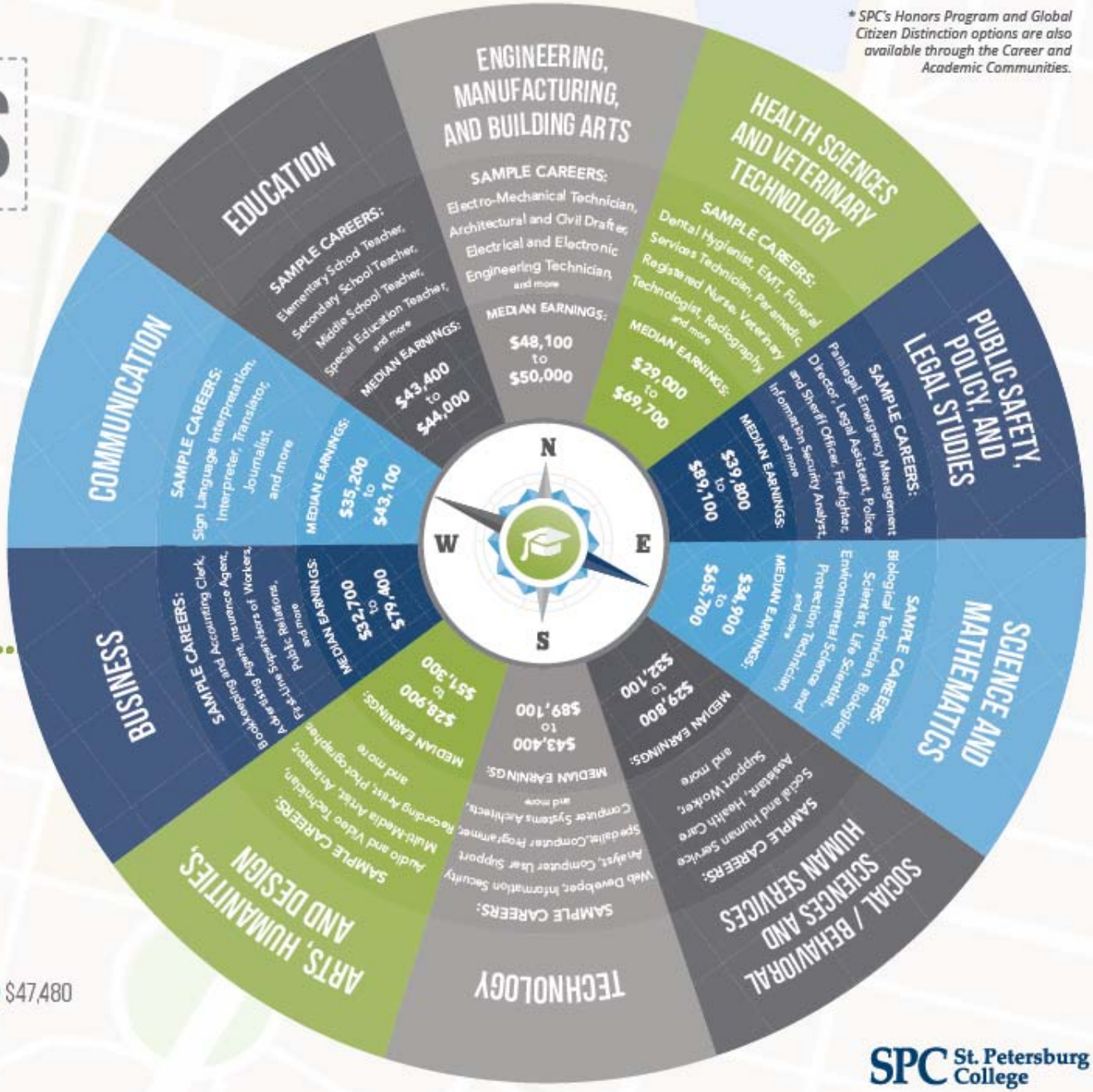
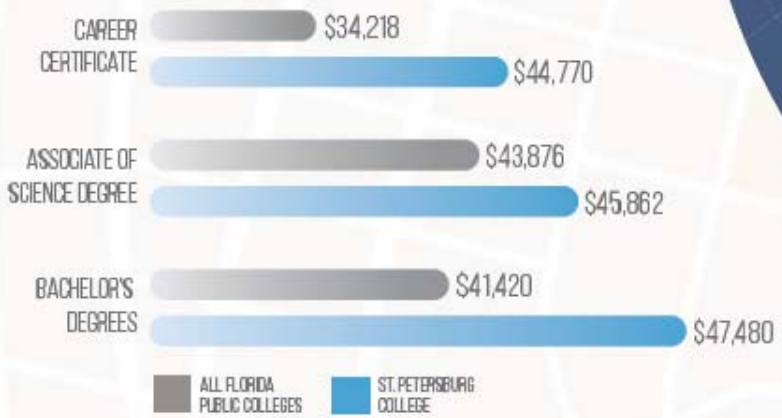
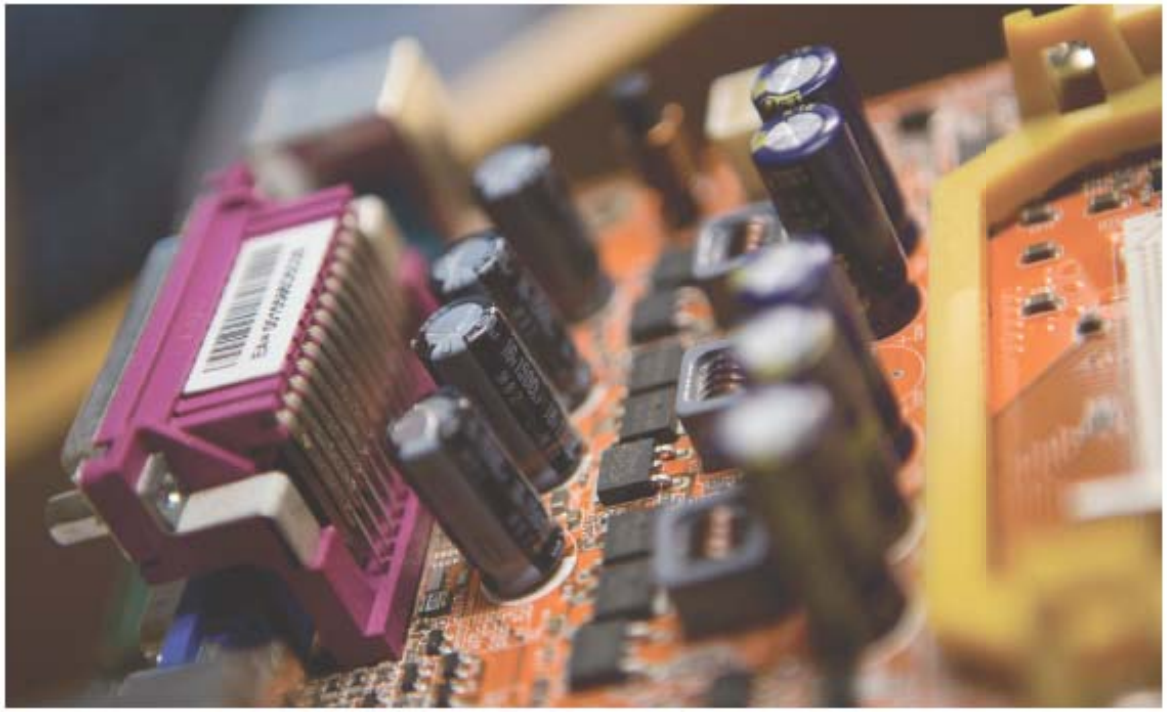


CHART YOUR PATH
BUILD YOUR FUTURE

MEDIAN FIRST-YEAR EARNINGS
(AFTER GRADUATION)



SPC St. Petersburg College



TECHNOLOGY
DEGREES AND PROGRAMS

BACHELOR'S DEGREES
Technology Development and Management

ASSOCIATE IN ARTS TRANSFER PLAN
Information Systems Management

ASSOCIATE IN SCIENCE
Computer Information Technology
Cybersecurity
Computer Networking
Computer Programming and Analysis
Web Development

CERTIFICATES
Help Desk Support Specialist
Cybersecurity
Computer Support
Cisco Certified Network Associate
Linux System Administrator
Microsoft Certified Solutions Associate
Computer Programmer
Computer Programming Specialist
Web Development Specialist

ACADEMIC PATHWAY

Computer Networking Associate in Science Degree

Seq #	Course	Course Title	Credit	Type	Term Offered	Pre-Req.	Options Avail.
1	CGS 1070	Basic Computer and Information Literacy	1	Gen Ed	F, Sp, Su		Y
2	PHI 1600	Studies in Applied Ethics	3	Gen Ed	F, Sp, Su		Y
3	COP 1000	Introduction to Computer Programming	3	Core [3,5]	F, Sp, Su		
4	MAT 1033	Intermediate Algebra	3	PreReq	F, Sp, Su		
5	CET 1171C	Computer Repair Essentials	3	Core [1,2,4]	F, Sp, Su		
6	MAC 1105	College Algebra	3	Gen Ed	F, Sp, Su	Y	
7	CNT 1000	Local Area Network Concepts	3	Subplan [1,2,3]	F, Sp, Su	Y	
8	CET 1172C	Computer Support Technician	3	Core [1,4]	F, Sp, Su		
	PREPARATION FOR COMPTIA A+ INDUSTRY CERTIFICATION COMPLETED						
9	ENC 1101	Composition I	3	Gen Ed	F, Sp, Su		Y
10	SPC 1065	Business and Professional Speaking	3	Gen Ed	F, Sp, Su		Y
11	CTS 1327	Configuring and Administering MS Windows Client	3	Subplan [1,2,3]	F, Sp, Su		
12	CTS 1328	Installing and Configuring Windows Server	3	Subplan [1,3]	F, Sp, Su	Y	
13	CTS 2106	Fundamentals of the Linux/Unix Operating Environment	3	Subplan [1,2,3]	F, Sp, Su	Y	
	COMPUTER SUPPORT CERTIFICATE COMPLETED						
14	POS 2041	American National Government	3	Gen Ed	F, Sp, Su		Y
15	CTS 2321	Linux System Administration I	3	Subplan[2]	F, Sp	Y	
16	CTS 2322	Linux System Administration II	3	Subplan[2]	F, Sp	Y	
	LINUX SYSTEM ADMINISTRATOR CERTIFICATE COMPLETED						
17	HUM 2270	Humanities (East-West Synthesis)	3	Gen Ed	F, Sp, Su		Y
18	CTS 1334	Administering Windows Servers	3	Subplan [3]	F, Sp	Y	
19	CTS 1303	Configuring Advanced Windows Server Services	3	Subplan [3]	F, Sp	Y	
	MICROSOFT CERTIFIED IT PROFESSIONAL: SERVER ADMINISTRATOR CERTIFICATE COMPLETED						
20	CIS 2321	Systems Analysis and Design	3	Core	F, Sp, Su	Y	
21	CTS 1411	Fundamentals of Information Storage and Management	3	Core	F, Sp	Y	
22	CTS 2370	Configuring and Managing Virtualization	3	Core	F, Sp	Y	
23	CNT 2940	Computer Networking Internship	3	Core	F, Sp, Su		

Total program credits: 67

(Includes MAT 1033 & Computer Competency)

[1] Part of Computer Support Certificate
[2] Part of Linux System Administrator Certificate
[3] Part of Microsoft Certified IT Professional: Server Administrator Certificate
[4] Preparation Course for CompTia A+ Industry Certification

Term Offered: **F** - Fall | **SP** - Spring | **SU** - Summer | *Type of Course:* **Core** - Required for the Program | **Elective** - Options based upon personal interest | **Gen Ed** - General Education | **PreReq** - Prerequisite | **Subplan** - Specific to a particular degree option

Show Students Their Path

SPC St. Petersburg College
INSTRUCTION AND ACADEMIC PROGRAMS

Your pathway to success

Follow this checklist to set and achieve clear career goals

Engineering Technology A.S. (ENG-AS)

Biomedical Systems Subplan with embedded
Medical Quality Systems Certificate (MEDQS-CT) and
Engineering Technology Support Certificate (ENGTECH-CT)

ETI 1030	REGULATORY ENVIRONMENT FOR MEDICAL DEVICES	3
ETI 2031	RISK MANAGEMENT AND ASSESSMENT FOR MEDICAL DEVICE	3
ETI 2032	CHANGE CONTROL AND DOCUMENTATION	3
ETI 2171	QUALITY AUDITING FOR MEDICAL DEVICES	3
CGS 1070	BASIC COMPUTER AND INFORMATION LITERACY	1
ENC 1101	COMPOSITION I	3

0 TO 15 CREDITS

- ✓ Visit Career Services & complete assessments
- ✓ Discover careers & research (using BLS & ONET)
- ✓ Explore degree options & requirements
- ✓ Work with Academic Advising to create a MLP
- ✓ Familiarize yourself with MySPC, MyCourses & SPC Email
- ✓ Volunteer & join Student Government or a club
- ✓ Start a basic resume
- ✓ Locate scholarship opportunities

ETI 1701	INDUSTRIAL SAFETY	3
ETI 2041*	MEDICAL DEVICE DESIGN AND MANUFACTURING	3
ETI 1622	CONCEPTS OF LEAN AND SIX SIGMA	3
MAT 1033	INTERMEDIATE ALGEBRA	3
MAC 1105	COLLEGE ALGEBRA	3

16 TO 30 CREDITS

- ✓ Confirm degree plan matches career goals
- ✓ Modify My Learning Plan (MLP) if necessary
- ✓ Add Volunteer Activities & Clubs to resume
- ✓ A.S. Programs: Attend events related to program & prepare for industry certifications & exams
- ✓ A.A. Program: Determine transfer institution
- ✓ Make an advising appointment
- ✓ Visit Career Services to discuss work based learning opportunities

SPC St. Petersburg College

Your pathway to success

ETI 1420	MANUFACTURING PROCESSES AND MATERIALS I	3
ETI 1628	DEVELOPING & COACHING SELF-DIRECTED WORK TEAMS	3
EET 2949	CO-OP WORK EXPERIENCE	3
EET 1084C	INTRODUCTION TO ELECTRONICS	3
ETI 1110	INTRODUCTION TO QUALITY ASSURANCE	3

31 TO 45 CREDITS

- ✓ Gain experience in your field (volunteer/internships)
- ✓ Build relationships and practice interviewing
- ✓ Create LinkedIn Profile & clean up your online presence
- ✓ Complete all required courses for credit internship
- ✓ Make plans for transfer or continuing at SPC
- ✓ Complete degree audit with an advisor
- ✓ Update My Learning Plan and resume

SPC 1017	INTRODUCTION TO SPEECH COMMUNICATION	3
PHI 1600	STUDIES IN APPLIED ETHICS	3
ETM 1010C	MECHANICAL MEASUREMENT AND INSTRUMENTATION	3
ETD 1320C**	INTRODUCTION TO CAD	3
POS 2041	AMERICAN NATIONAL GOVERNMENT	3
HUM 2270	HUMANITIES (EAST-WEST SYNTHESIS)	3

46 TO 60 CREDITS

- ✓ Research jobs & companies
- ✓ Get references/letters of recommendation
- ✓ Complete a graduation check with advisor
- ✓ Finalize plans for transfer or continuing with SPC
- ✓ Apply for graduation & order your cap and gown

Total Program Credits 60
Total Pathway Credits 64

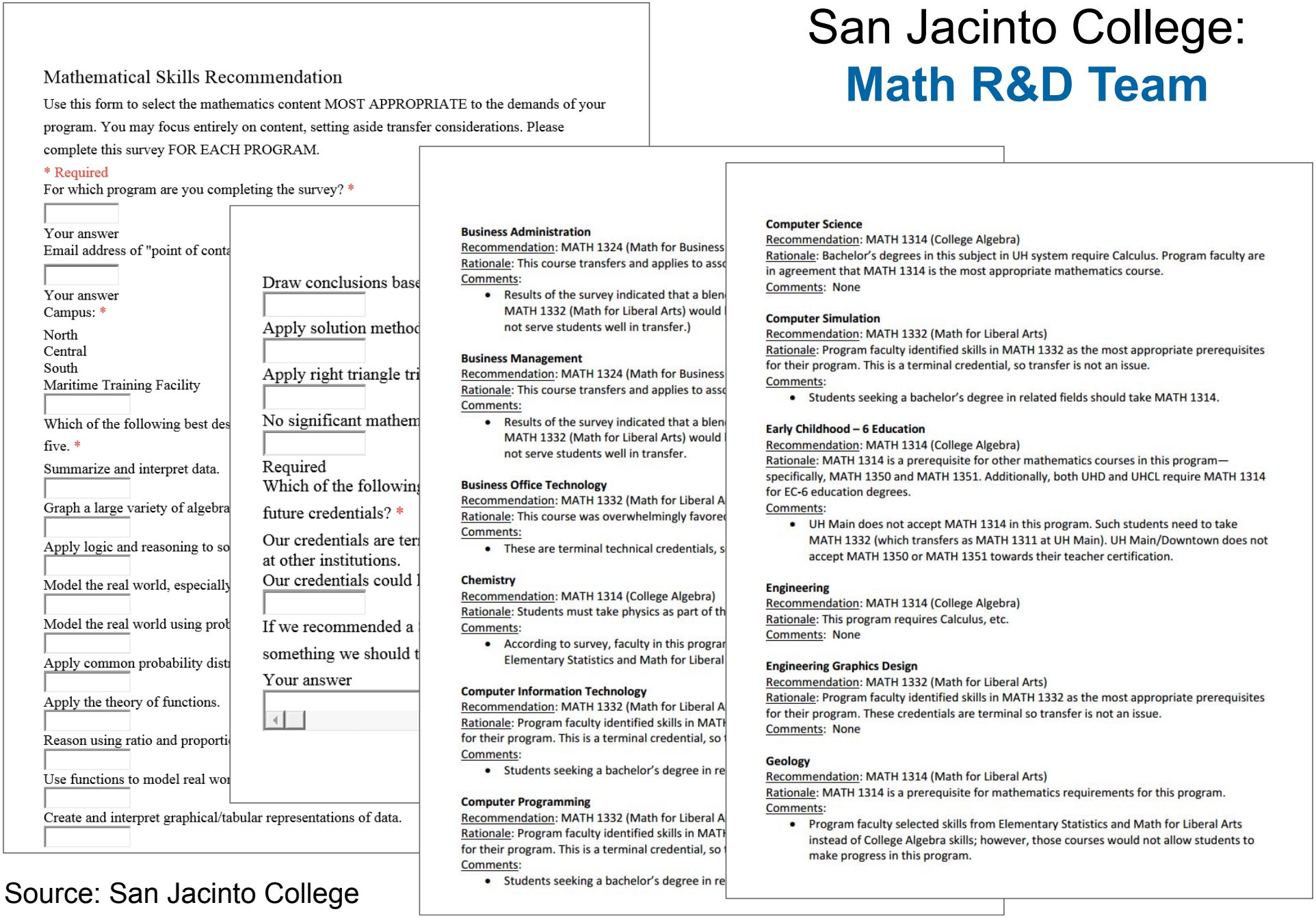
GRADUATION

SPC St. Petersburg College

Part of Medical Quality Systems Certificate[1]
Part of Engineering Technology Support Certificate[2]
Denotes last course required for Medical Quality Systems Certificate*
Denotes last course required for Engineering Technology Support Certificate**

spcollege.edu/careerservices | Twitter #careerspc

San Jacinto College: Math R&D Team



Mathematical Skills Recommendation

Use this form to select the mathematics content MOST APPROPRIATE to the demands of your program. You may focus entirely on content, setting aside transfer considerations. Please complete this survey FOR EACH PROGRAM.

* Required

For which program are you completing the survey? *

Your answer

Email address of "point of conta

Your answer

Campus: *

North
Central
South
Maritime Training Facility

Which of the following best des

five. *

Summarize and interpret data.

Graph a large variety of algebra

Apply logic and reasoning to so

Model the real world, especially

Model the real world using prob

Apply common probability distr

Apply the theory of functions.

Reason using ratio and proportio

Use functions to model real wor

Create and interpret graphical/tabular representations of data.

Draw conclusions base

Apply solution metho

Apply right triangle tri

No significant mathem

Required

Which of the following

future credentials? *

Our credentials are ter
at other institutions.
Our credentials could

If we recommended a

something we should t

Your answer

Business Administration
Recommendation: MATH 1324 (Math for Business
Rationale: This course transfers and applies to assc
Comments:
- Results of the survey indicated that a blen
MATH 1332 (Math for Liberal Arts) would
not serve students well in transfer.)

Business Management
Recommendation: MATH 1324 (Math for Business
Rationale: This course transfers and applies to assc
Comments:
- Results of the survey indicated that a blen
MATH 1332 (Math for Liberal Arts) would
not serve students well in transfer.

Business Office Technology
Recommendation: MATH 1332 (Math for Liberal A
Rationale: This course was overwhelmingly favore
Comments:
- These are terminal technical credentials, s

Chemistry
Recommendation: MATH 1314 (College Algebra)
Rationale: Students must take physics as part of th
Comments:
- According to survey, faculty in this prograr
Elementary Statistics and Math for Liberal

Computer Information Technology
Recommendation: MATH 1332 (Math for Liberal A
Rationale: Program faculty identified skills in MATH
for their program. This is a terminal credential, so
Comments:
- Students seeking a bachelor's degree in re

Computer Programming
Recommendation: MATH 1332 (Math for Liberal A
Rationale: Program faculty identified skills in MATH
for their program. This is a terminal credential, so
Comments:
- Students seeking a bachelor's degree in re

Computer Science
Recommendation: MATH 1314 (College Algebra)
Rationale: Bachelor's degrees in this subject in UH system require Calculus. Program faculty are in agreement that MATH 1314 is the most appropriate mathematics course.
Comments: None

Computer Simulation
Recommendation: MATH 1332 (Math for Liberal Arts)
Rationale: Program faculty identified skills in MATH 1332 as the most appropriate prerequisites for their program. This is a terminal credential, so transfer is not an issue.
Comments:
- Students seeking a bachelor's degree in related fields should take MATH 1314.

Early Childhood – 6 Education
Recommendation: MATH 1314 (College Algebra)
Rationale: MATH 1314 is a prerequisite for other mathematics courses in this program—specifically, MATH 1350 and MATH 1351. Additionally, both UHD and UHCL require MATH 1314 for EC-6 education degrees.
Comments:
- UH Main does not accept MATH 1314 in this program. Such students need to take MATH 1332 (which transfers as MATH 1311 at UH Main). UH Main/Downtown does not accept MATH 1350 or MATH 1351 towards their teacher certification.

Engineering
Recommendation: MATH 1314 (College Algebra)
Rationale: This program requires Calculus, etc.
Comments: None

Engineering Graphics Design
Recommendation: MATH 1332 (Math for Liberal Arts)
Rationale: Program faculty identified skills in MATH 1332 as the most appropriate prerequisites for their program. These credentials are terminal so transfer is not an issue.
Comments: None

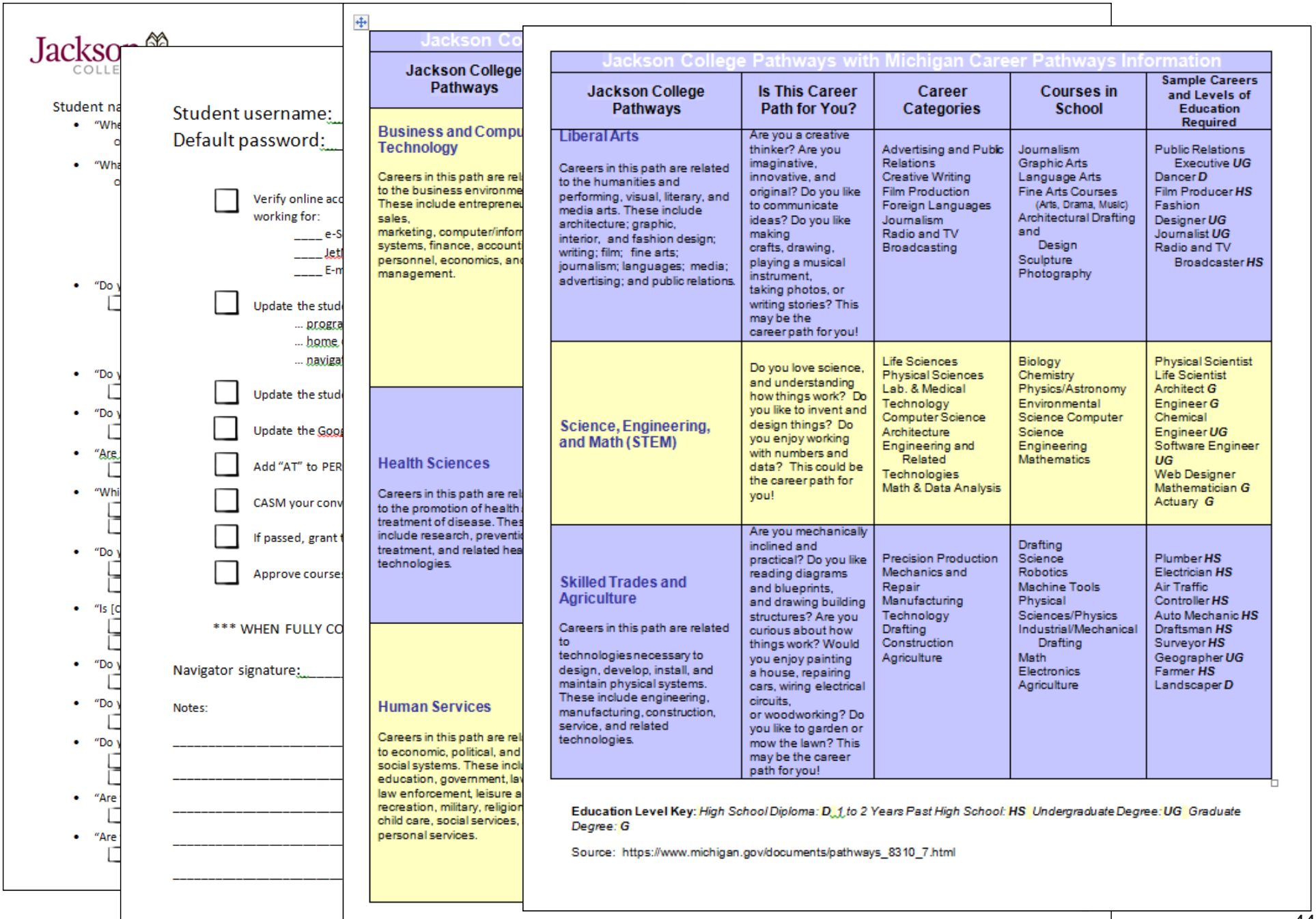
Geology
Recommendation: MATH 1314 (Math for Liberal Arts)
Rationale: MATH 1314 is a prerequisite for mathematics requirements for this program.
Comments:
- Program faculty selected skills from Elementary Statistics and Math for Liberal Arts instead of College Algebra skills; however, those courses would not allow students to make progress in this program.

Source: San Jacinto College

Helping Students Choose and Plan a Program

Rethinking Student On-boarding

From:	*To:*
Job/transfer support for near completers	Career/college exploration and planning for all from the start
Current semester schedule	Full-program plan
Academic assessment	Holistic assessment
Pre-requisite remediation	Co-requisite academic support
Algebra and English comp	Critical program courses
A lá carte dual HS credit	Exploration of program pathways beginning in HS



Student username:
Default password:

Verify online acc
working for:
____ e-S
____ Jetl
____ E-m

Update the stud
... progra
... home
... navigat

Update the stud

Update the Goog

Add "AT" to PER

CASM your conv

If passed, grant t

Approve course

*** WHEN FULLY CO

Navigator signature:

Notes:

Jackson Co

Jackson College Pathways

Business and Compu Technology

Careers in this path are rel to the business environme These include entrepreneu sales, marketing, computer/inform systems, finance, account personnel, economics, and management.

Health Sciences

Careers in this path are rel to the promotion of health treatment of disease. Thes include research, preventi treatment, and related hea technologies.

Human Services

Careers in this path are rel to economic, political, and social systems. These inclu education, government, la law enforcement, leisure a recreation, military, religion child care, social services, personal services.

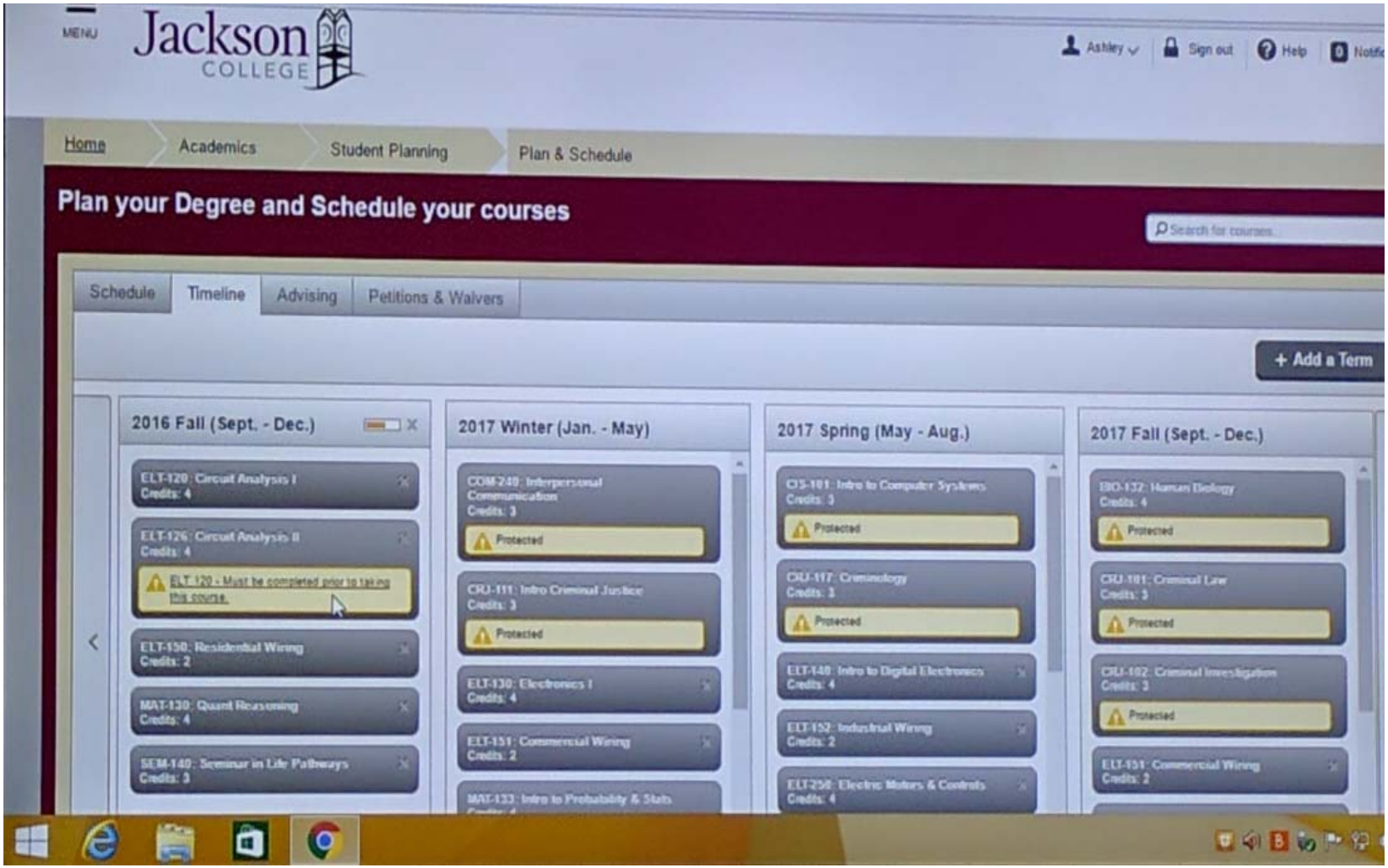
Jackson College Pathways with Michigan Career Pathways Information

Jackson College Pathways	Is This Career Path for You?	Career Categories	Courses in School	Sample Careers and Levels of Education Required
Liberal Arts Careers in this path are related to the humanities and performing, visual, literary, and media arts. These include architecture; graphic, interior, and fashion design; writing; film; fine arts; journalism; languages; media; advertising; and public relations.	Are you a creative thinker? Are you imaginative, innovative, and original? Do you like to communicate ideas? Do you like making crafts, drawing, playing a musical instrument, taking photos, or writing stories? This may be the career path for you!	Advertising and Public Relations Creative Writing Film Production Foreign Languages Journalism Radio and TV Broadcasting	Journalism Graphic Arts Language Arts Fine Arts Courses (Arts, Drama, Music) Architectural Drafting and Design Sculpture Photography	Public Relations Executive *UG* Dancer *D* Film Producer *HS* Fashion Designer *UG* Journalist *UG* Radio and TV Broadcaster *HS*
Science, Engineering, and Math (STEM)	Do you love science, and understanding how things work? Do you like to invent and design things? Do you enjoy working with numbers and data? This could be the career path for you!	Life Sciences Physical Sciences Lab. & Medical Technology Computer Science Architecture Engineering and Related Technologies Math & Data Analysis	Biology Chemistry Physics/Astronomy Environmental Science Computer Science Engineering Mathematics	Physical Scientist Life Scientist Architect *G* Engineer *G* Chemical Engineer *UG* Software Engineer *UG* Web Designer Mathematician *G* Actuary *G*
Skilled Trades and Agriculture Careers in this path are related to technologies necessary to design, develop, install, and maintain physical systems. These include engineering, manufacturing, construction, service, and related technologies.	Are you mechanically inclined and practical? Do you like reading diagrams and blueprints, and drawing building structures? Are you curious about how things work? Would you enjoy painting a house, repairing cars, wiring electrical circuits, or woodworking? Do you like to garden or mow the lawn? This may be the career path for you!	Precision Production Mechanics and Repair Manufacturing Technology Drafting Construction Agriculture	Drafting Science Robotics Machine Tools Physical Sciences/Physics Industrial/Mechanical Drafting Math Electronics Agriculture	Plumber *HS* Electrician *HS* Air Traffic Controller *HS* Auto Mechanic *HS* Draftsman *HS* Surveyor *HS* Geographer *UG* Farmer *HS* Landscaper *D*

Education Level Key: *High School Diploma: D, 1 to 2 Years Past High School: HS Undergraduate Degree: UG Graduate Degree: G*

Source: https://www.michigan.gov/documents/pathways_8310_7.html

Jackson College Student Planning



Using JetSTREAM to customize plan

What makes for a good plan?

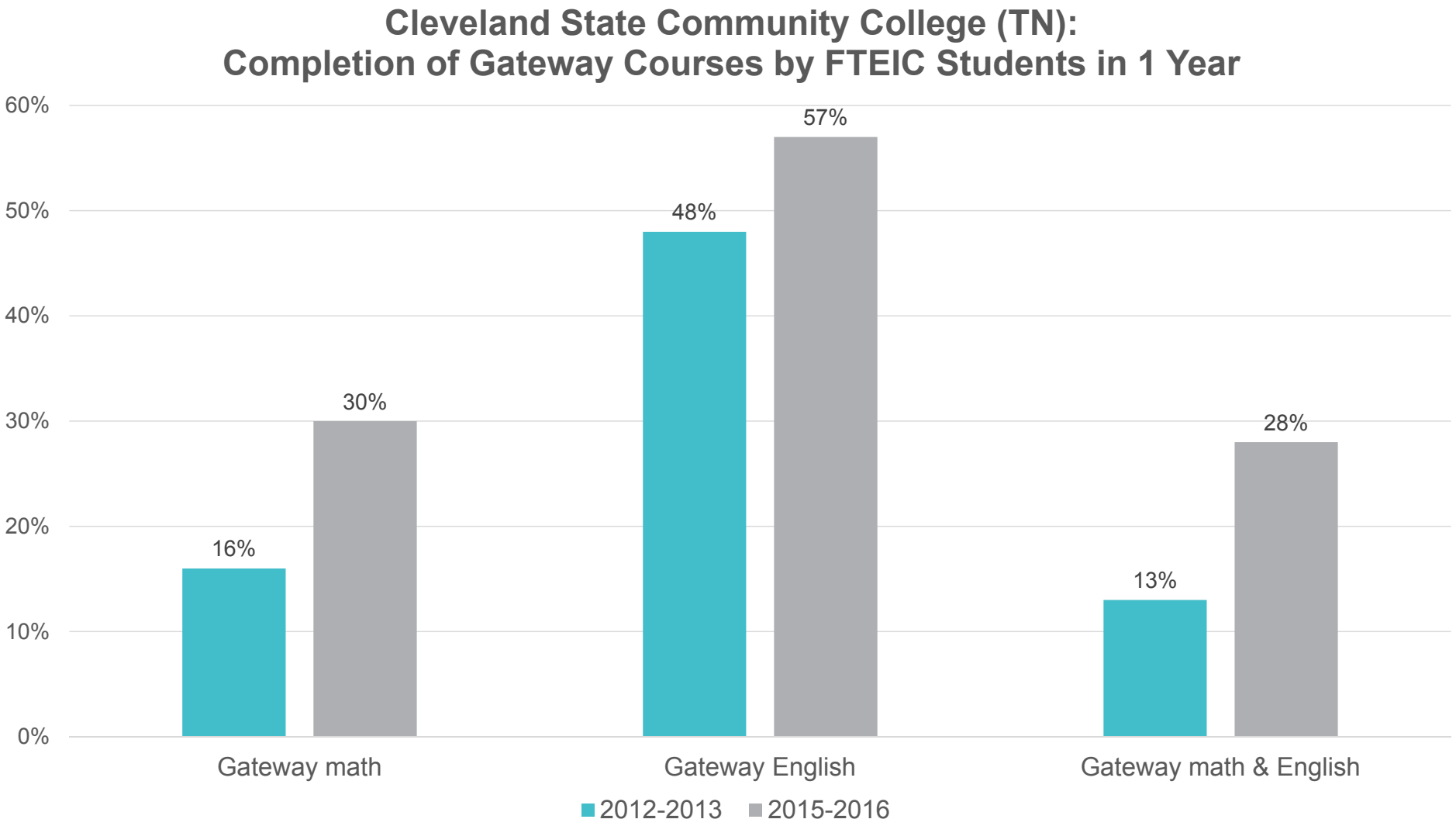
- ✓ Covers *entire* program based on default program maps
- ✓ Customized for each student to account for:
  - **prior credits** (dual enrollment, transfer, AP, etc.)
  - educational **goals** and **personal interests**
  - **transfer** destination and major
  - **timeline** to completion
- ✓ Contains at least 1 program course in first term, and 3 program courses in first year
- ✓ Easily accessible by student, advisor, faculty
- ✓ Tied to scheduling/registration process and locked into student information system

All of the AACC Pathways colleges are experimenting with new and promising approaches to developmental education…

…but with a couple of notable exceptions, they have not yet connected these efforts to their guided pathways reforms at scale.

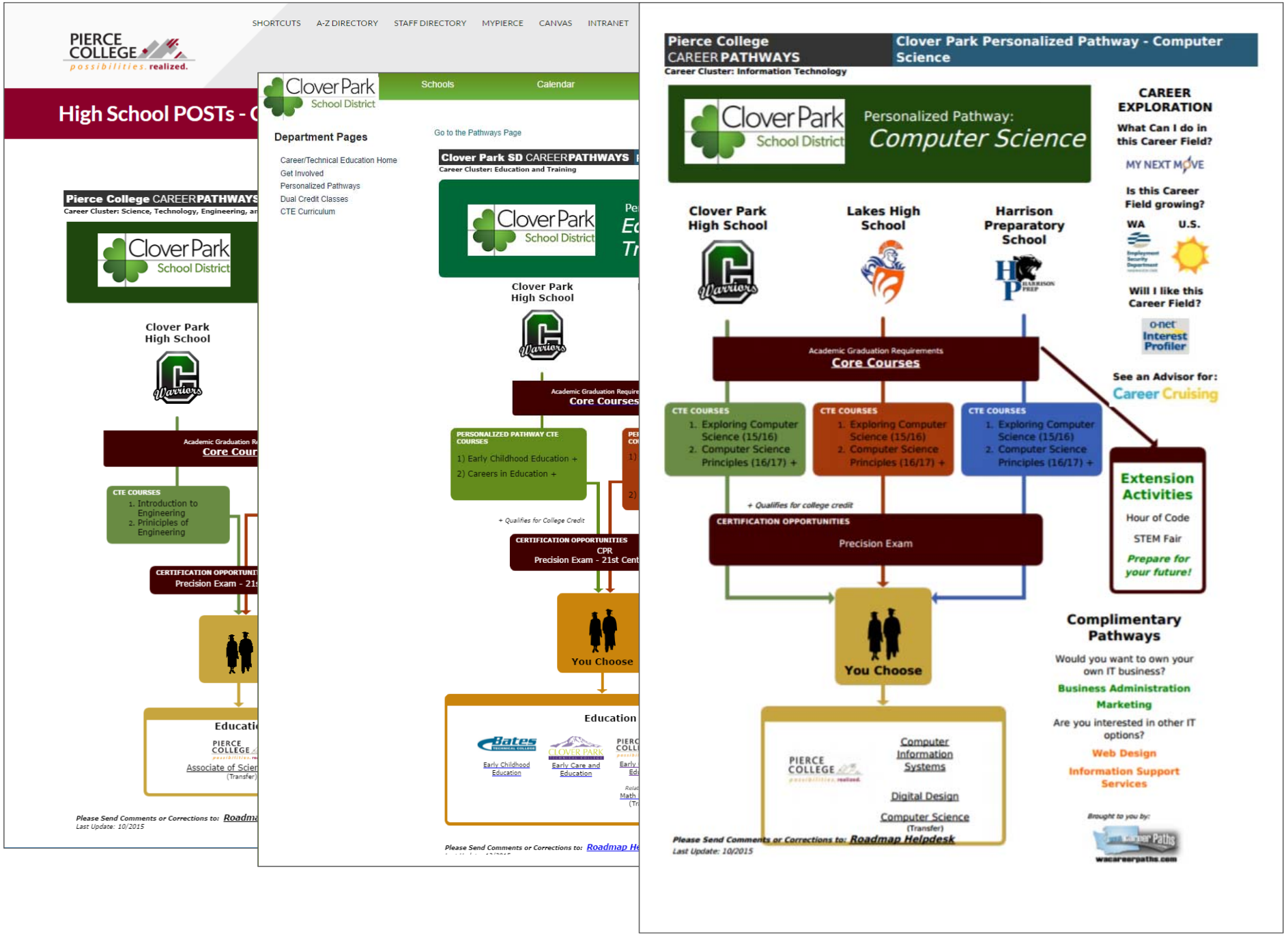
- Examples:
  - Cleveland State Community College (TN)
  - Stanly Community College (NC)
  - Wallace State Community College (AL)

Early evidence of impacts



AACC colleges are beginning to build pathways down into high schools, starting with dual enrollment students

- Examples:
  - Indian River State College (FL)
    - "Great Explorations"
    - Required SLS 1000
    - Build an academic plan
  - Columbus State Community College (OH)
    - College Credit Plus
  - Pierce College (WA)
    - Career cruising
    - Washington Career Pathways


SHORTCUTS
A-Z DIRECTORY
STAFF DIRECTORY
MYPIERCE
CANVAS
INTRANET
PIERCE COLLEGE
possibilities. realized.
High School POSTs - C
Pierce College CAREERPATHWAYS
Career Cluster: Science, Technology, Engineering, ar
Clover Park School District
Clover Park High School
Academic Graduation Re
Core Cour
CTE COURSES
1. Introduction to Engineering
2. Priniciples of Engineering
CERTIFICATION OPPORTUNIT
Precision Exam - 21
Educati
PIERCE COLLEGE
Associate of Scier
(Transfer)
Please Send Comments or Corrections to: Roadma
Last Update: 10/2015
Clover Park School District
Schools
Calendar
Department Pages
Career/Technical Education Home
Get Involved
Personalized Pathways
Dual Credit Classes
CTE Curriculum
Go to the Pathways Page
Clover Park SD CAREERPATHWAYS
Career Cluster: Education and Training
Clover Park School District
Clover Park High School
Academic Graduation Require
Core Courses
PERSONALIZED PATHWAY CTE COURSES
1) Early Childhood Education +
2) Careers in Education +
+ Qualifies for College Credit
CERTIFICATION OPPORTUNITIES
CPR
Precision Exam - 21st Cent
You Choose
Education
Bates TECHNICAL COLLEGE
Early Childhood Education
CLOVER PARK TECHNICAL COLLEGE
Early Care and Education
Early Ed
Math
Please Send Comments or Corrections to: Roadmap He
Pierce College CAREER PATHWAYS
Clover Park Personalized Pathway - Computer Science
Career Cluster: Information Technology
Clover Park School District
Personalized Pathway:
Computer Science
Clover Park High School
Lakes High School
Harrison Preparatory School
Academic Graduation Requirements
Core Courses
CTE COURSES
1. Exploring Computer Science (15/16)
2. Computer Science Principles (16/17) +
CTE COURSES
1. Exploring Computer Science (15/16)
2. Computer Science Principles (16/17) +
CTE COURSES
1. Exploring Computer Science (15/16)
2. Computer Science Principles (16/17) +
+ Qualifies for college credit
CERTIFICATION OPPORTUNITIES
Precision Exam
You Choose
PIERCE COLLEGE
Computer Information Systems
Digital Design
Computer Science
(Transfer)
Please Send Comments or Corrections to: Roadmap Helpdesk
Last Update: 10/2015
CAREER EXPLORATION
What Can I do in this Career Field?
MY NEXT MOVE
Is this Career Field growing?
WA
U.S.
Employment Security Department
Will I like this Career Field?
o-net Interest Profiler
See an Advisor for:
Career Cruising
Extension Activities
Hour of Code
STEM Fair
Prepare for your future!
Complimentary Pathways
Would you want to own your own IT business?
Business Administration
Marketing
Are you interested in other IT options?
Web Design
Information Support Services
Brought to you by:
wacareerpaths.com

Keeping Students On Path

Rethinking Student Advising

From:	*To:*
Info "dump" at orientation	JIT support for major decisions along the path
Scheduling available courses to suit college schedule	Scheduling courses on the student's plan to fit their schedule
Full-time vs. part-time	On-plan vs. off-plan
Advising vs. teaching	Advisors teach and faculty advise

Major Decisions Along the Path

CONNECTION
From interest to application

- What are my career options?
- Which college offers programs in my field of interest?
- How much will it cost and how will I pay?

ENTRY
From entry to passing program gatekeeper courses

- What are my program options?
- What are program requirements?
- Which program is a good fit?
- What will I take?
- Will credits transfer?
- How much time and money to finish?
- What if I change my mind about a major?

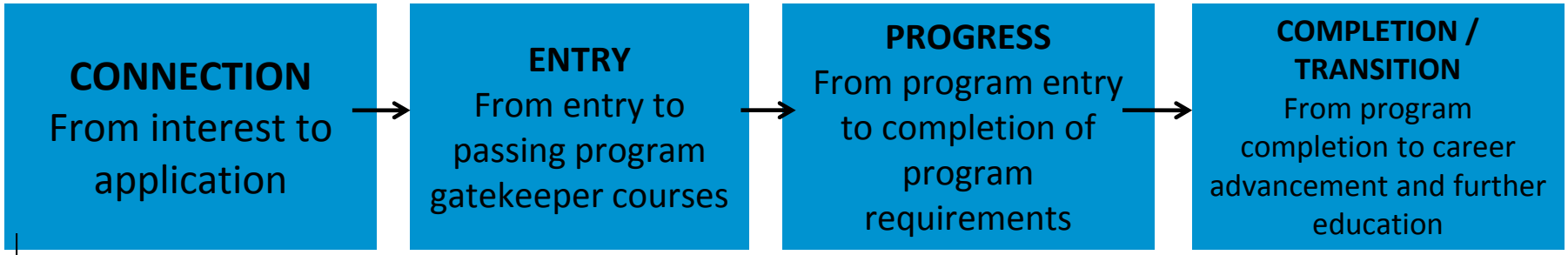
PROGRESS
From program entry to completion of program requirements

- Am I making progress?
- How do I get related work experience?
- What if I want to change majors?
- What if I am struggling academically?
- How much time and money to complete?
- How do I balance my other obligations?

COMPLETION / TRANSITION
From program completion to career advancement and further education

- How do I transfer?
- How do I get a job in my field of interest?

Approaches to Redesigning Advising



Jackson College (MI)

Navigators (case managers liaise w/ academic departments, financial aid)

Academic Departments & Financial Aid

Connection WELCOME/ADVISING CENTERS → **Entry** COLLEGE SUCCESS → **Progress** FACULTY ASSIGNED WITH MAJOR → **Completion** CAREER & GRAD. CENTERS

PRE-COLLEGE—0 HOURS

- **AlamoENROLL**—Provides enrollment guidance to prospective students through cross-college website including:
  - Steps to Enrollment Checklist
  - Open Modules
  - Ready, Set, Apply
  - Intro to College and **AlamoINSTITUTES**
  - Financing Your Future
  - Test 101
  - Resources/Computer labs
- **AlamoINSTITUTES**—Provide advising information regarding career pathways
  - Health & Biosciences
  - Advanced Manufacturing & Logistics
  - Science & Technology
  - Public Service
  - Creative & Communication Arts
  - Business & Entrepreneurship
- **Early Colleges/Academies**—Course enrollment in Fr/Sr through assigned advisor.
- **Dual Credit**—Course enrollment in Jr/Sr year through assigned Advisor.
- **College Connection**—Guide through enrollment process, including completion of ApplyTexas, FAFSA Application, TSI and **AlamoENROLL** modules.
- **Grad Guru** downloaded

0–3(

INITIAL ENROLLMENT—1ST SEMESTER

- **New Student Orientation/Convocation**—Ori
  - Provide Academic Advising Syllabus (0–3
  - Assist with scheduling & registering for
  - Orient students to Degree Plans via Alam
  - Online Web Registration assistance avail
  - **AlamoINSTITUTES** / major course of stu
  - Identify **ACOL/PLA**
- **Post Assessment Advising**—TSI score interp
- **Academic Refreshers**—INRW and math
- **Post Refresher Advising**

1ST SEMESTER

- Instruction on College Success (**SDEV Cours**
- Advisor utilizes **Canvas** to connect with assig
- Assist students in choosing their major usin
- **MyAlamoCareer.org and Career Coach**—vir centers, Alamo Colleges and local job marke
- **AlamoINSTITUTES** utilized
- Provide students with a plan to earn a certifi
  - Complete ISP via Alamo GPS.
- Advise and register students into appropriat
- Early Alert & Smart Start utilized
- Advisor determines Faculty integration (12–

2ND SEMESTER

- Confirm students' plan to earn a certificate
- Advise and register students into appropriat
- Early Alert & Smart Start utilized

31+ HOURS

2ND YEAR—GRADUATION

- Faculty teamed with an advisor through Degree or Certificate completion via GPS.
- Provide Academic Advising Syllabus (31+ hours)
- Advising regarding course selection is offered through Group or Individual Sessions to understand the requirements of chosen major at transfer university.
- Major Mixers/Major Mania Events
- Provide positive feedback at primary success points.
- Graduation and Transfer Initiative—Experiential/Career Centers & Faculty Mentors work in tandem to advise, graduate students and proclaim their transfer university (review their degree plan/ISP, and consider transferring to a university)

ADVISING CENTERS (19 Teams)

- Advising regarding course selection is offered through Group or Individual Sessions to understand major requirements.

2ND YEAR—GRADUATION

- Assist students (42+ Hours/ Core Complete) in Degree Audits via Alamo GPS
- Faculty advise students during semester on how to be successful in classes.
- Coordinate the Academic Achievement Events, Career/ Scholarship Fairs, Transfer Fairs, and Graduation Event/ Festival.
- Graduation Survey
- Reverse Transfer

ACTIONS: Assign Connection Advisor | Certified Advisor Assigned/PIN Given, Institut | Faculty Mentor Assigned

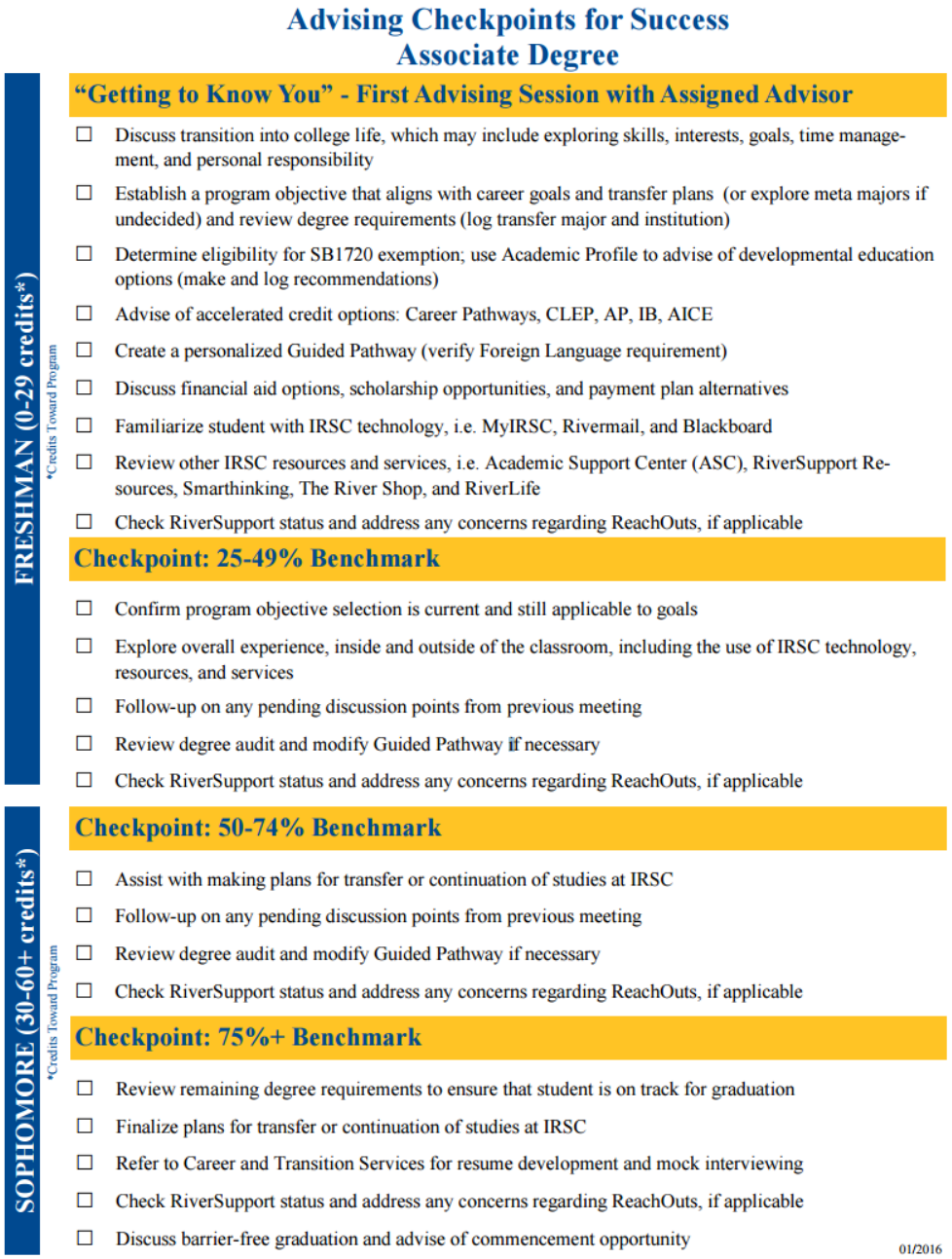
METRICS: Number of Apply Texas Submitte | FTICS Enrolled | # of Certificate & Core Completers | Number of Degrees

(Analyst) Number of DC/EC Enrolled | Productive Grade Rate (PGR) | Number of Art. Agreements | Number of Certificates

DC/EC Term Retention

BADGES: Welcome | College Ready, 15 Hours, 30 Hours | Core Complete | Cert., Degree, Alum

IRSC: Checkpoint advising manual



Advising Checkpoints for Success
Associate Degree

FRESHMAN (0-29 credits*)

*Credits Toward Program

"Getting to Know You" - First Advising Session with Assigned Advisor

- ☐ Discuss transition into college life, which may include exploring skills, interests, goals, time management, and personal responsibility
- ☐ Establish a program objective that aligns with career goals and transfer plans (or explore meta majors if undecided) and review degree requirements (log transfer major and institution)
- ☐ Determine eligibility for SB1720 exemption; use Academic Profile to advise of developmental education options (make and log recommendations)
- ☐ Advise of accelerated credit options: Career Pathways, CLEP, AP, IB, AICE
- ☐ Create a personalized Guided Pathway (verify Foreign Language requirement)
- ☐ Discuss financial aid options, scholarship opportunities, and payment plan alternatives
- ☐ Familiarize student with IRSC technology, i.e. MyIRSC, Rivermail, and Blackboard
- ☐ Review other IRSC resources and services, i.e. Academic Support Center (ASC), RiverSupport Resources, Smarthinking, The River Shop, and RiverLife
- ☐ Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

Checkpoint: 25-49% Benchmark

- ☐ Confirm program objective selection is current and still applicable to goals
- ☐ Explore overall experience, inside and outside of the classroom, including the use of IRSC technology, resources, and services
- ☐ Follow-up on any pending discussion points from previous meeting
- ☐ Review degree audit and modify Guided Pathway if necessary
- ☐ Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

SOPHOMORE (30-60+ credits*)

*Credits Toward Program

Checkpoint: 50-74% Benchmark

- ☐ Assist with making plans for transfer or continuation of studies at IRSC
- ☐ Follow-up on any pending discussion points from previous meeting
- ☐ Review degree audit and modify Guided Pathway if necessary
- ☐ Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

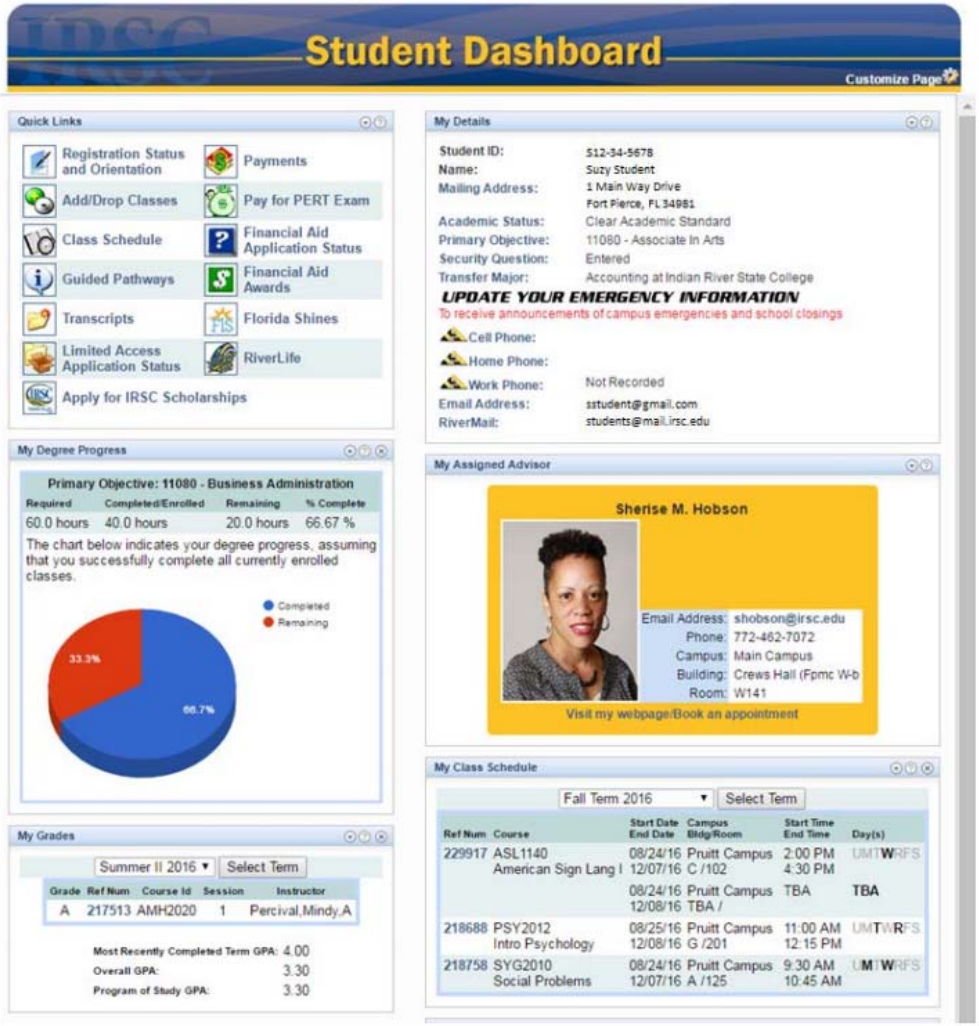
Checkpoint: 75%+ Benchmark

- ☐ Review remaining degree requirements to ensure that student is on track for graduation
- ☐ Finalize plans for transfer or continuation of studies at IRSC
- ☐ Refer to Career and Transition Services for resume development and mock interviewing
- ☐ Check RiverSupport status and address any concerns regarding ReachOuts, if applicable
- ☐ Discuss barrier-free graduation and advise of commencement opportunity

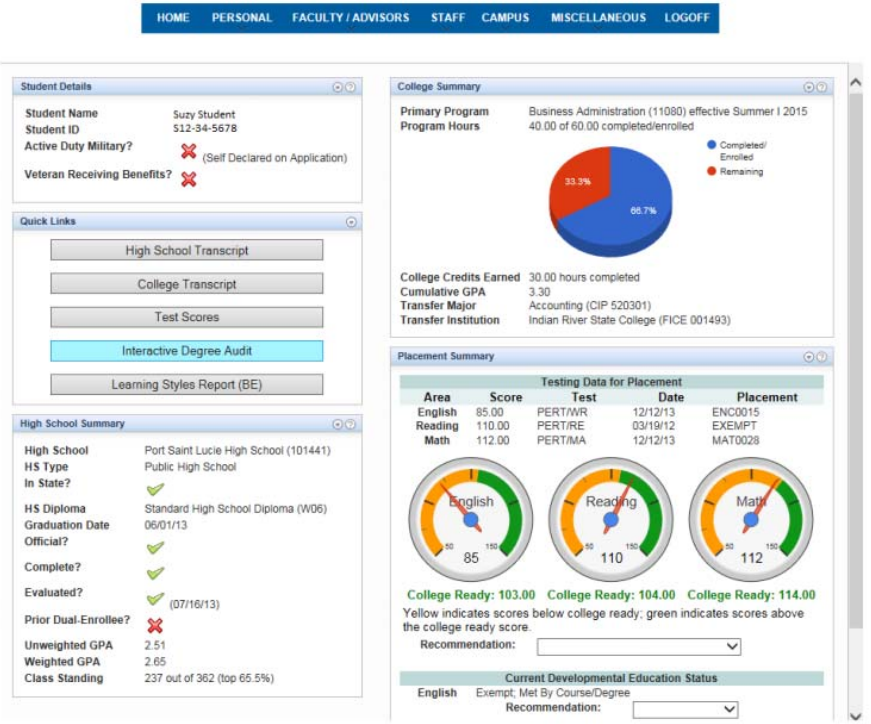
01/2016

Source: Indian River State College

STUDENT VIEW OF STUDENT INFORMATION



ADVISOR VIEW OF STUDENT INFORMATION



Source: Indian River State College

Typical On-Boarding Path for Degree/Certificate Seeking Student at St. Petersburg College

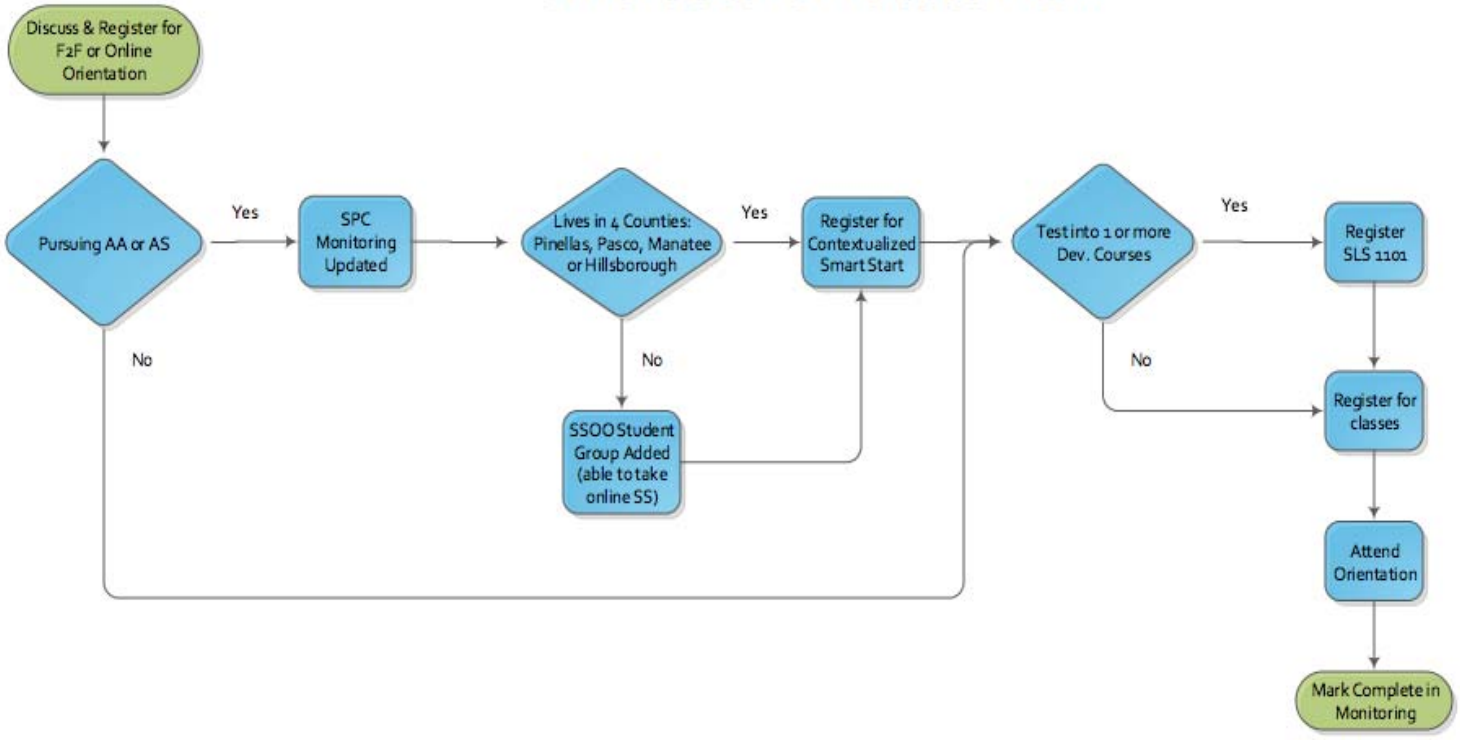
Last Modified: Jan. 1, 2017

Advising Visit Flow

Current Student Onboarding

Changing Community

Smart Start Process Flow



Advising Redesign Key Features

- **Personal contacts early on**, so students feel welcomed and valued
- **Case management approach,** so that every student ideally has one advisor who is overseeing his or her progress throughout
- **Connection with faculty and others in their field of interest** to provide guidance and networking support
- **Responsibility for guiding students into and through program paths shared by all faculty and staff**, regardless of whether they have formal roles as advisors

Ensuring that Students are Learning

Rethinking Teaching and Learning

From:	*To:*
Gen ed learning outcomes	→ Meta-major learning outcomes
Generic gen eds	→ Contextualized gen eds
In-class learning	→ Curricular + co-curricular learning
Student transcripts	→ Portfolios

Ensuring that students are learning

A handful of colleges are considering how to customize general education learning outcomes for broad meta-major fields.

- "Pathways can't just be sequences of courses. They have to fit together to create an educationally coherent program…[Therefore] you need program learning outcomes for pathways in particular fields." – Associate dean, IRSC.
- Contextualizing general education courses for career and academic communities (St. Pete College)
- Challenge: **Measuring and documenting learning outcomes mastery by individual students.**

Program ePortfolios: Education

- Introductory
- Advanced
- Programs
  - Nursing
    - LPN
    - LPN to RN
    - RN
  - Physical Therapy
  - Occupational Therapy
  - Dietetic Technician
  - Business Technology
  - Education
  - Fine Arts
  - Human Services
- eP Student Scholars
- eP Showcase
- eP Student Clubs

Amy Monte
Major: Childhood Education

Angela Roque
Major: Childhood Education

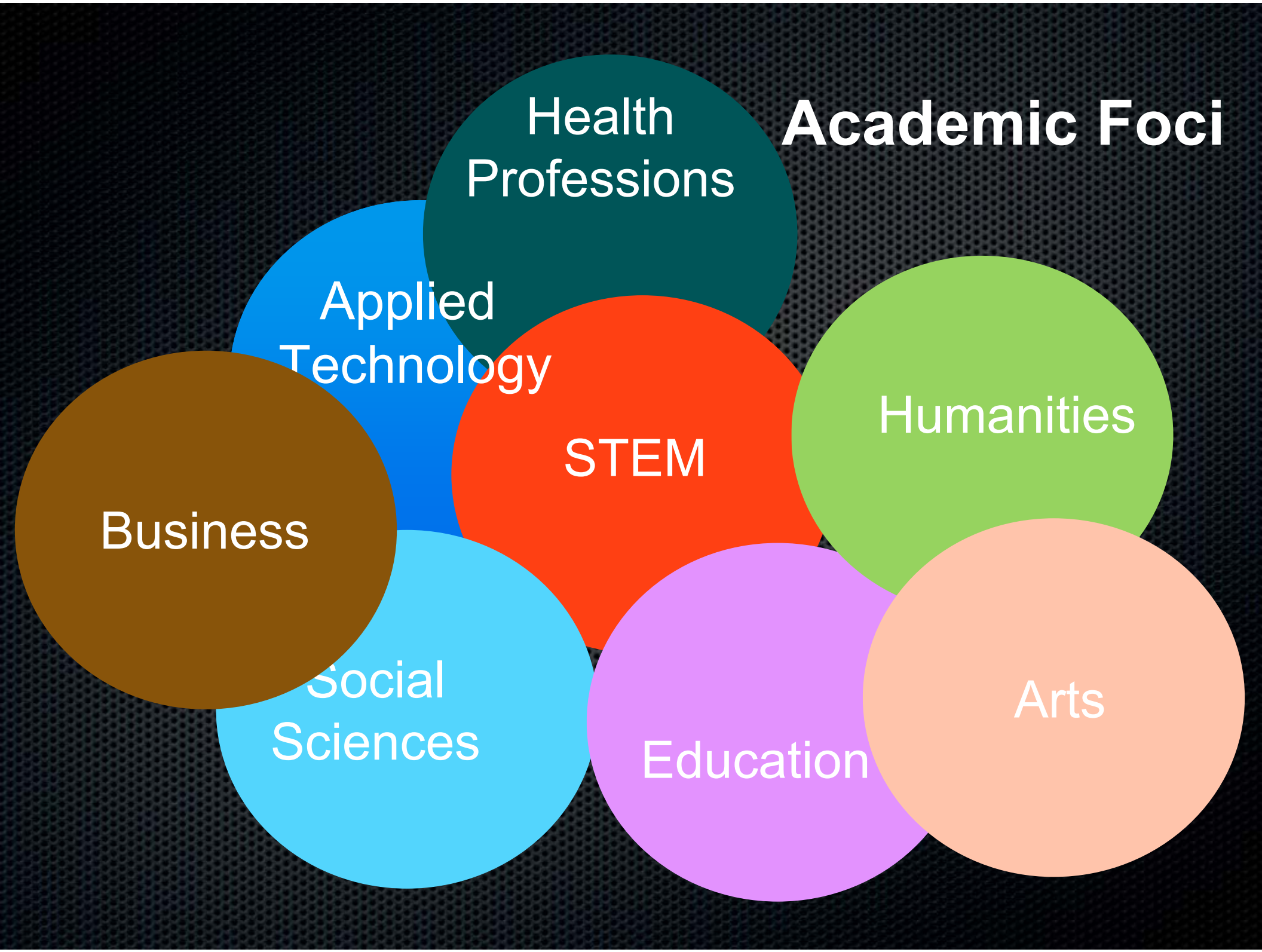
Jessica Guzman
Major: Bilingual Education

Jonathan Melgar
Major: Secondary Education

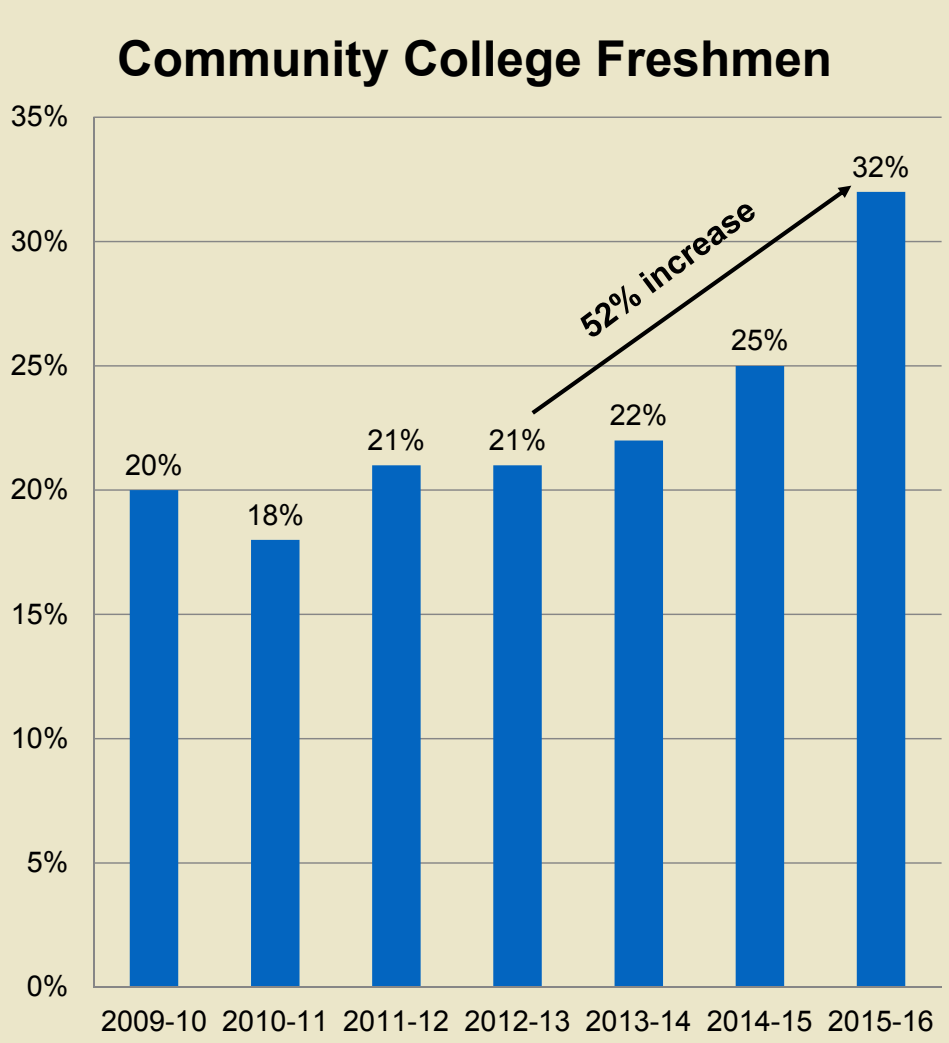
Kenya Barahona
Major: Childhood Education

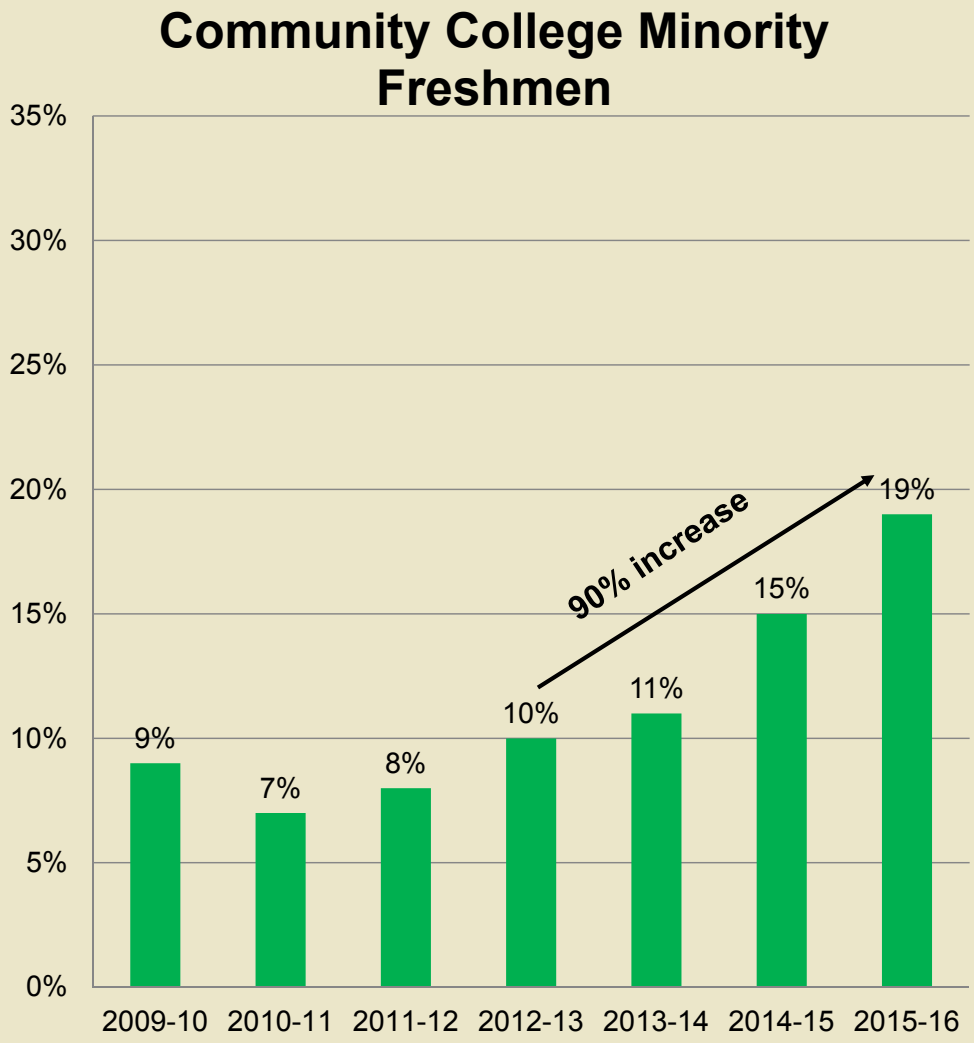
Mayra Cabrera
Major: Education

Early Evidence: Tennessee GPS


Academic Foci
Health Professions
Applied Technology
STEM
Humanities
Business
Social Sciences
Education
Arts

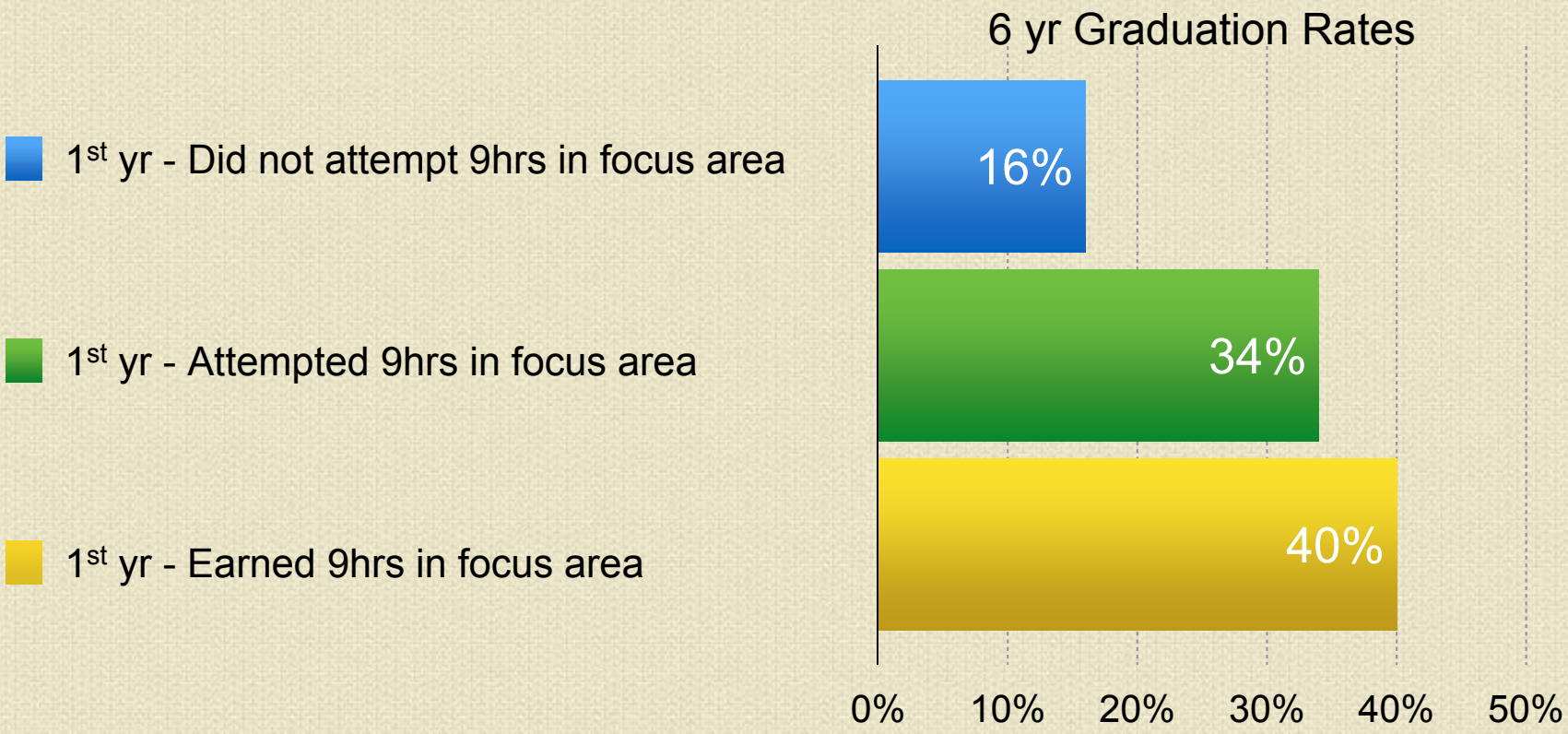
Incoming Freshmen Who Successfully Completed at Least 9 hours in Their Focus Area During Their 1st Academic Year





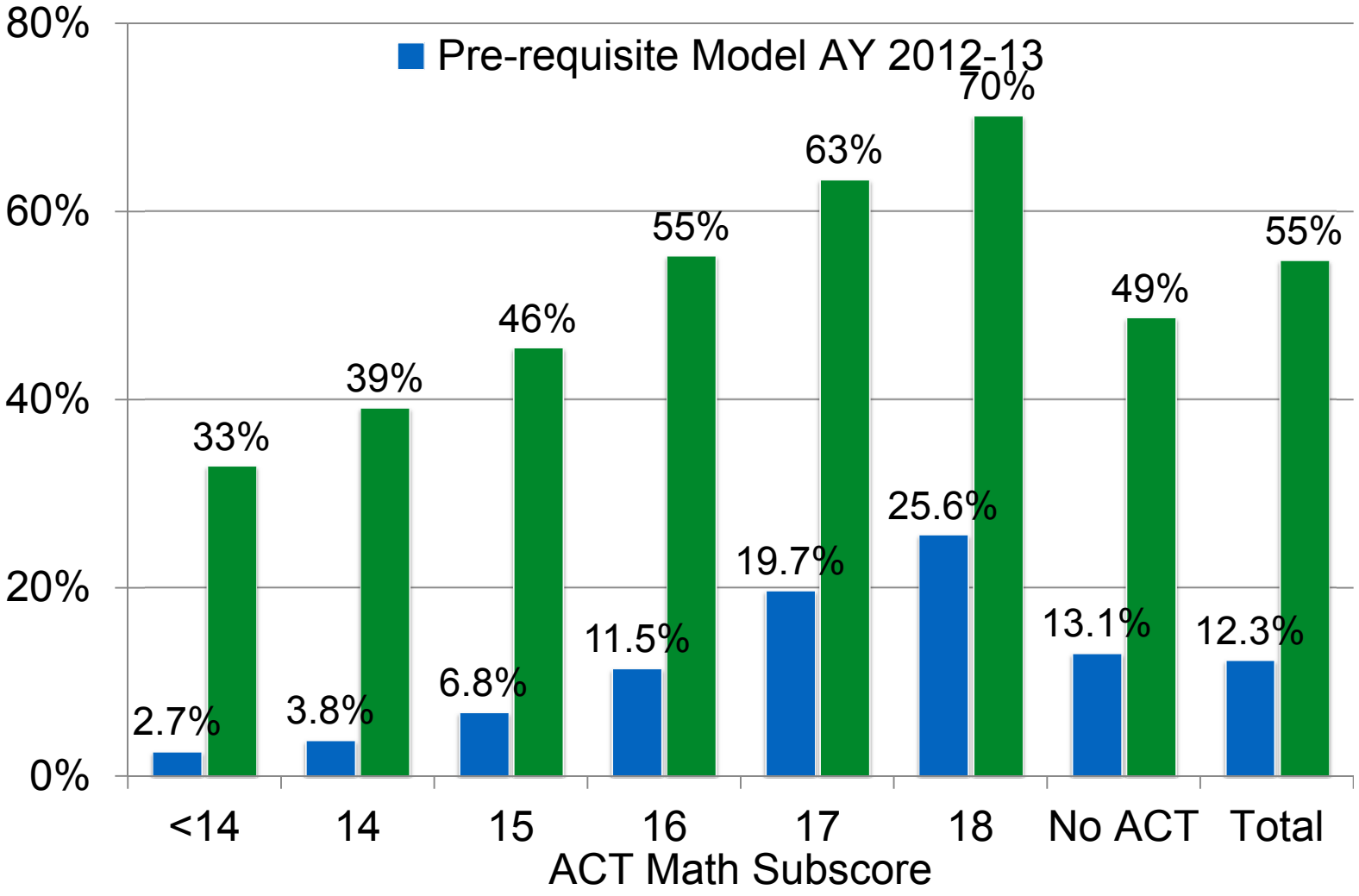
Source: Denley, TBR, 2016

Community College Graduation Rates



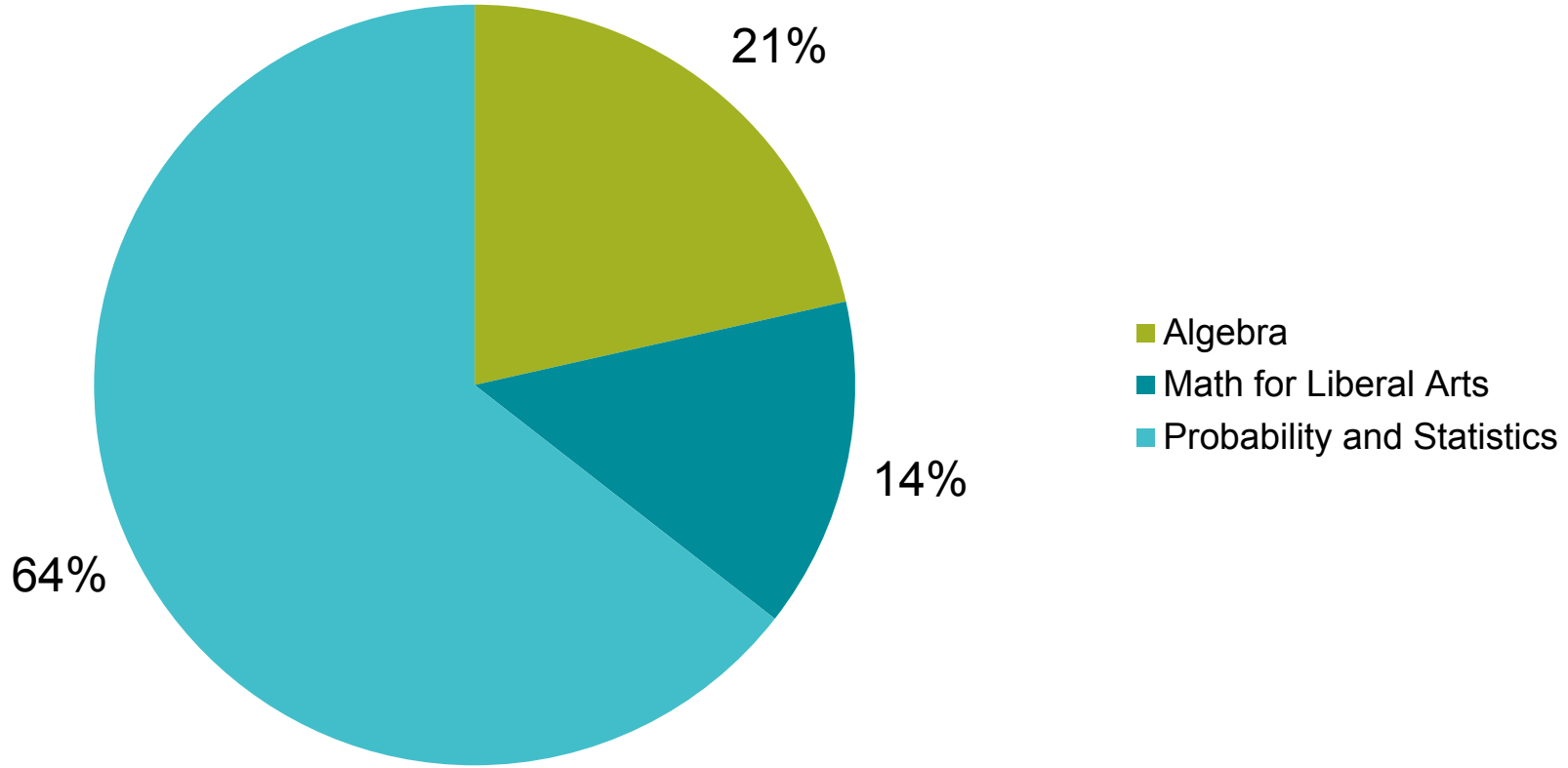
Completion of Gateway Math by ACT Sub-score

Community College Pre-requisite Model vs. Co-requisite Model



Accelerating College Entry

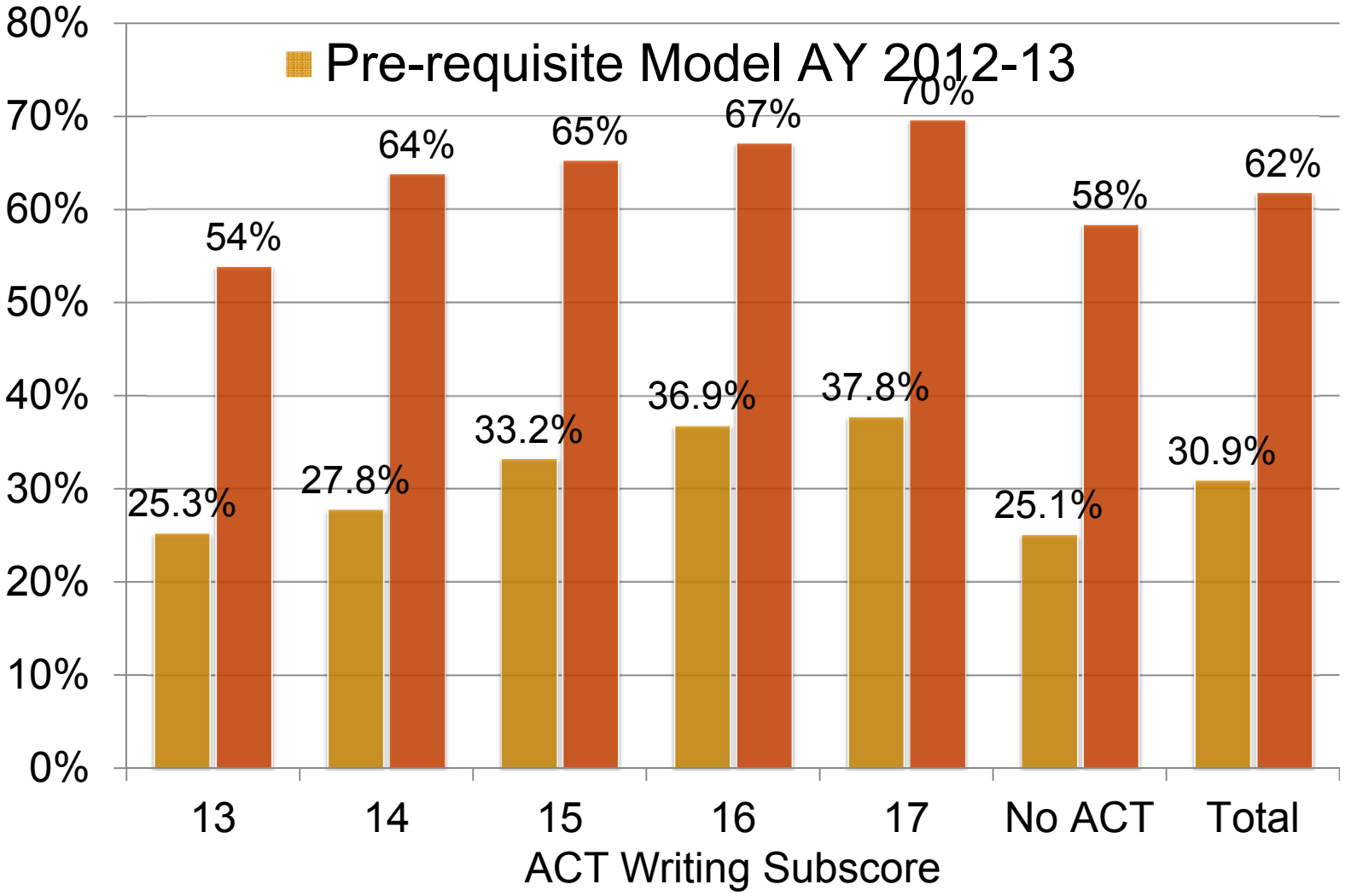
College Math Taken by Students in Tennessee Community Colleges Co-Requisite Scale Implementation, Fall 2015



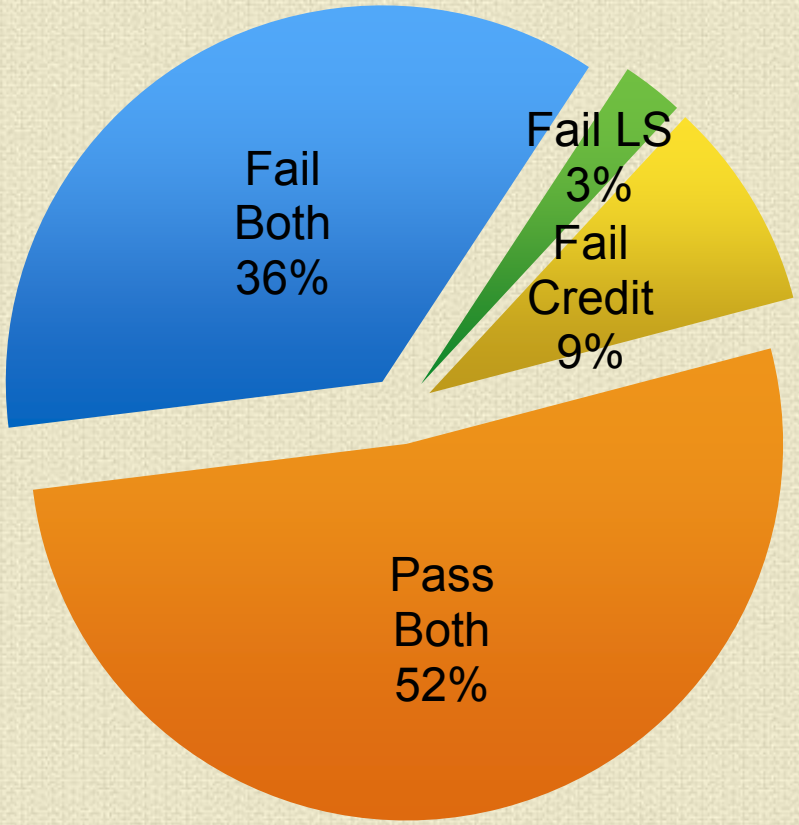
Source: Belfield, Jenkins, Lahr (2016).

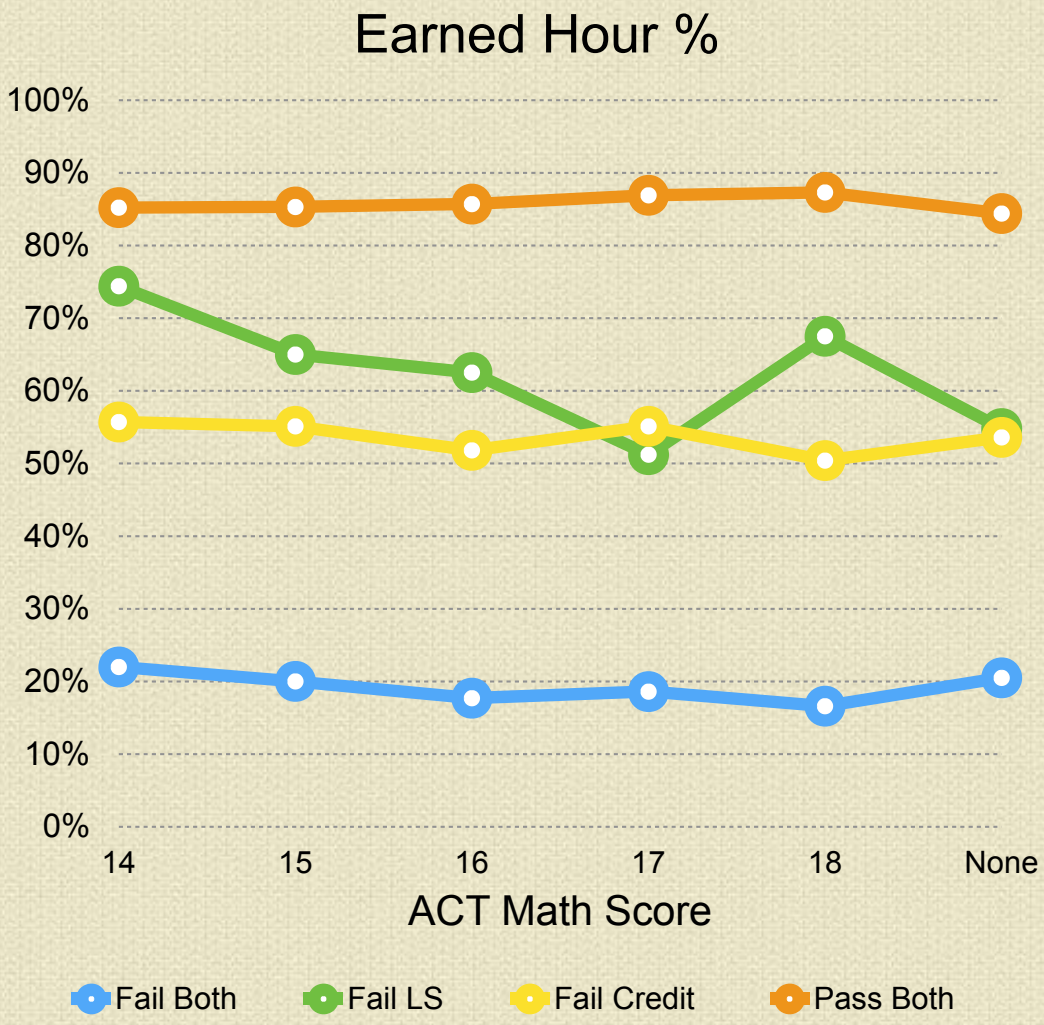
Completion of Gateway Writing by ACT Sub-score

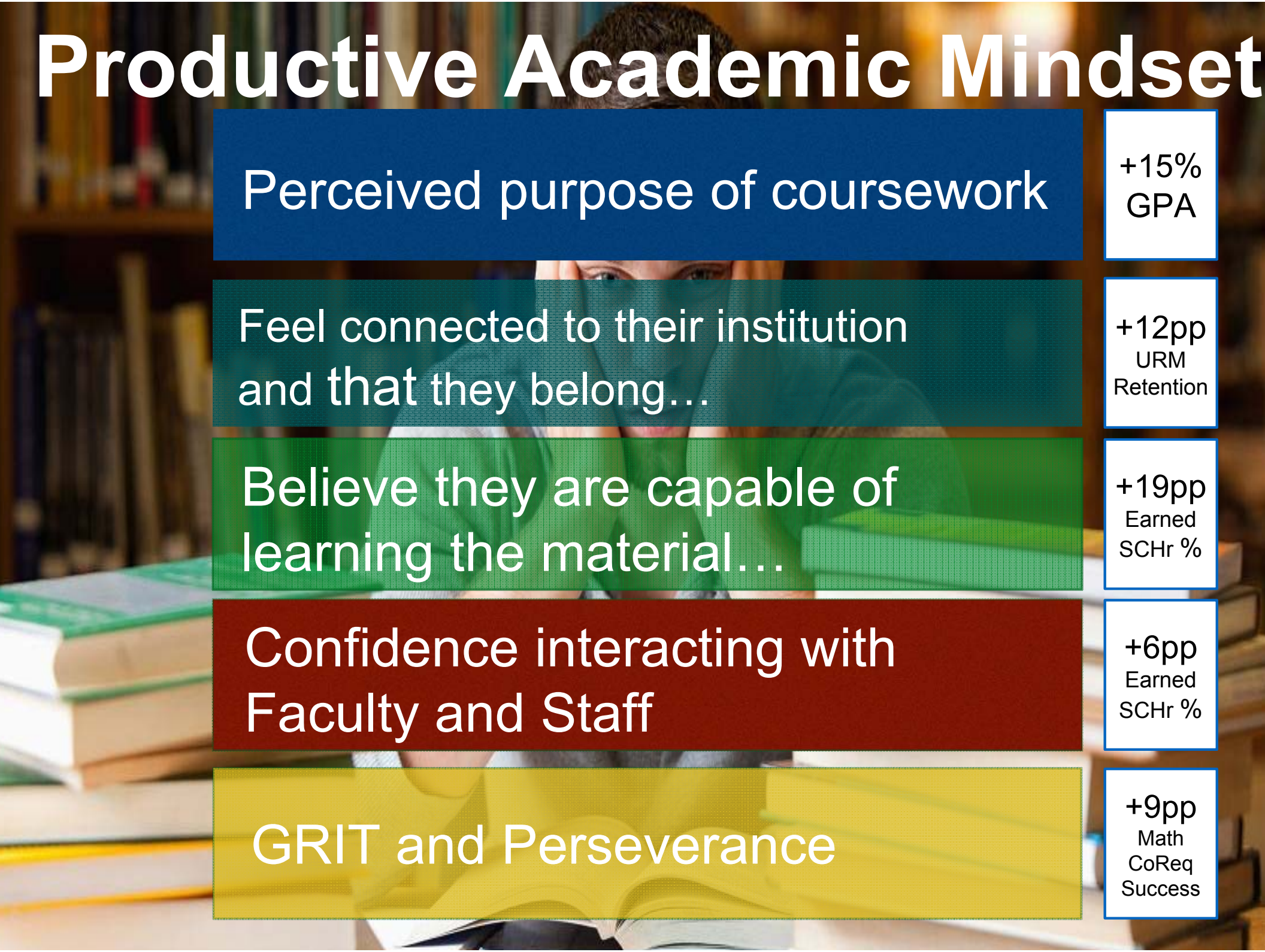
Community College Pre-requisite Model vs. Co-requisite Model



Disaggregation by Student Group






Productive Academic Mindset
Perceived purpose of coursework
+15% GPA
Feel connected to their institution and that they belong…
+12pp URM Retention
Believe they are capable of learning the material…
+19pp Earned SCHr %
Confidence interacting with Faculty and Staff
+6pp Earned SCHr %
GRIT and Perseverance
+9pp Math CoReq Success

Early Evidence: Sinclair CC Career Communities

Academic Calendar
Course Schedule Planner
All Programs A-Z
Academic Divisions
Online Programs
International Education
K-12 Student Programs
Lifelong Learning
Workforce Development
Honors Program
CAREER COMMUNITIES
• Business & IT
• Creative Arts
• Health Sciences
• Liberal Arts & Social Sciences
• Public Safety & Justice
• Science, Technology, Engineering & Math
Course Catalog

College Events See All →

JAN 25 Sinclair Talks - Diversity Dialogues: Women and Islam – A Closer Look
JAN 26 Chinese New Year Celebration
JAN 31 Sinclair Talks - Career Exploration: Alternative Spring Break options as Service Learning
FEB 06 12-Week Session Begins
FEB 06 Sinclair Talks - Career Exploration: The Many Benefits of Learning a

Career Communities

Why Career Communities?

Career Communities will give you opportunities to:

1. EXPLORE and CONNECT with your career and academic goals
2. MEET students with similar interests
3. ENGAGE with faculty members and employers in your career area
4. CONSULT with an advisor who specializes in the programs in a particular career community
5. UNDERSTAND the resources at Sinclair

FALL 2016: CAREER COMMUNITY EVENTS

Sinclair has 6 Career Communities:

- Business & IT
- Creative Arts
- Health Sciences
- Liberal Arts & Social Sciences (LASS)
- Public Safety & Justice
- Science, Technology, Engineering & Math (STEM)

Browse Programs by Career Community

- BUSINESS & IT
- CREATIVE ARTS
- HEALTH SCIENCES
- LIBERAL ARTS & SOCIAL SCIENCES (LASS)
- PUBLIC SAFETY & JUSTICE
- SCIENCE, TECHNOLOGY, ENGINEERING & MATH (STEM)

SINCLAIR COLLEGE

Career Connection

Your Gateway for Career Resources

Home | Explore- | Plan- | Gain- | Finish-

STEPS

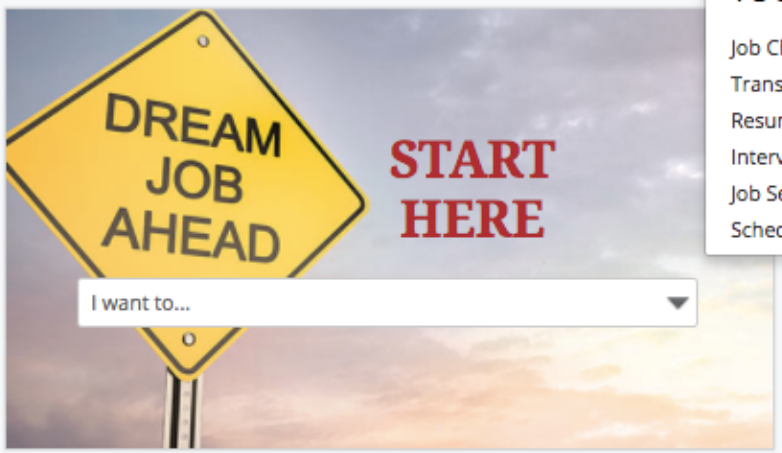
Get Ready for Success
Get Ready to Transfer
Find Your Job and Get Hired

TOOLS

Job Checklist
Transfer Checklist
Resumes
Interviews
Job Search
Schedule an Appointment with an Advisor

Welcome to your Career Connection!

Do you want to discover your career options? Navigate the way to you…er to a 4-year college? You're in the right place! The Career Connection is your gateway to career resources at S…t.



Use the Career Connection to...

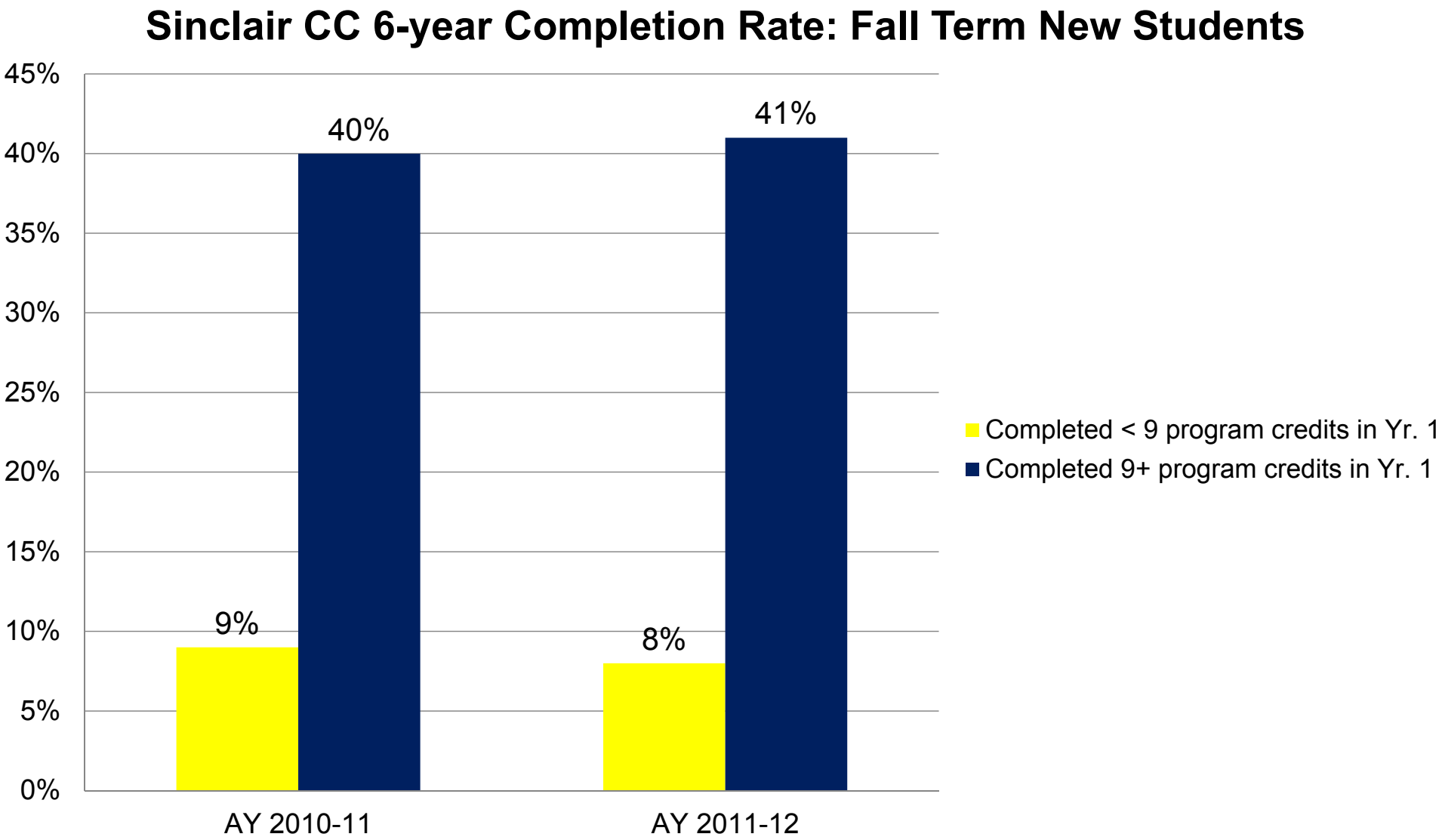
EXPLORE
Career Fields and Options
View

PLAN
My Academic and Career Pathway
View

GAIN
Experience with an Internship or Other Options
View

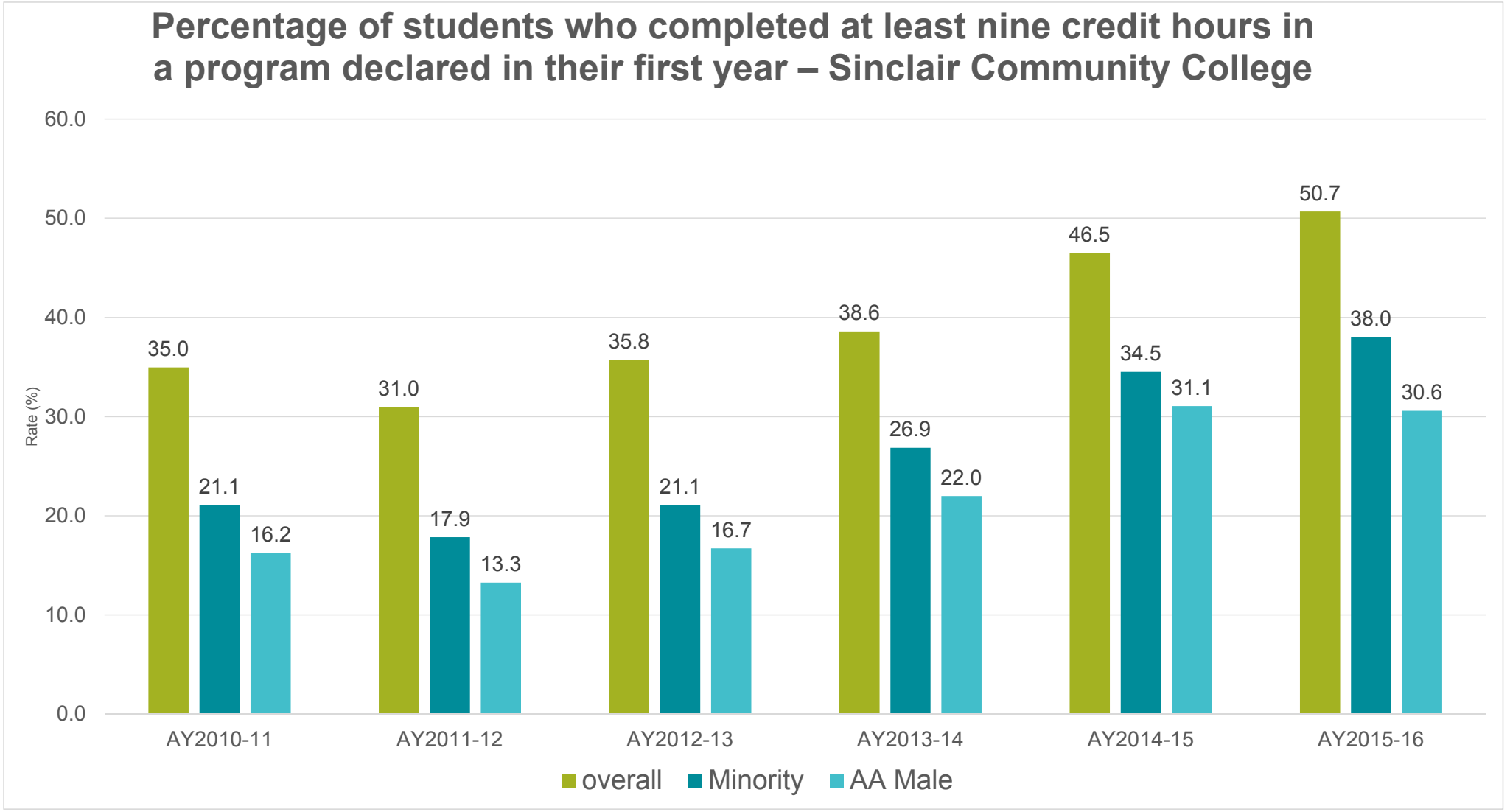
FINISH
and Get a Job or Transfer to a 4-year College
View

Promising Evidence from Ohio



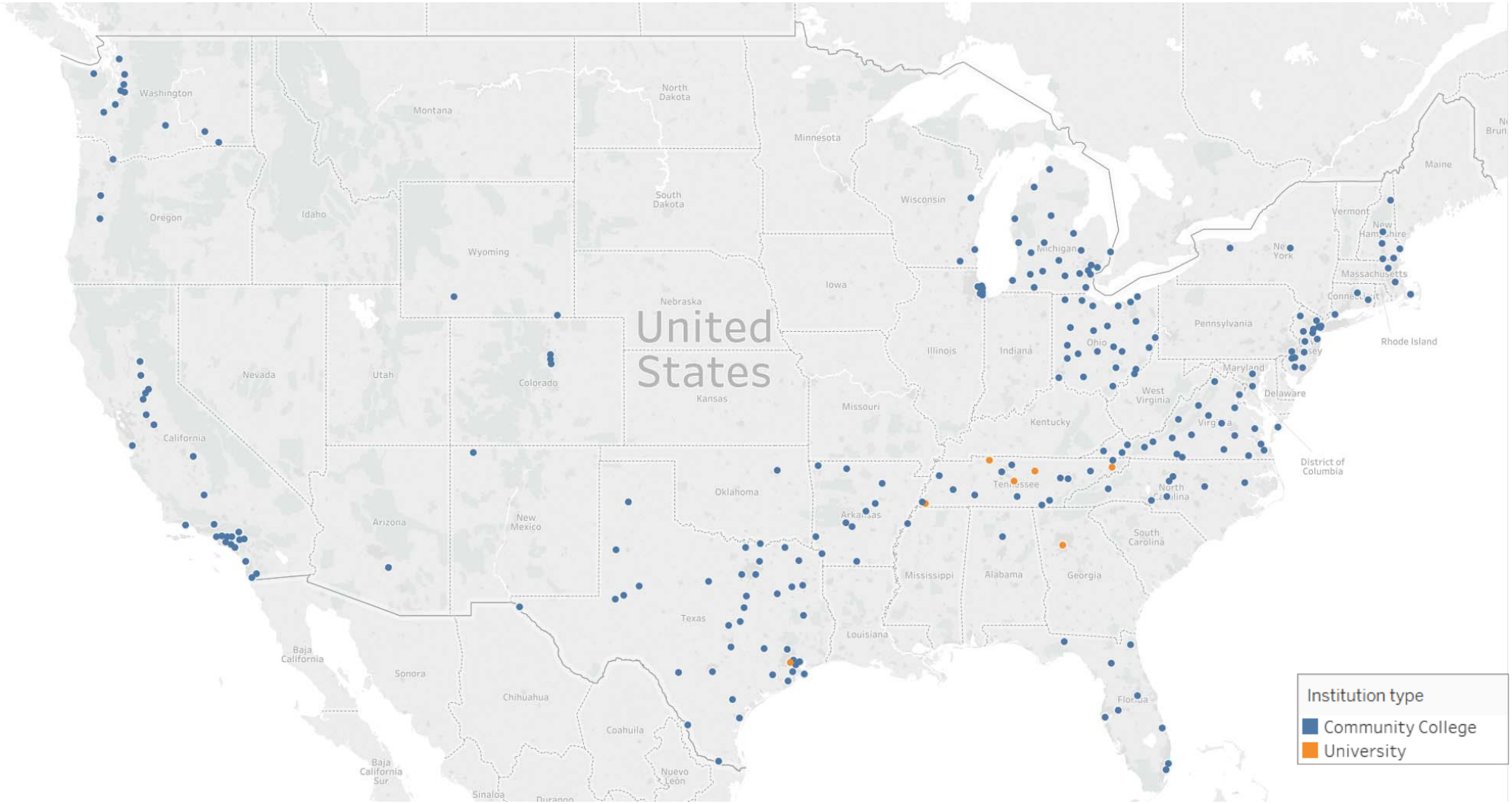
Source: Sinclair Community College.

Promising Evidence from Ohio



Source: Sinclair Community College.

A National Movement



Updated July 2017

Guided Pathways: Planning, Implementation, Evaluation

Creating guided pathways requires managing and sustaining large-scale transformational change. The work begins with thorough planning, continues through consistent implementation, and depends on ongoing evaluation. **The goals are to improve rates of college completion, transfer, and attainment of jobs with value in the labor market — and to achieve equity in those outcomes.**

PLANNING

ESSENTIAL CONDITIONS

Make sure the following conditions are in place – prepared, mobilized, and adequately resourced – to support the college's large-scale transformational change:

- Strong change leadership throughout the institution
- Faculty and staff engagement
- Commitment to using data
- Capacity to use data
- Technology infrastructure
- Professional development
- Favorable policy (state, system, and institutional levels) and board support
- Commitment to student success and equity

PREPARATION/AWARENESS

Understand where you are, prepare for change, and build awareness by:

- Engaging stakeholders and making the case for change
- Establishing a baseline for key performance indicators
- Building partnerships with K–12, universities, and employers
- Developing flowcharts of how students choose, enter, and complete programs
- Developing an implementation plan with roles and deadlines

SUSTAINABILITY

Commit to pathways for the long term and make sure they are implemented for all students by:

- Determining barriers to sustainability (state, system, and institutional levels)
- Redefining the roles of faculty, staff, and administrators as needed
- Identifying needs for professional development and technical assistance
- Revamping technology to support the redesigned student experience
- Reallocating resources as needed
- Continuing to engage key stakeholders, especially students
- Integrating pathways into hiring and evaluation practices

IMPLEMENTATION

CLARIFY THE PATHS

Map all programs to transfer and career and include these features:

- Detailed information on target career and transfer outcomes
- Course sequences, critical courses, embedded credentials, and progress milestones
- Math and other core coursework aligned to each program of study

HELP STUDENTS GET ON A PATH

Require these supports to make sure students get the best start:

- Use of multiple measures to assess students' needs
- First-year experiences to help students explore the field and choose a major
- Full program plans based on required career/transfer exploration
- Contextualized, integrated academic support to help students pass program gateway courses
- K–12 partnerships focused on career/college program exploration

HELP STUDENTS STAY ON THEIR PATH

Keep students on track with these supports:

- Ongoing, intrusive advising
- Systems for students to easily track their progress
- Systems/procedures to identify students at risk and provide needed supports
- A structure to redirect students who are not progressing in a program to a more viable path

ENSURE STUDENTS ARE LEARNING

Use these practices to assess and enrich student learning:

- Program-specific learning outcomes
- Project-based, collaborative learning
- Applied learning experiences
- Inescapable student engagement
- Faculty-led improvement of teaching practices
- Systems/procedures for the college and students to track mastery of learning outcomes that lead to credentials, transfer, and/or employment

EARLY OUTCOMES

Measure key performance indicators, including:

- Number of college credits earned in first term
- Number of college credits earned in first year
- Completion of gateway math and English courses in the student's first year
- Number of college credits earned in the program of study in first year
- Persistence from term 1 to term 2
- Rates of college-level course completion in students' first academic year
- Equity in outcomes

Revisit conditions, sustainability, and implementation. Continuously improve pathways by building on elements that work and adjusting or discarding elements that are not serving all students well.

EVALUATION

Contributors to this model for Guided Pathways are: American Association of Community Colleges (AACC), Achieving the Dream (ATD), The Aspen Institute, Center for Community College Student Engagement (CCCSE), Community College Research Center (CCRC), Complete College America, The Charles A. Dana Center, Jobs for the Future (JFF), National Center for Inquiry and Improvement (NCII), and Public Agenda.

FEB. 17

AACC Pathways Project Colleges

Pathway Discussion Starters

- How well aligned are our programs with career and transfer opportunities in our region?
- How do we help students explore options and develop career, academic & financial plans?
- How well do we monitor student progress to ensure they are “on-plan”?
- How do we ensure that students are building needed skills across programs?

For more information

Please visit us on the web at

http://ccrc.tc.columbia.edu

where you can download presentations, reports, and briefs, and sign-up for news announcements. We're also on Facebook and Twitter.

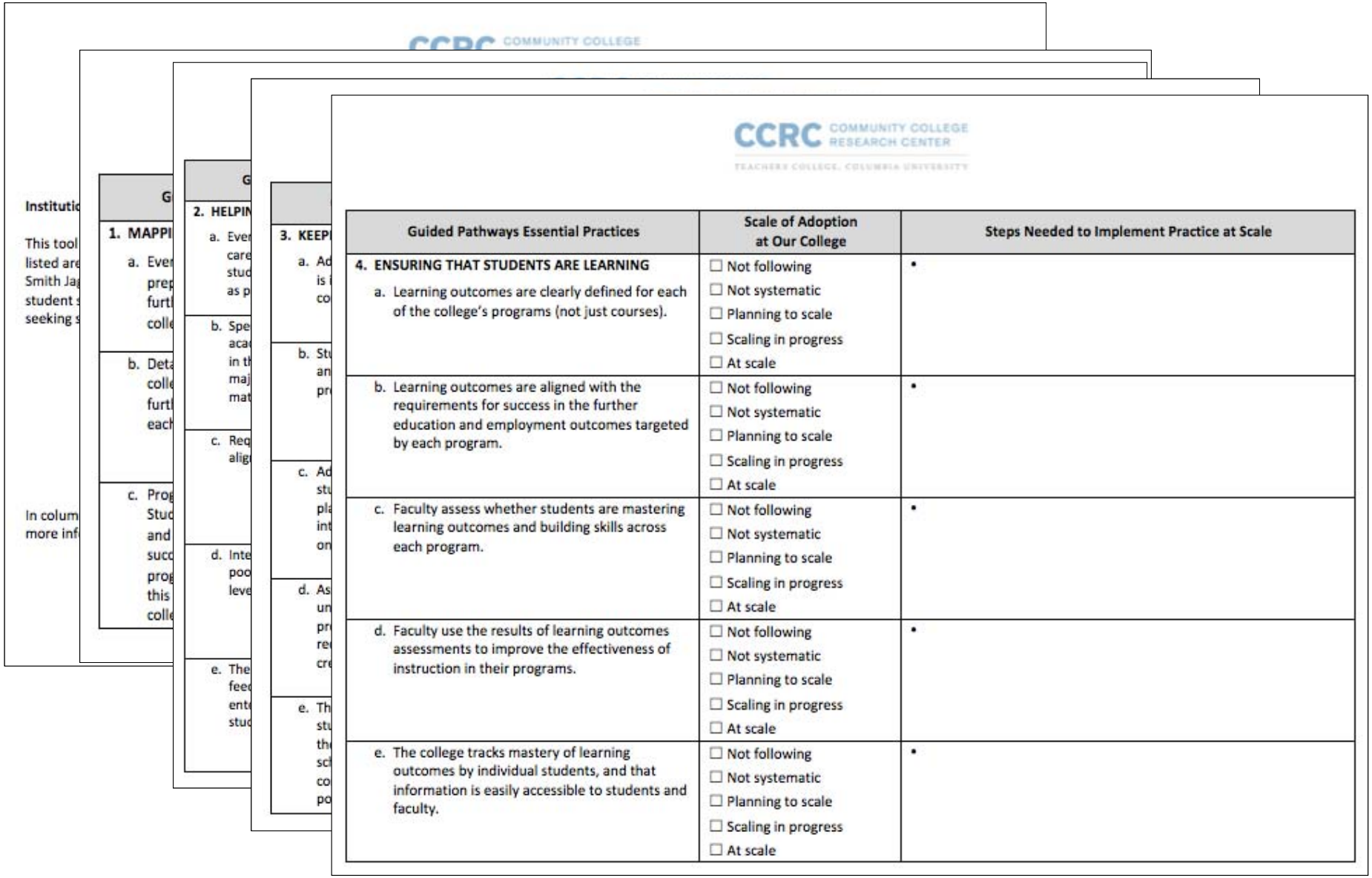
Community College Research Center
Teachers College, Columbia University
525 West 120th Street, Box 174, New York, NY 10027
E-mail: ccrc@columbia.edu Telephone: 212.678.3091

20 YEARS
CCRC COMMUNITY COLLEGE RESEARCH CENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Exercise: Students by Program

- Does every one of these “programs” have clear job and transfer outcomes?
- How accurately does this reflect students’ goals?
- Do we know how far along each student is toward program completion? Do students know?
- How well do we track when students change?
- Who is responsible for students in each “program”?
- Are there students whose progress is not monitored?

Guided Pathways Scale of Adoption



CCRC COMMUNITY COLLEGE RESEARCH CENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Guided Pathways Essential Practices	Scale of Adoption at Our College	Steps Needed to Implement Practice at Scale
4. ENSURING THAT STUDENTS ARE LEARNING a. Learning outcomes are clearly defined for each of the college's programs (not just courses).	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•
b. Learning outcomes are aligned with the requirements for success in the further education and employment outcomes targeted by each program.	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•
c. Faculty assess whether students are mastering learning outcomes and building skills across each program.	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•
d. Faculty use the results of learning outcomes assessments to improve the effectiveness of instruction in their programs.	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•
e. The college tracks mastery of learning outcomes by individual students, and that information is easily accessible to students and faculty.	☐ Not following ☐ Not systematic ☐ Planning to scale ☐ Scaling in progress ☐ At scale	•

PATHWAY TO THE BACCALAUREATE

A K-16 Systemic Approach

- 12,000+ students...
- 55 high schools in 8 school systems...
- 6 NOVA campuses...
- George Mason University...
- All working toward 1 common vision.

PATHWAY TO THE BACCALAUREATE

Program Philosophy

- **Collective Impact Model**
- **Shared Funding & Governance**
- **Seamless K-16 Pipeline**
- **Career Pathways Framework**
- **Common Outcomes & Data-Sharing**

PATHWAY TO THE BACCALAUREATE

Participant Demographics

- From Minority Backgrounds: 79%
- From Immigrant Families: 77%
- First Generation in College: 71%
- With a Disability: 26%
- FAFSA/Pell-Eligible: 86%

PATHWAY TO THE BACCALAUREATE

Access: High School-Based Services

- Comprehensive Intake
- Individualized College Transition Plan
- On-Site Counseling, Workshops & Events
- Financial Aid & Domicile Support
- Placement Test Preparation & Onsite Testing
- Early Advising & Priority Registration
- Summer Bridge & Bootcamp Programs
- Optional Parent Programming

PATHWAY TO THE BACCALAUREATE

Success: NOVA-Based Services

- **Intrusive Advising Model**
- **Retention Case Managers**
- **Transfer-Focused Student Community**
- **Service-Learning & Student Leadership**
- **Early Alert & Intervention**
- **Early Access to George Mason University**

PATHWAY TO THE BACCALAUREATE

Completion: Mason-Based Services

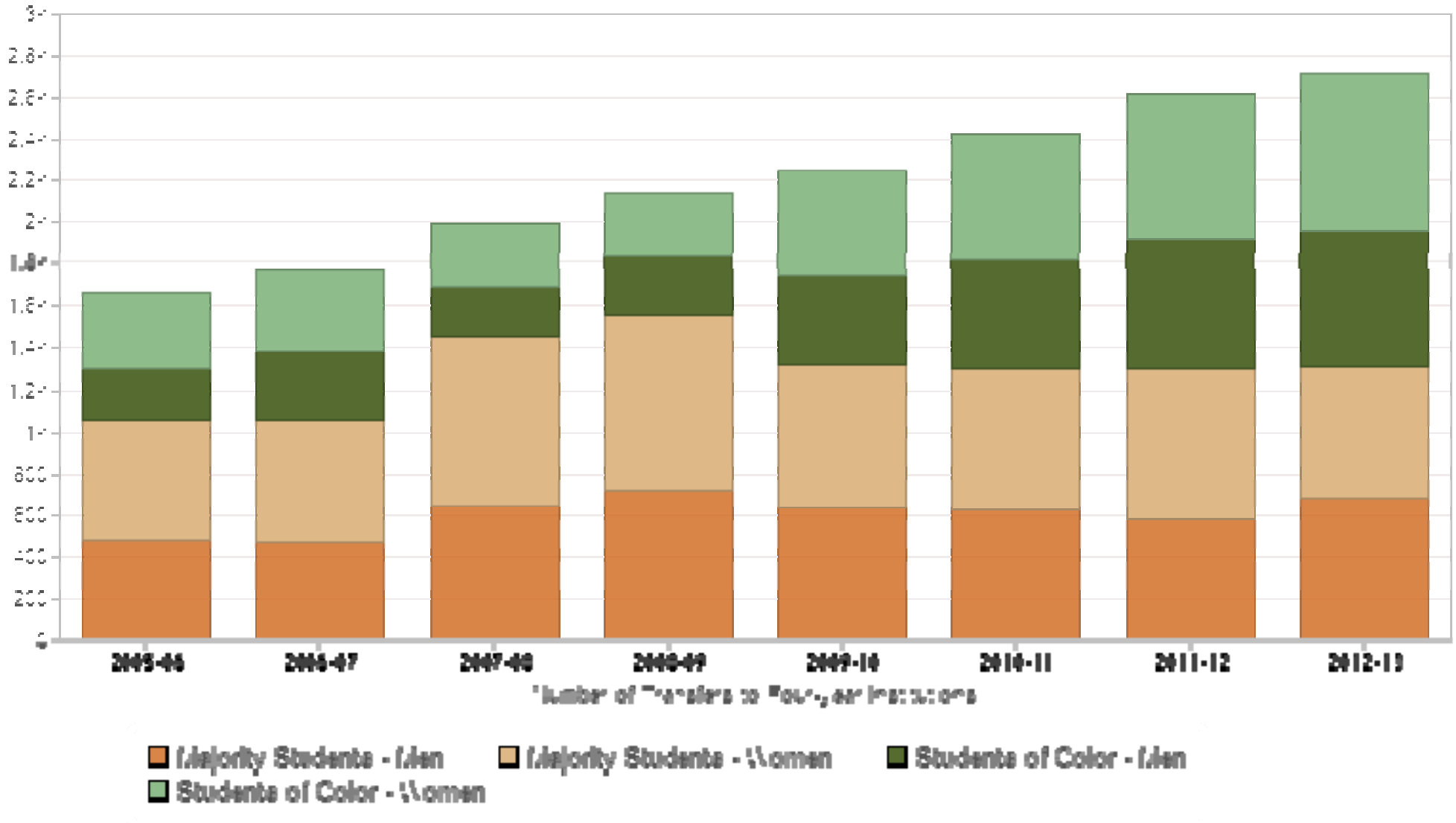
- **Guest Matriculation**
- **Guaranteed Admissions Addendum**
- **On-Site Retention Advisor**
- **Ongoing Academic Monitoring**
- **Mastery/Fading Support Model**

PATHWAY TO THE BACCALAUREATE

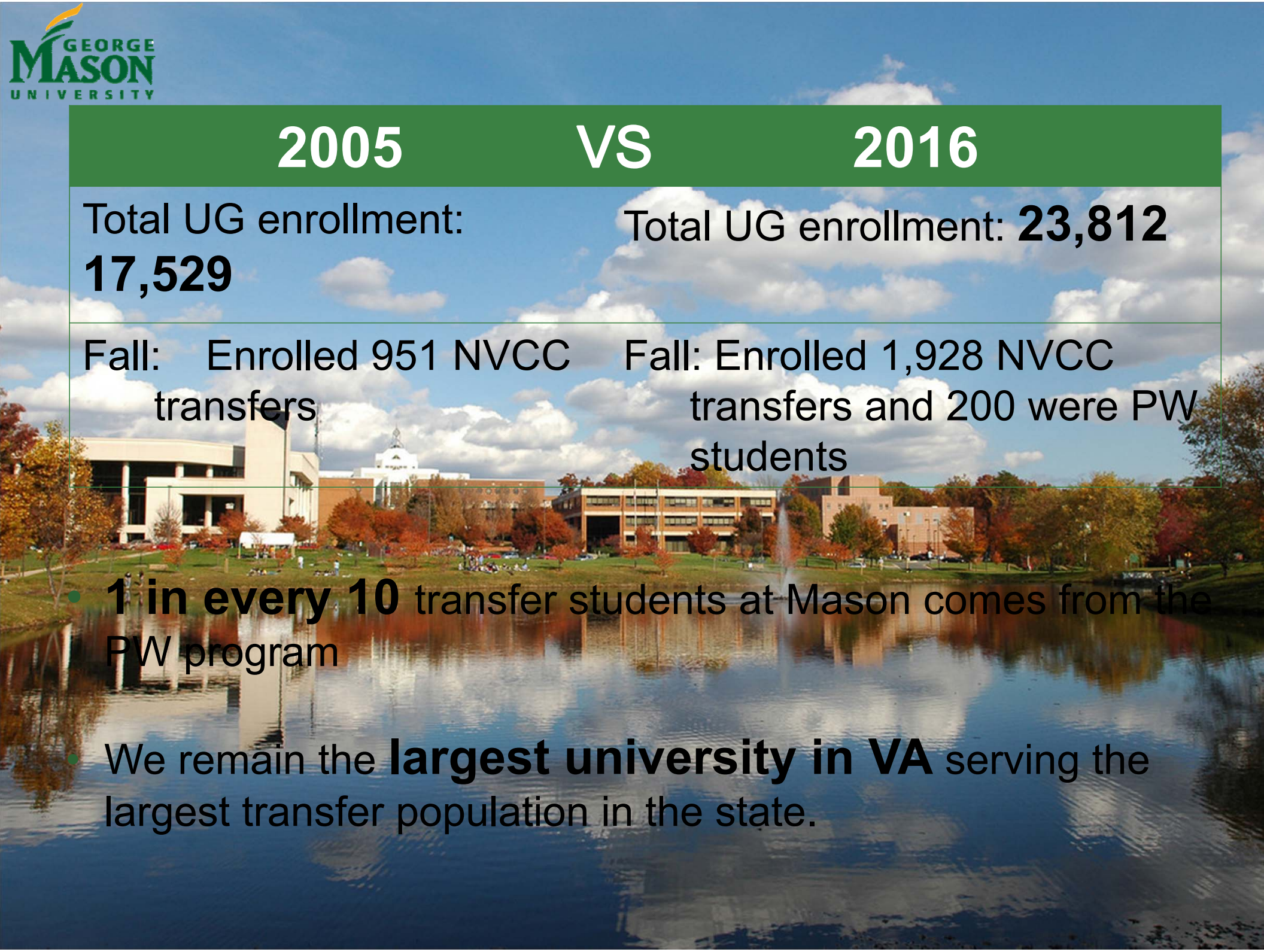
Program Outcomes: A Snapshot

- 98% On-time high school graduation.
- 88% Transition to post-secondary ed.
- 90% First-to-second term persistence.
- 83% First-to-second year persistence.
- Participants are 7% of NOVA population & 14% of credential completers.
- 60% transfer to George Mason University

NOVA Students Transferring to George Mason University: 2005–2012



Source: SCHEV 2014



2005	VS	2016
Total UG enrollment: **17,529**		Total UG enrollment: **23,812**
Fall: Enrolled 951 NVCC transfers		Fall: Enrolled 1,928 NVCC transfers and 200 were PW students

- **1 in every 10** transfer students at Mason comes from the PW program
- We remain the **largest university in VA** serving the largest transfer population in the state.

83% of Pathway students who transfer to Mason earn their Bachelor's degrees in three years.

For more information

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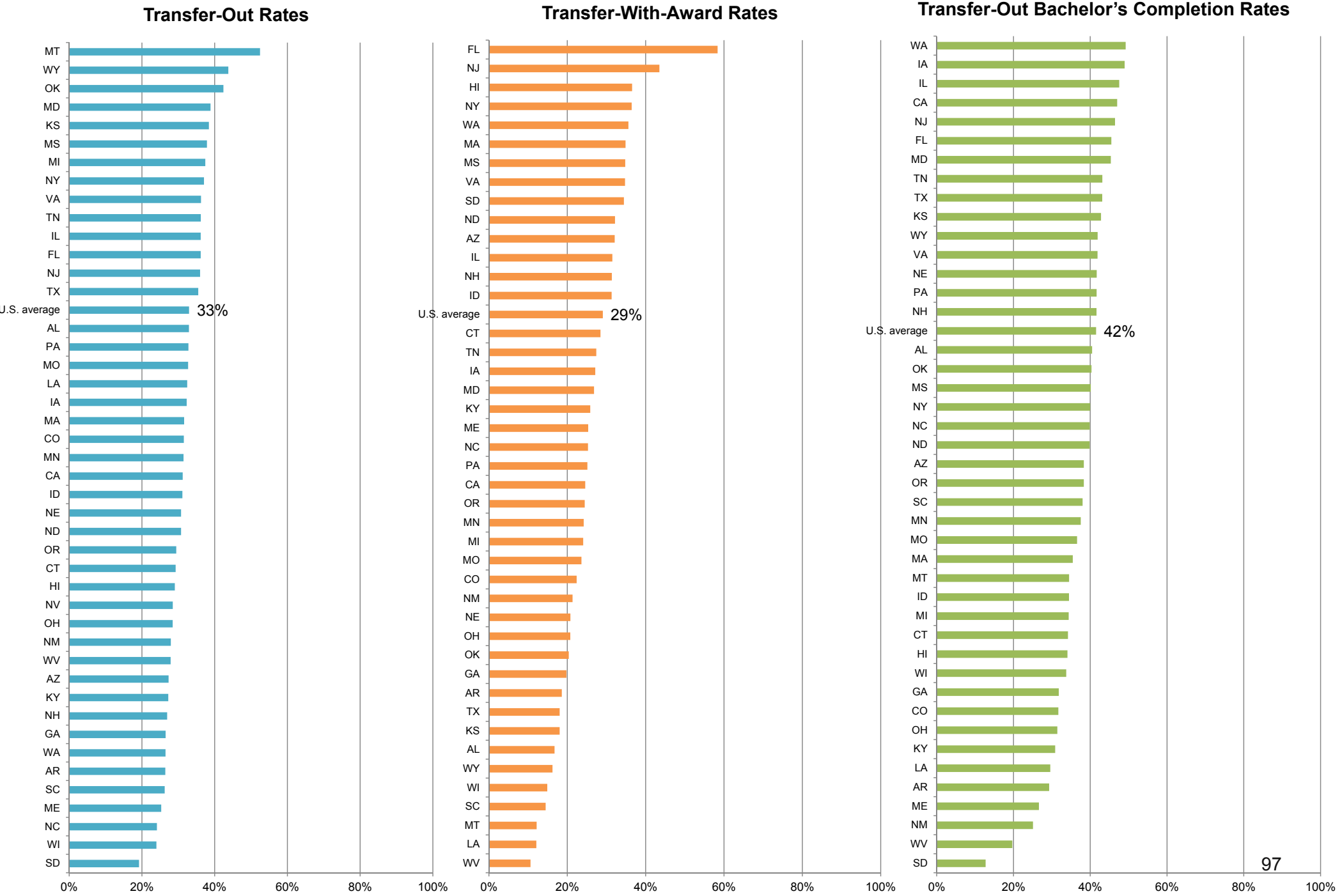
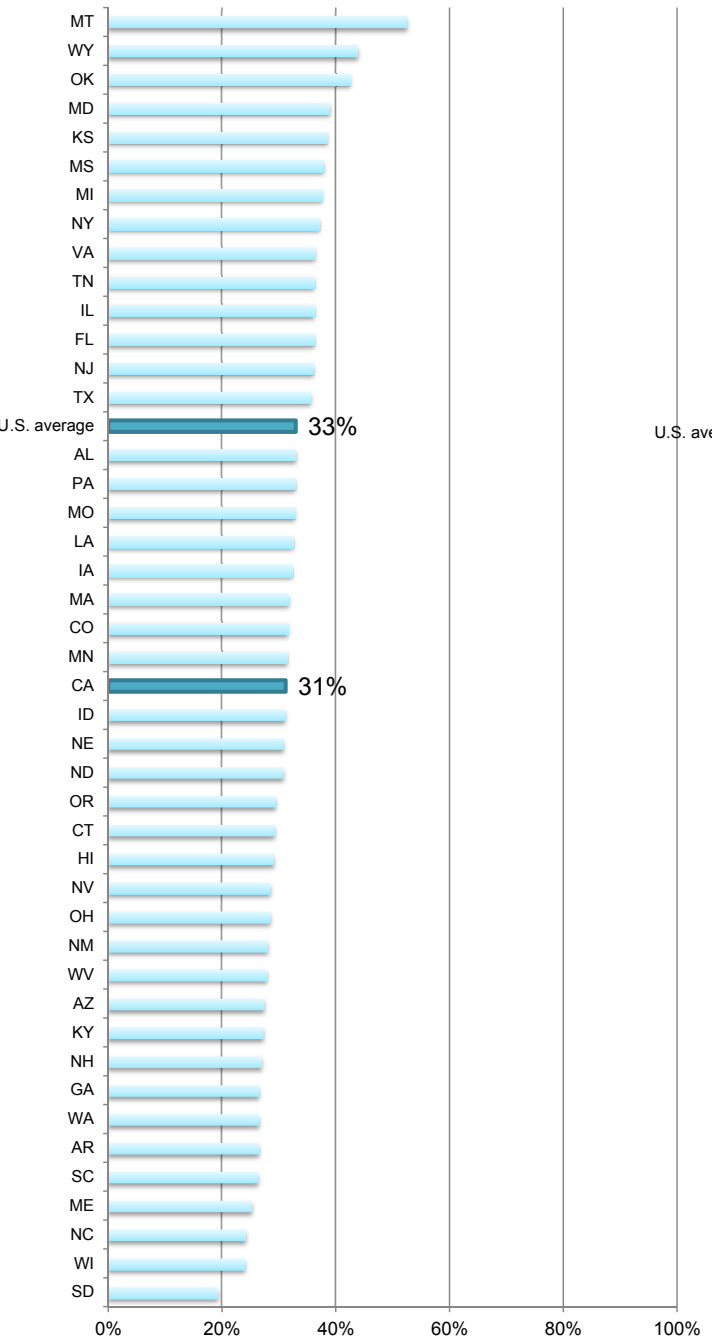
20 YEARS CCRC COMMUNITY COLLEGE RESEARCH CENTER
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

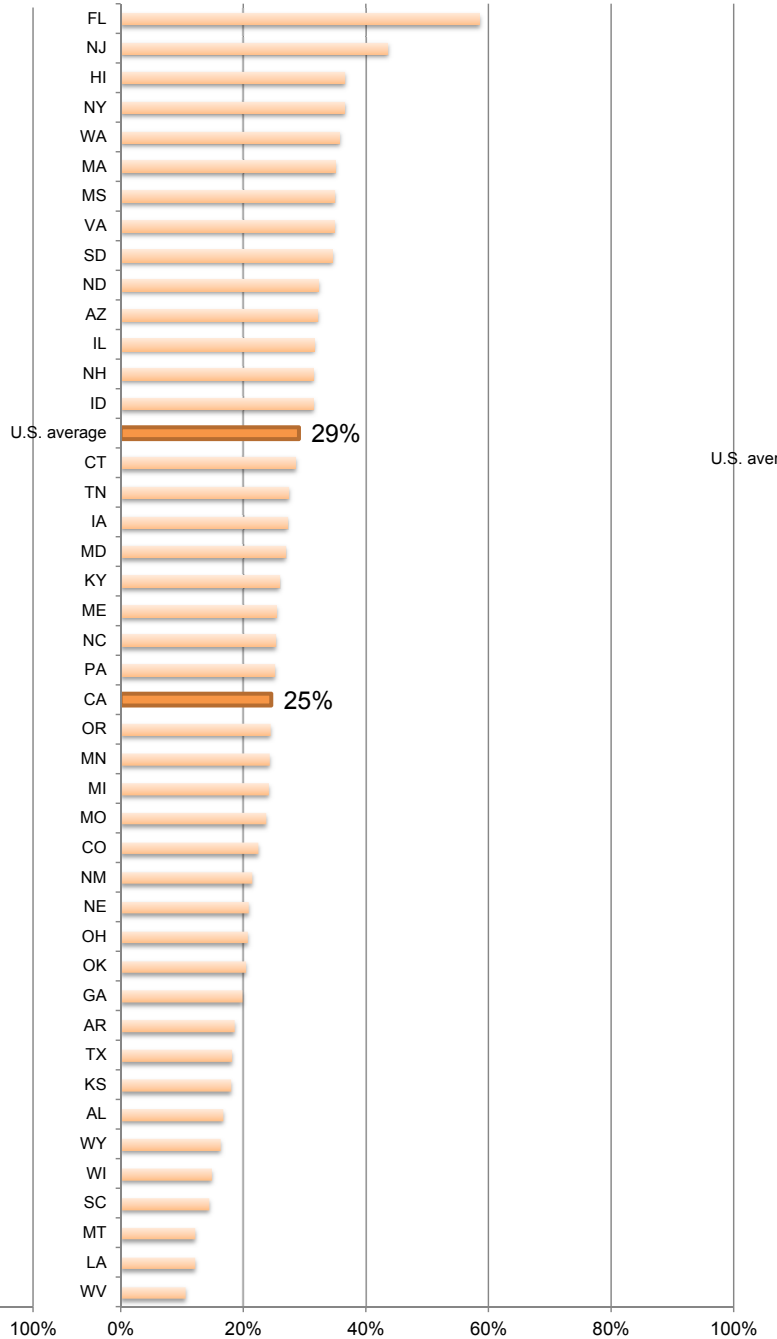
California Community College Transfer Student Outcomes


Transfer-Out Rates
MT
WY
OK
MD
KS
MS
MI
NY
VA
TN
IL
FL
NJ
TX
U.S. average
33%
AL
PA
MO
LA
IA
MA
CO
MN
CA
ID
NE
ND
OR
CT
HI
NV
OH
NM
WV
AZ
KY
NH
GA
WA
AR
SC
ME
NC
WI
SD
0%
20%
40%
60%
80%
100%
Transfer-With-Award Rates
FL
NJ
HI
NY
WA
MA
MS
VA
SD
ND
AZ
IL
NH
ID
U.S. average
29%
CT
TN
IA
MD
KY
ME
NC
PA
CA
OR
MN
MI
MO
CO
NM
NE
OH
OK
GA
AR
TX
KS
AL
WY
WI
SC
MT
LA
WV
0%
20%
40%
60%
80%
100%
Transfer-Out Bachelor's Completion Rates
WA
IA
IL
CA
NJ
FL
MD
TN
TX
KS
WY
VA
NE
PA
NH
U.S. average
42%
AL
OK
MS
NY
NC
ND
AZ
OR
SC
MN
MO
MA
MT
ID
MI
CT
HI
WI
GA
CO
OH
KY
LA
AR
ME
NM
WV
SD
97
0%
20%
40%
60%
80%
100%

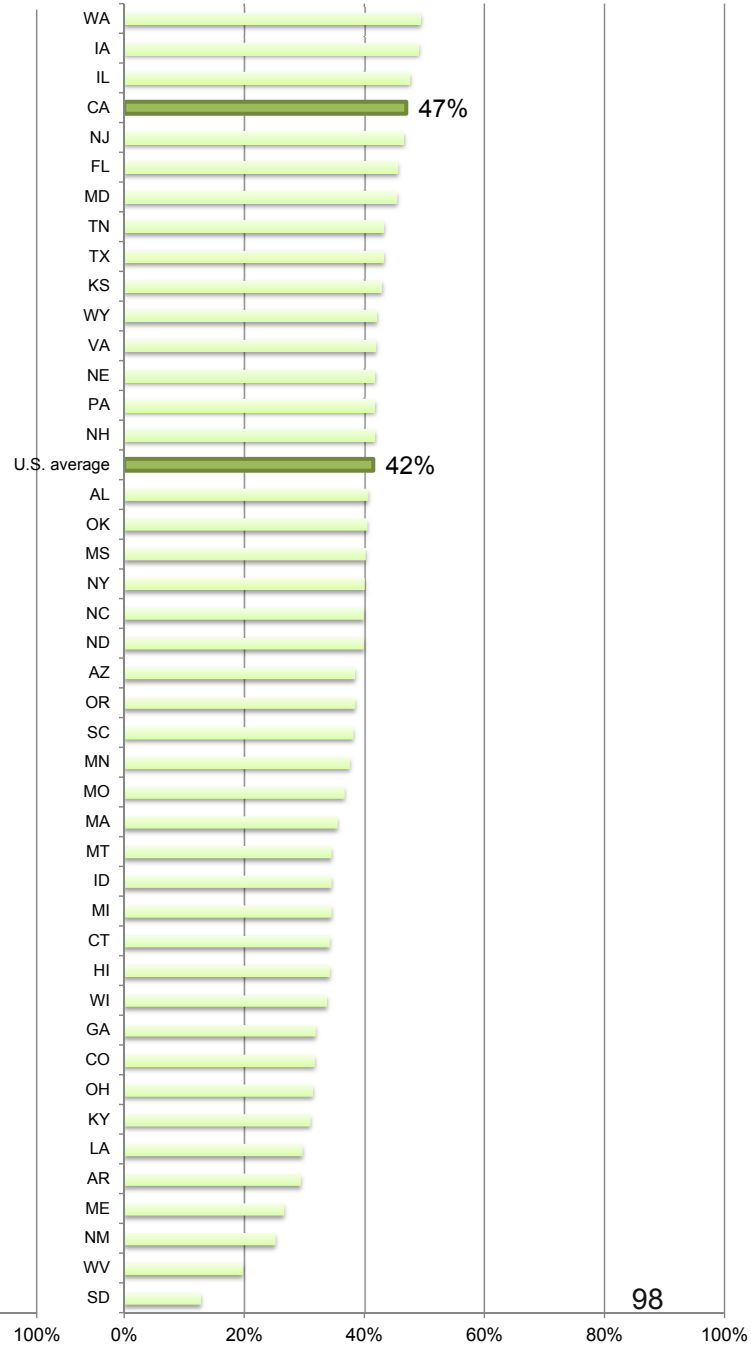
Transfer-Out Rates



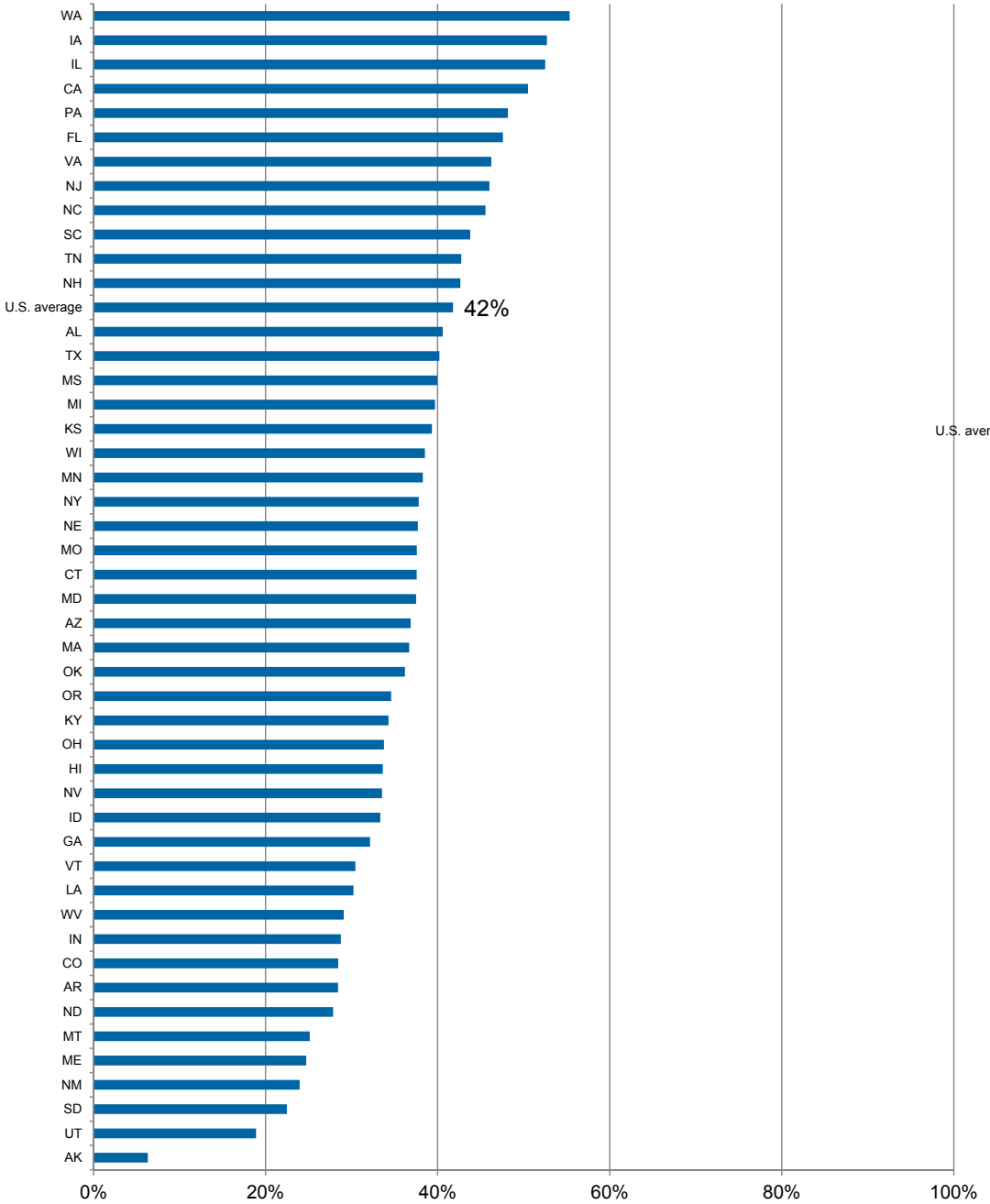
Transfer-With-Award Rates



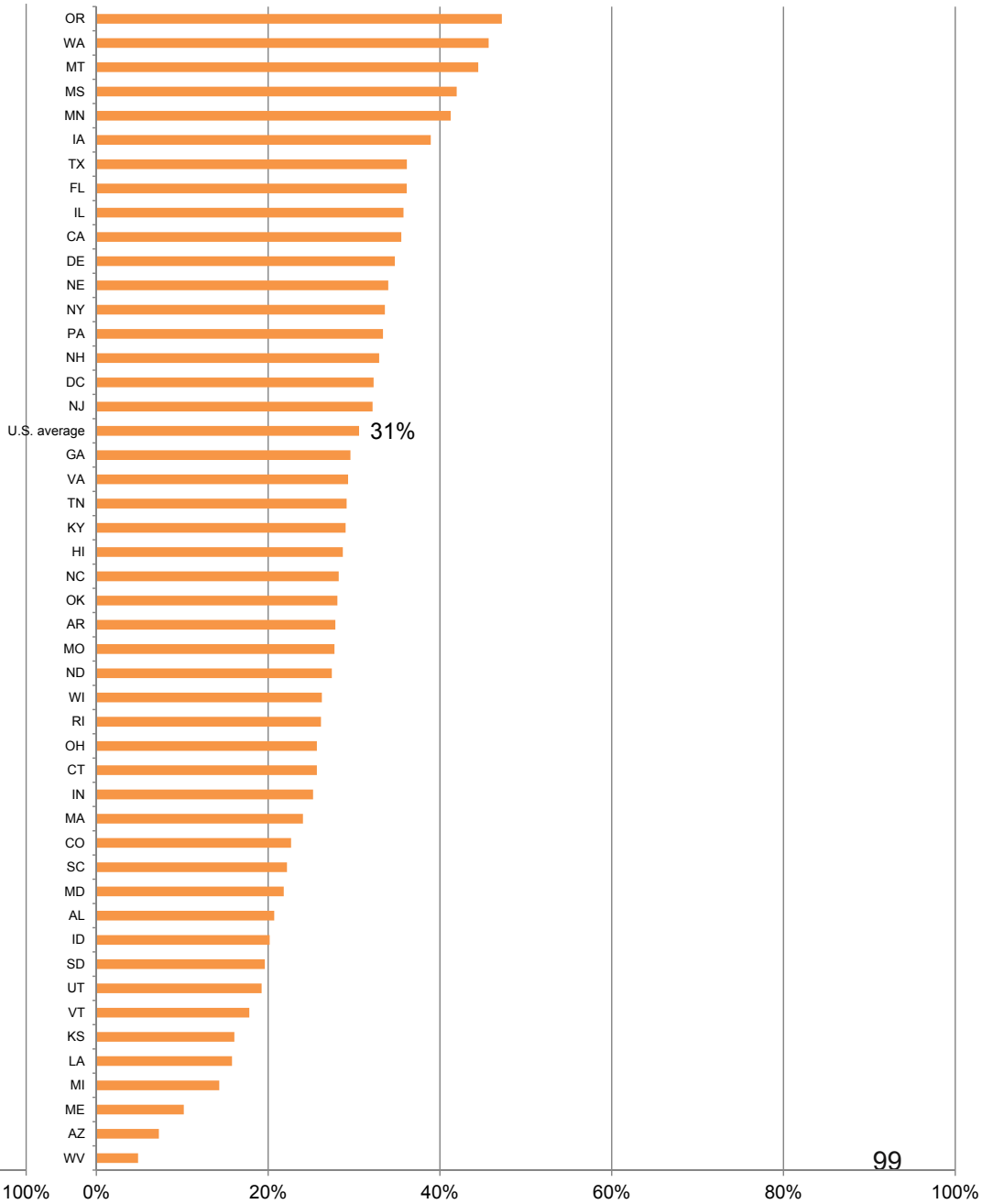
Transfer-Out Bachelor's Completion Rates



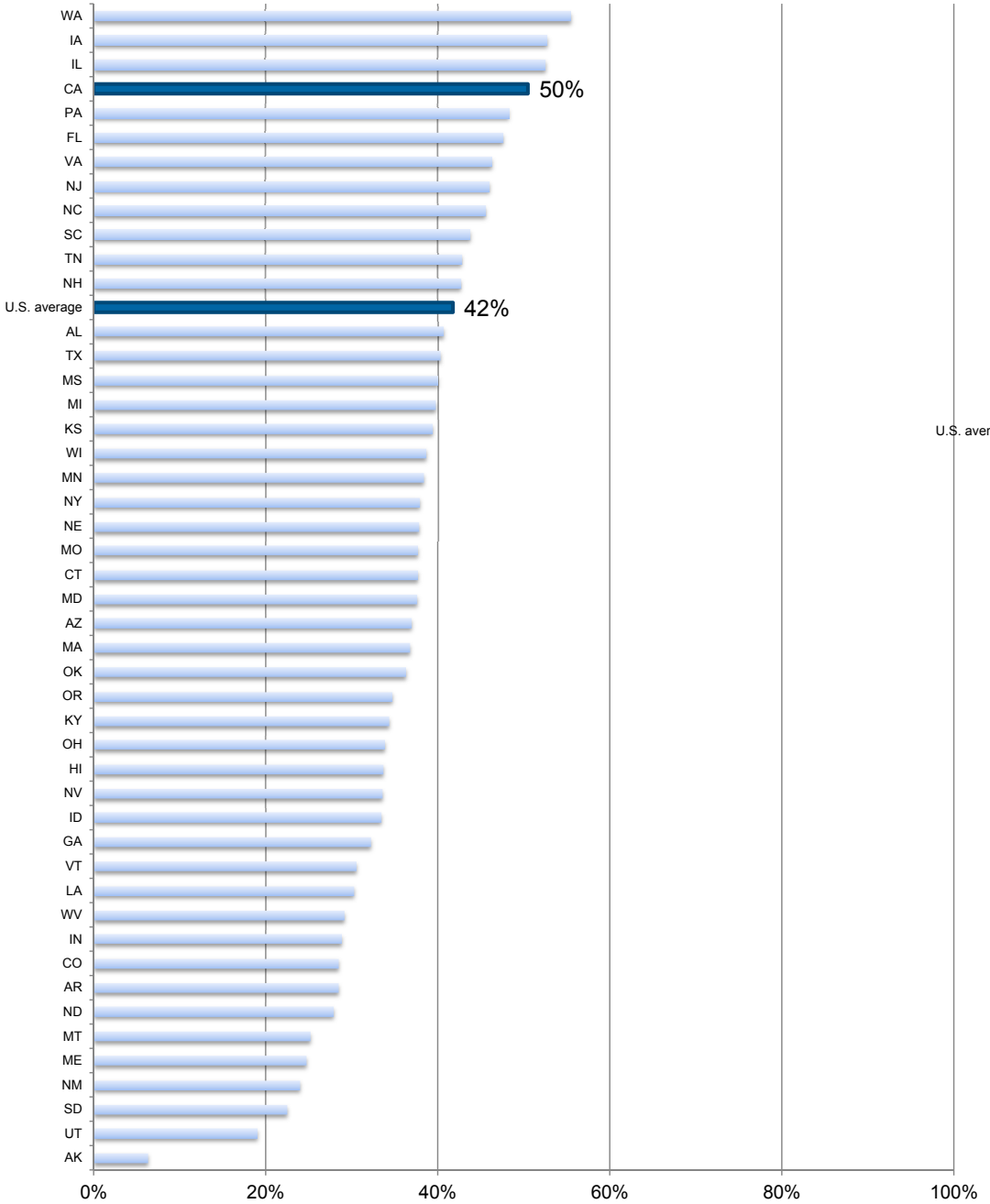
Transfer-In Bachelor's Completion Rates at Public Four-Year Institutions



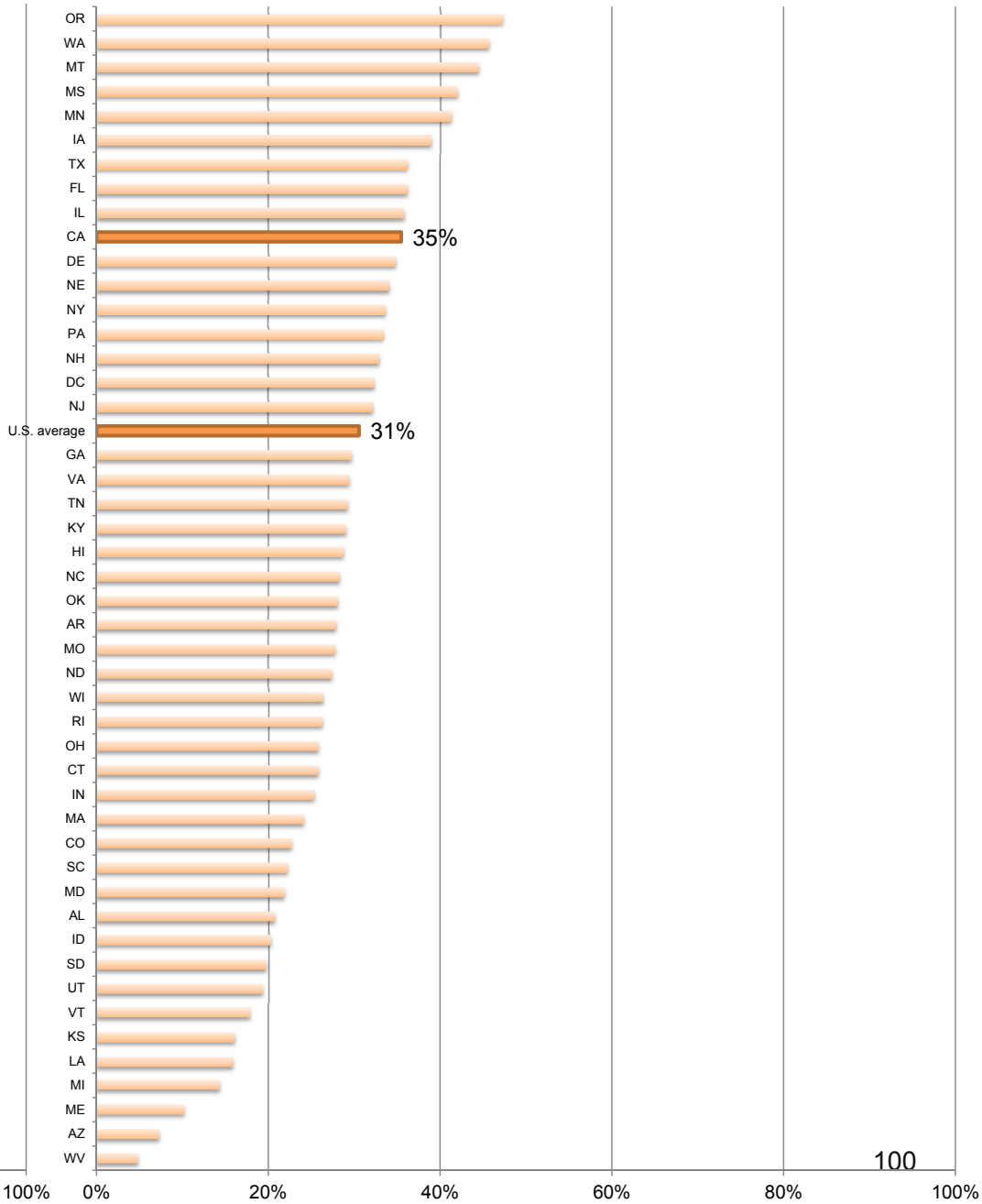
Transfer-In Bachelor's Completion Rates at Private Nonprofit Four-Year Institutions



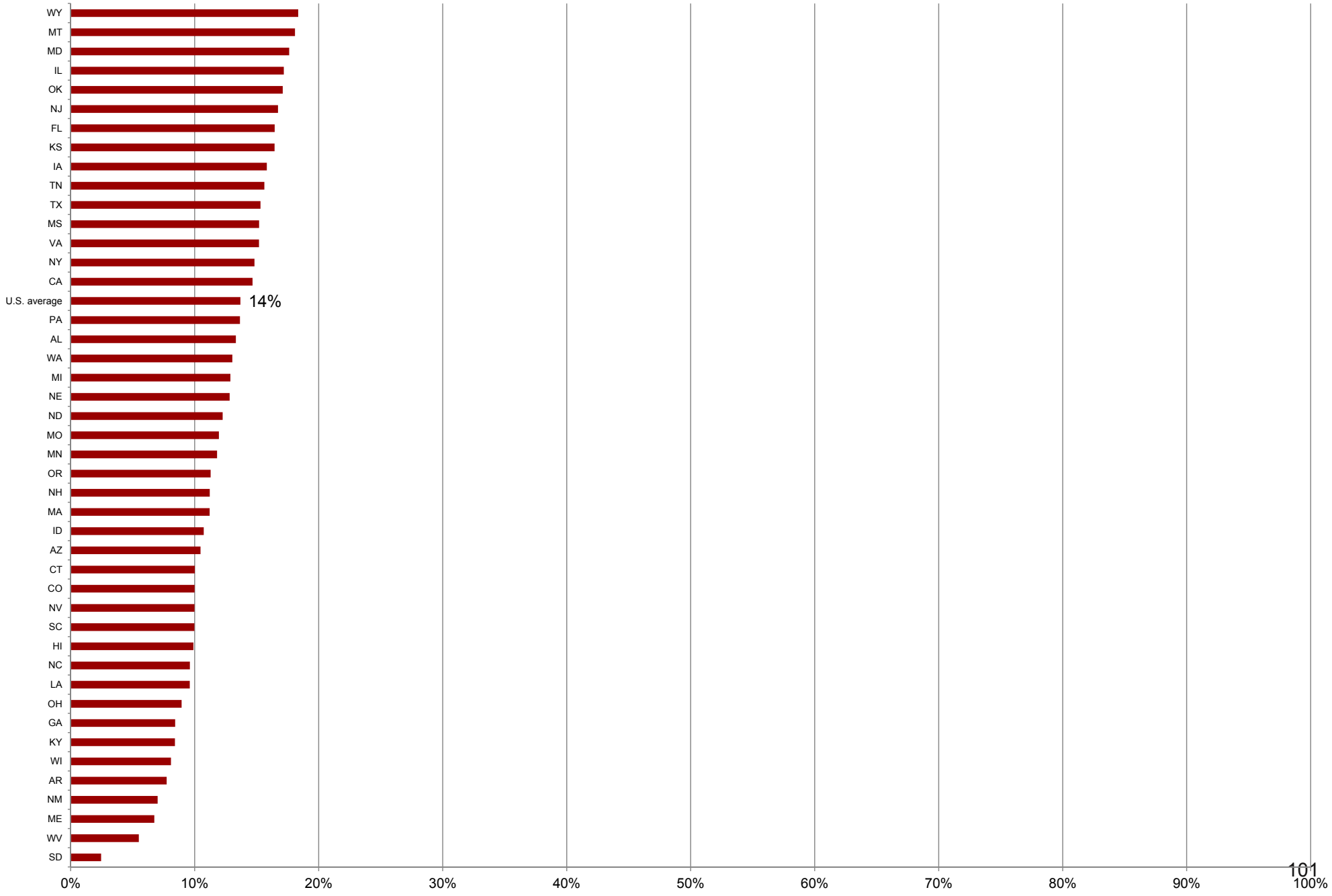
Transfer-In Bachelor's Completion Rates at Public Four-Year Institutions



Transfer-In Bachelor's Completion Rates at Private Nonprofit Four-Year Institutions



Community College Cohort Bachelor's Completion Rates by State



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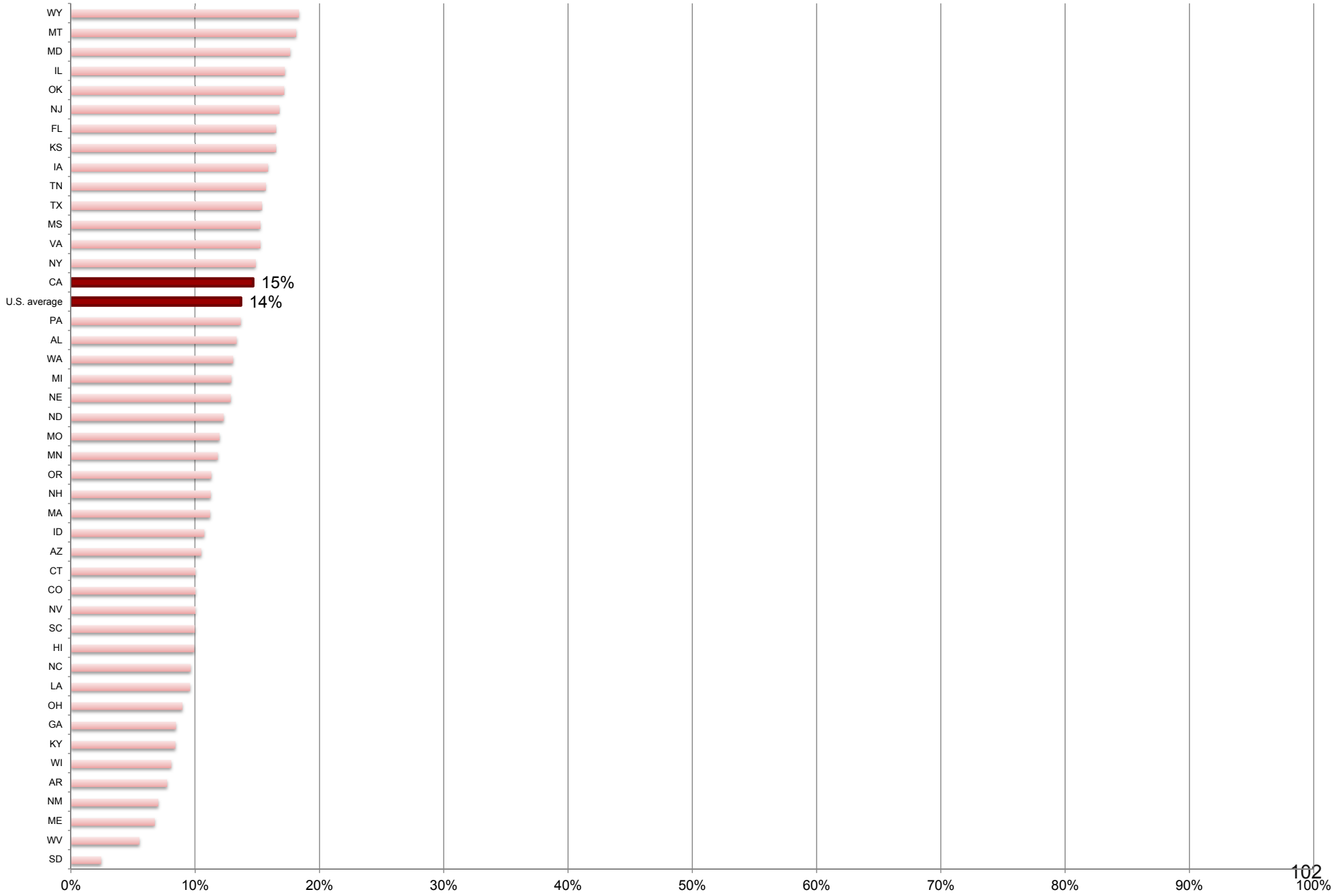
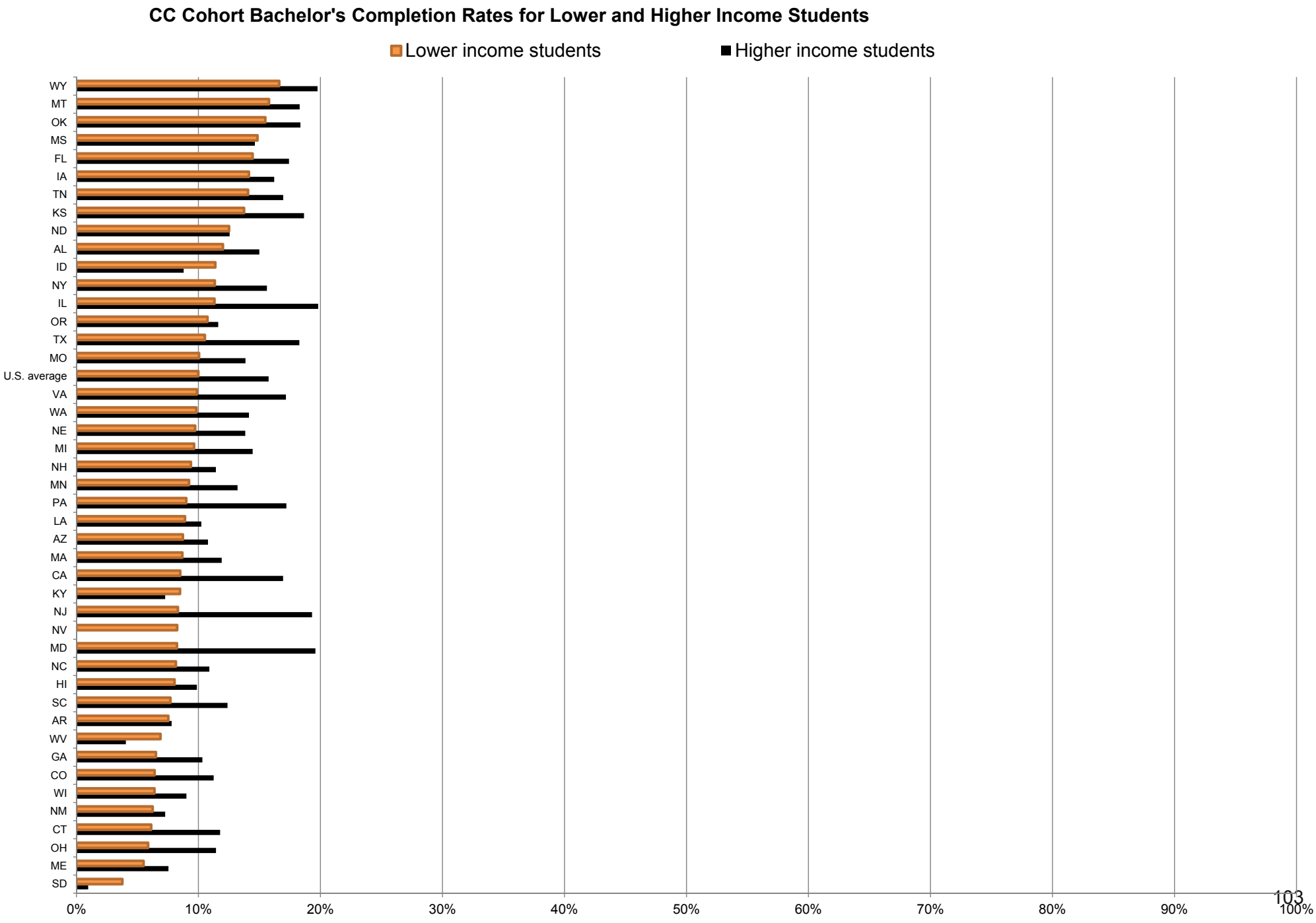
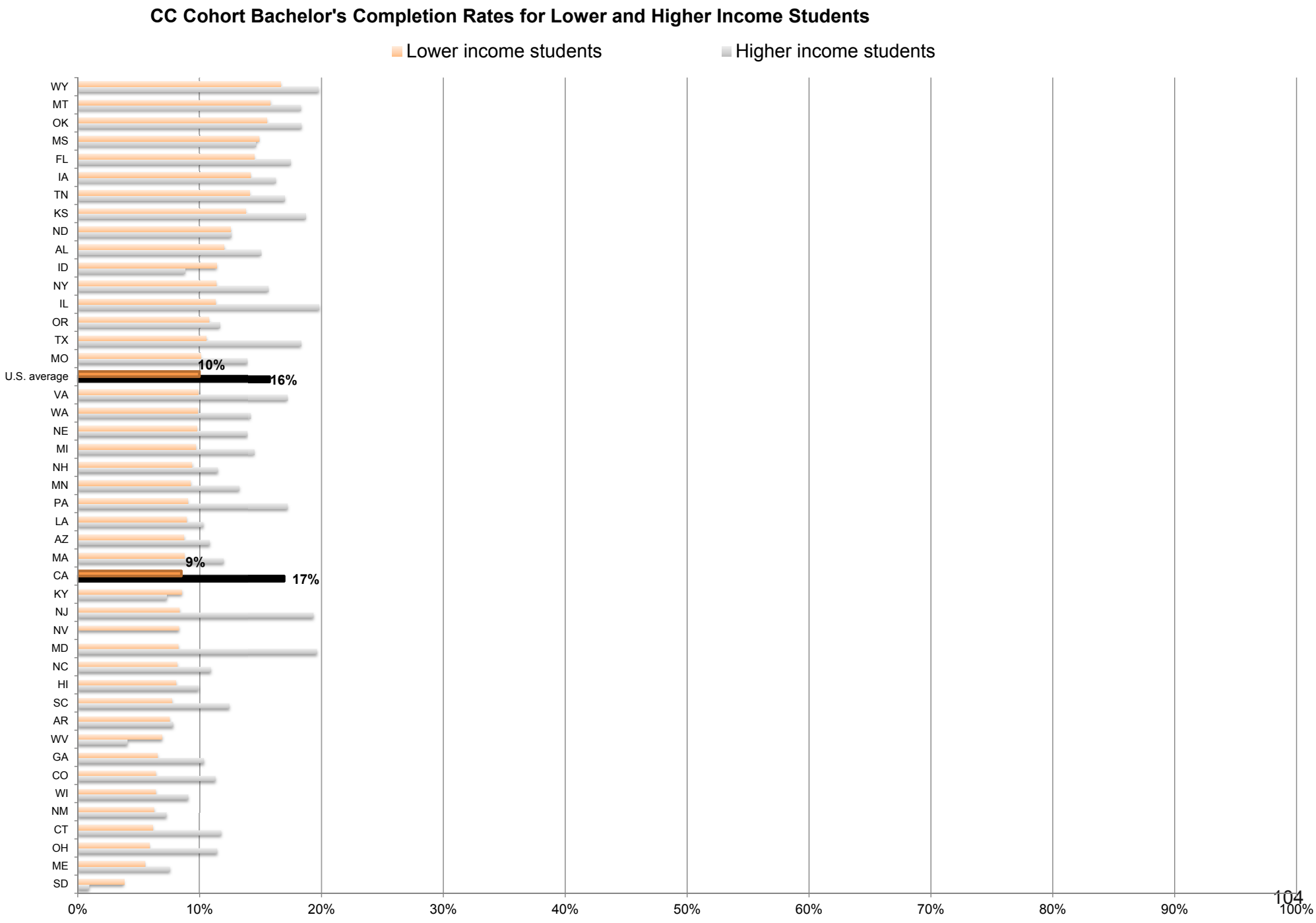
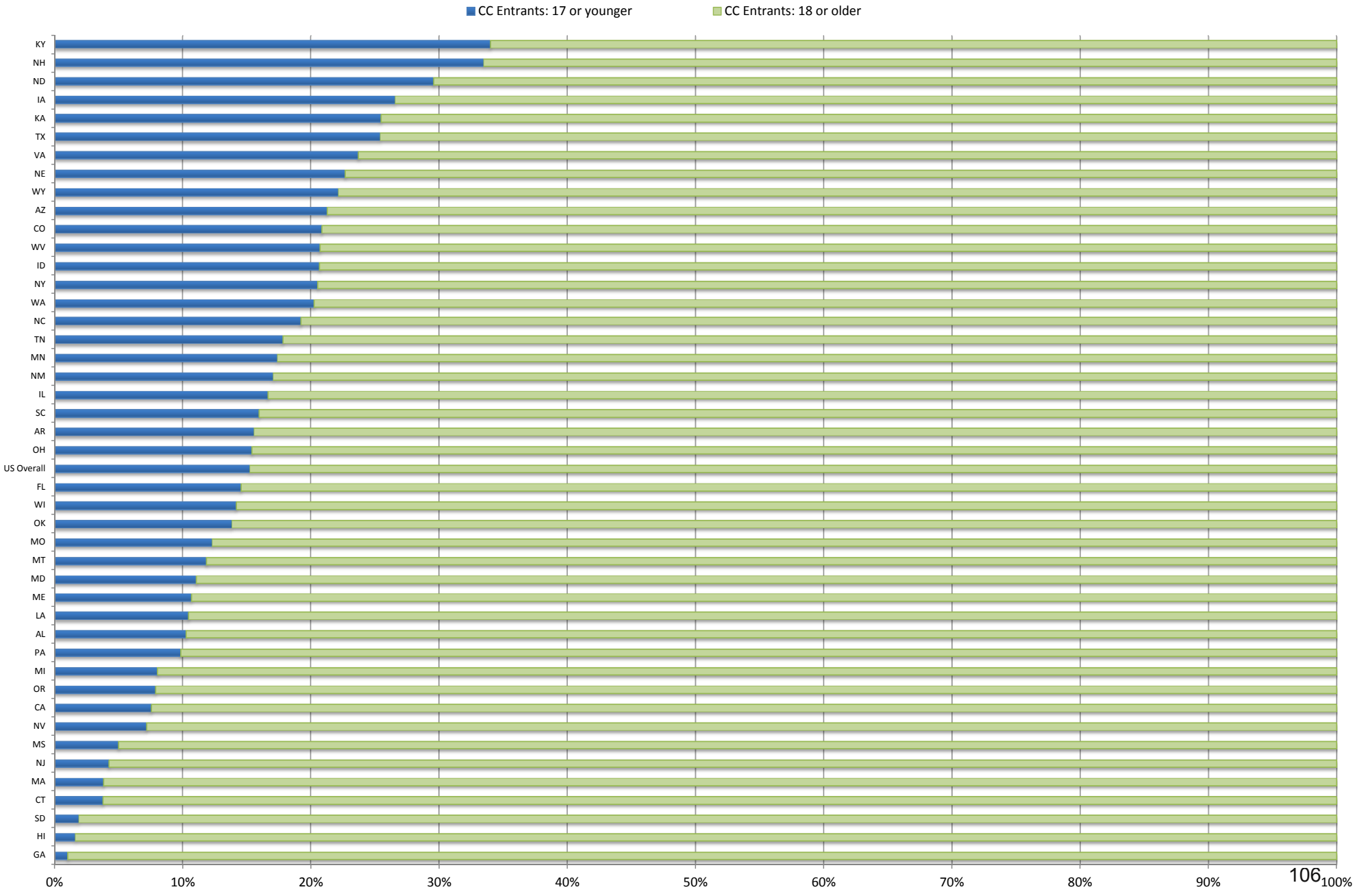



CC Cohort Bachelor's Completion Rates for Lower and Higher Income Students
Lower income students
Higher income students
WY
MT
OK
MS
FL
IA
TN
KS
ND
AL
ID
NY
IL
OR
TX
MO
U.S. average
VA
WA
NE
MI
NH
MN
PA
LA
AZ
MA
CA
KY
NJ
NV
MD
NC
HI
SC
AR
WV
GA
CO
WI
NM
CT
OH
ME
SD
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

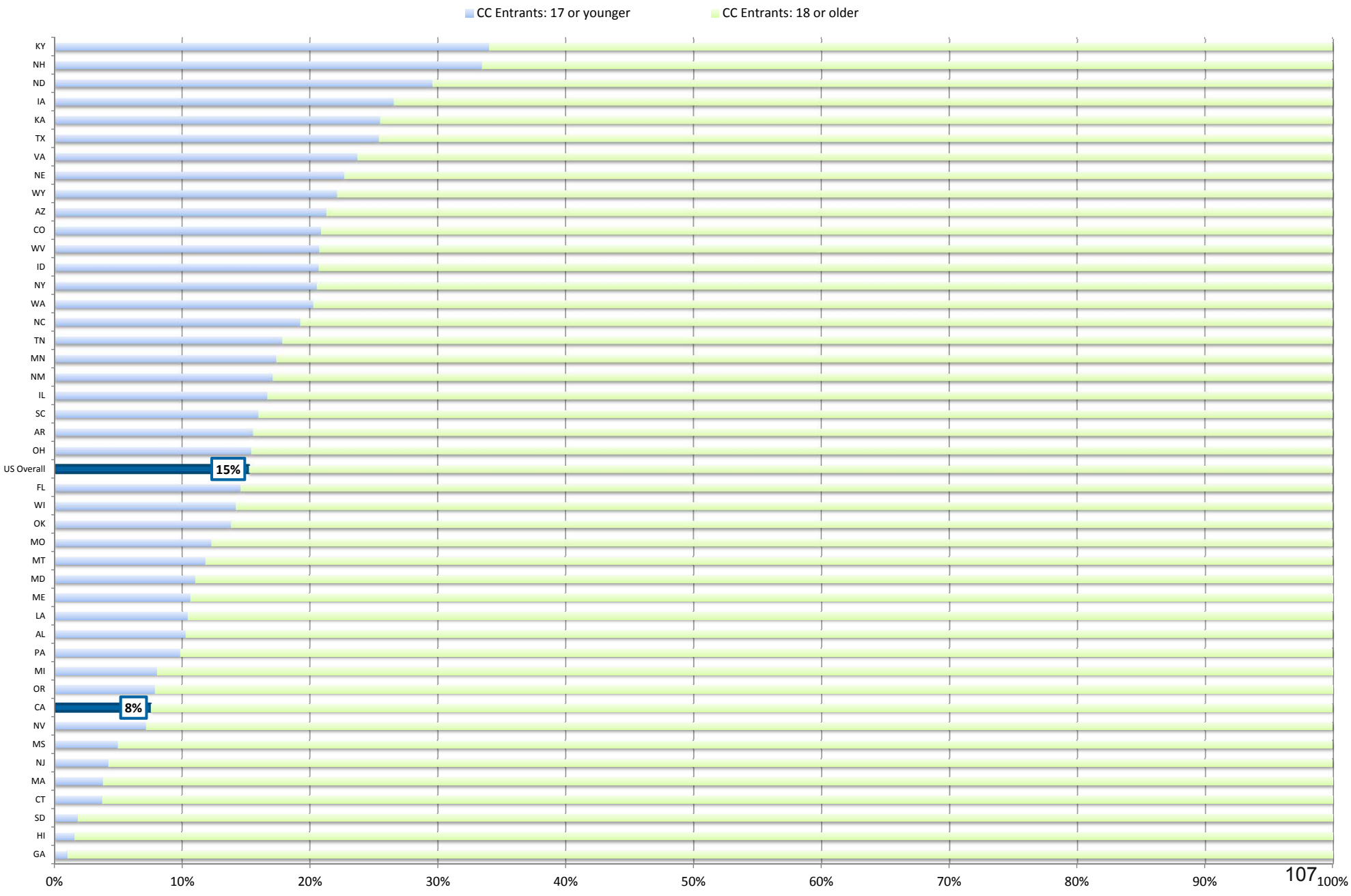

CC Cohort Bachelor's Completion Rates for Lower and Higher Income Students
Lower income students
Higher income students
WY
MT
OK
MS
FL
IA
TN
KS
ND
AL
ID
NY
IL
OR
TX
MO
U.S. average
VA
WA
NE
MI
NH
MN
PA
LA
AZ
MA
CA
KY
NJ
NV
MD
NC
HI
SC
AR
WV
GA
CO
WI
NM
CT
OH
ME
SD
10%
16%
9%
17%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

California Community College Dual Enrollment Student Outcomes

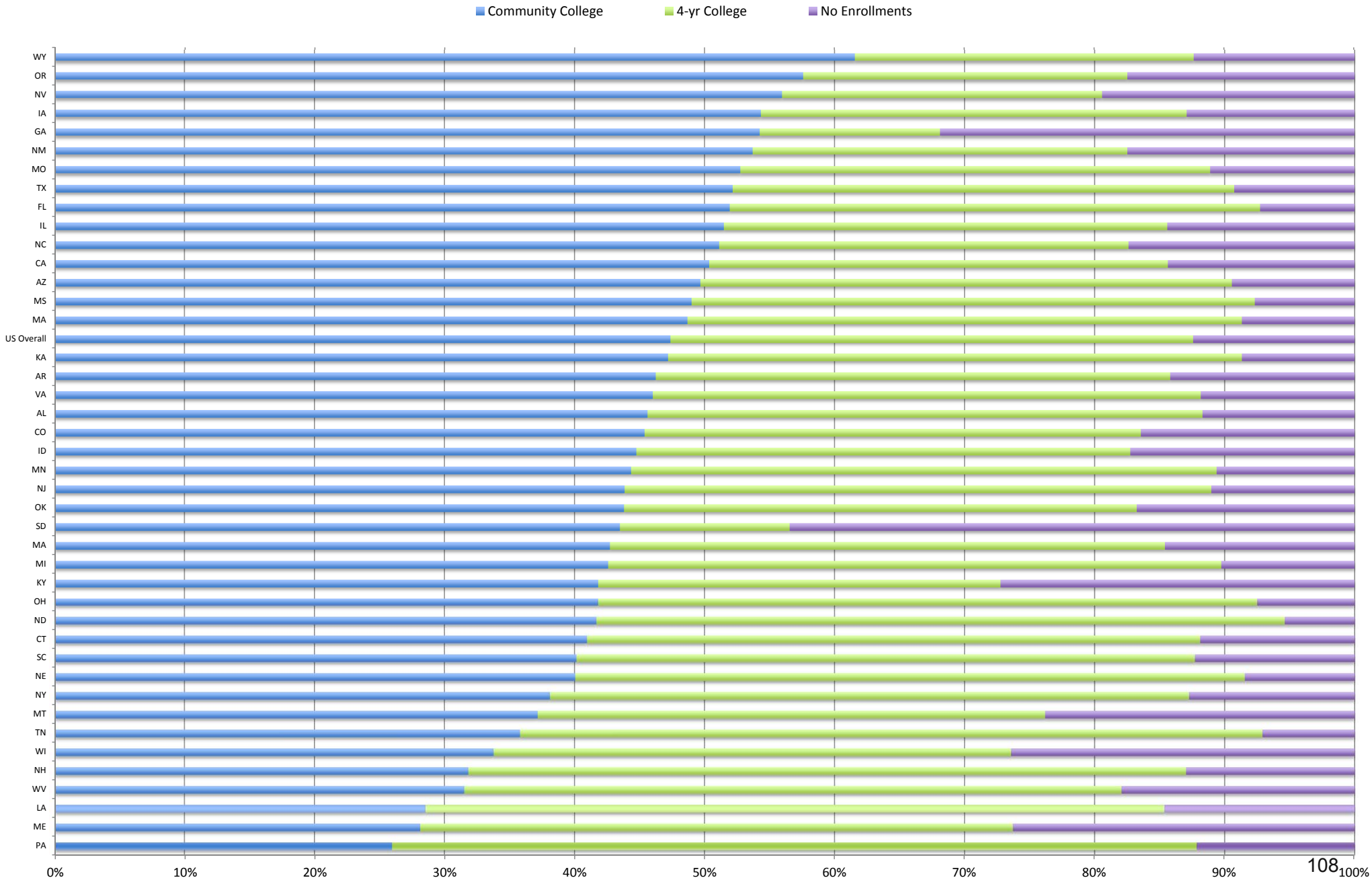
Percent of Community College Entrants who are in High School Dual Enrollment, by State



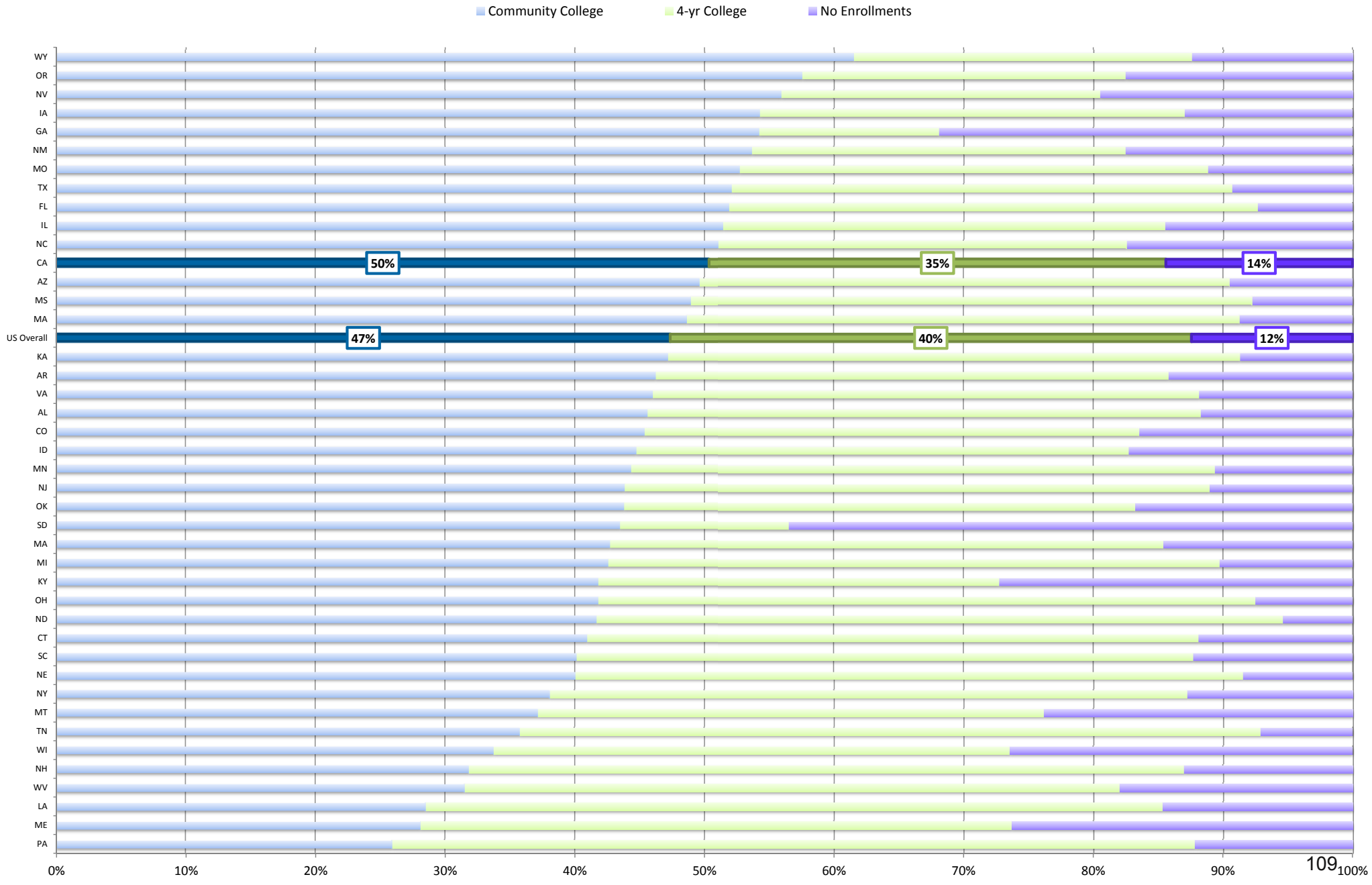
Percent of Community College Entrants who are in High School Dual Enrollment, by State



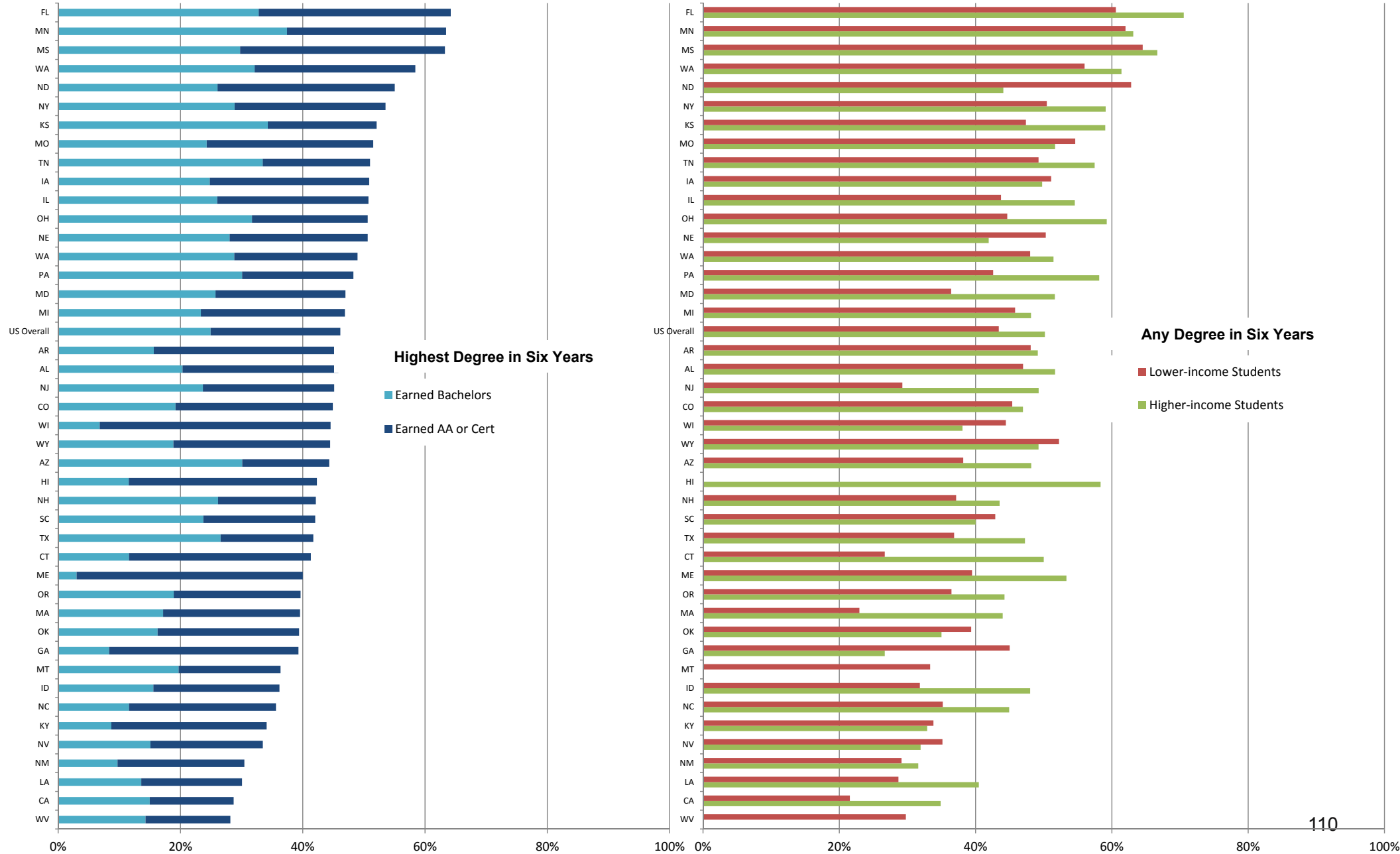
Former Dual Enrollment Students' First College Matriculations at Ages 18-20, by State



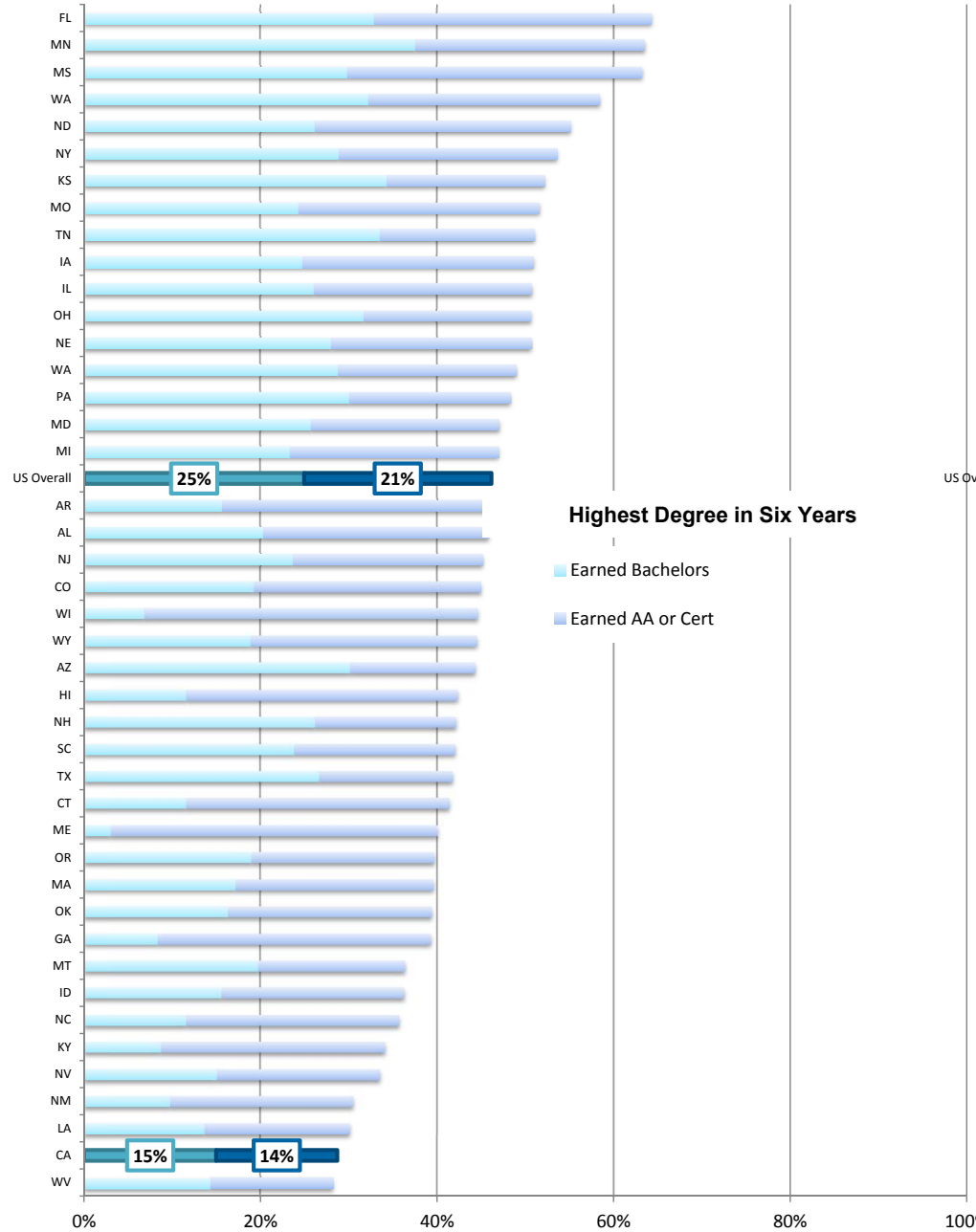
Former Dual Enrollment Students' First College Matriculations at Ages 18-20, by State



Degree Completion Rates among Former Dual Enrolled 17 year-olds who first matriculated at a **community college** at ages 18-20, by state and income



Degree Completion Rates among Former Dual Enrolled 17 year-olds who first matriculated at a **community college** at ages 18-20, by state and income



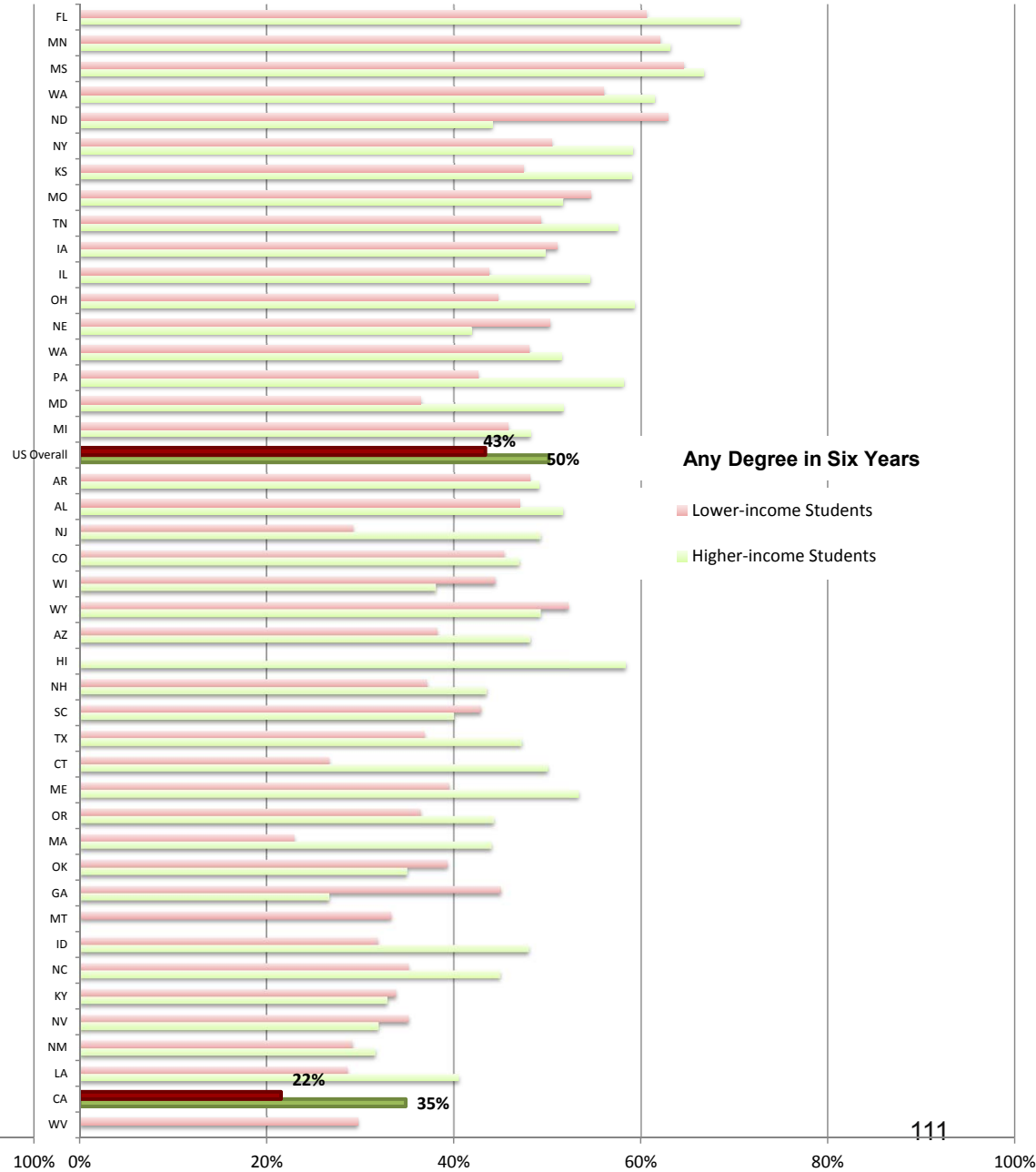


Figure 7. Degree Completion Rates among Former Dual Enrolled 17 year-olds who first matriculated at a **four-year college** at ages 18-20, by state and income

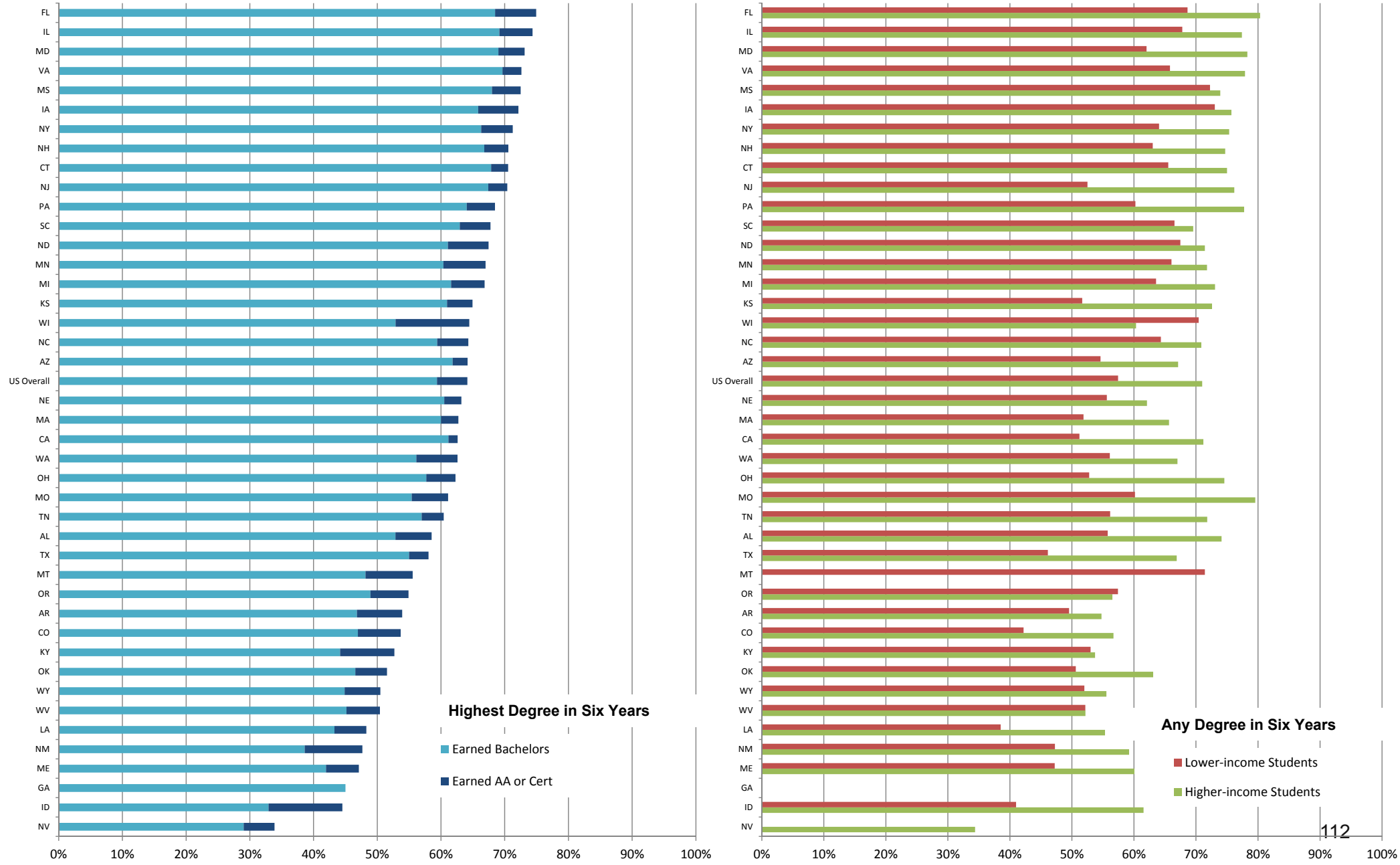
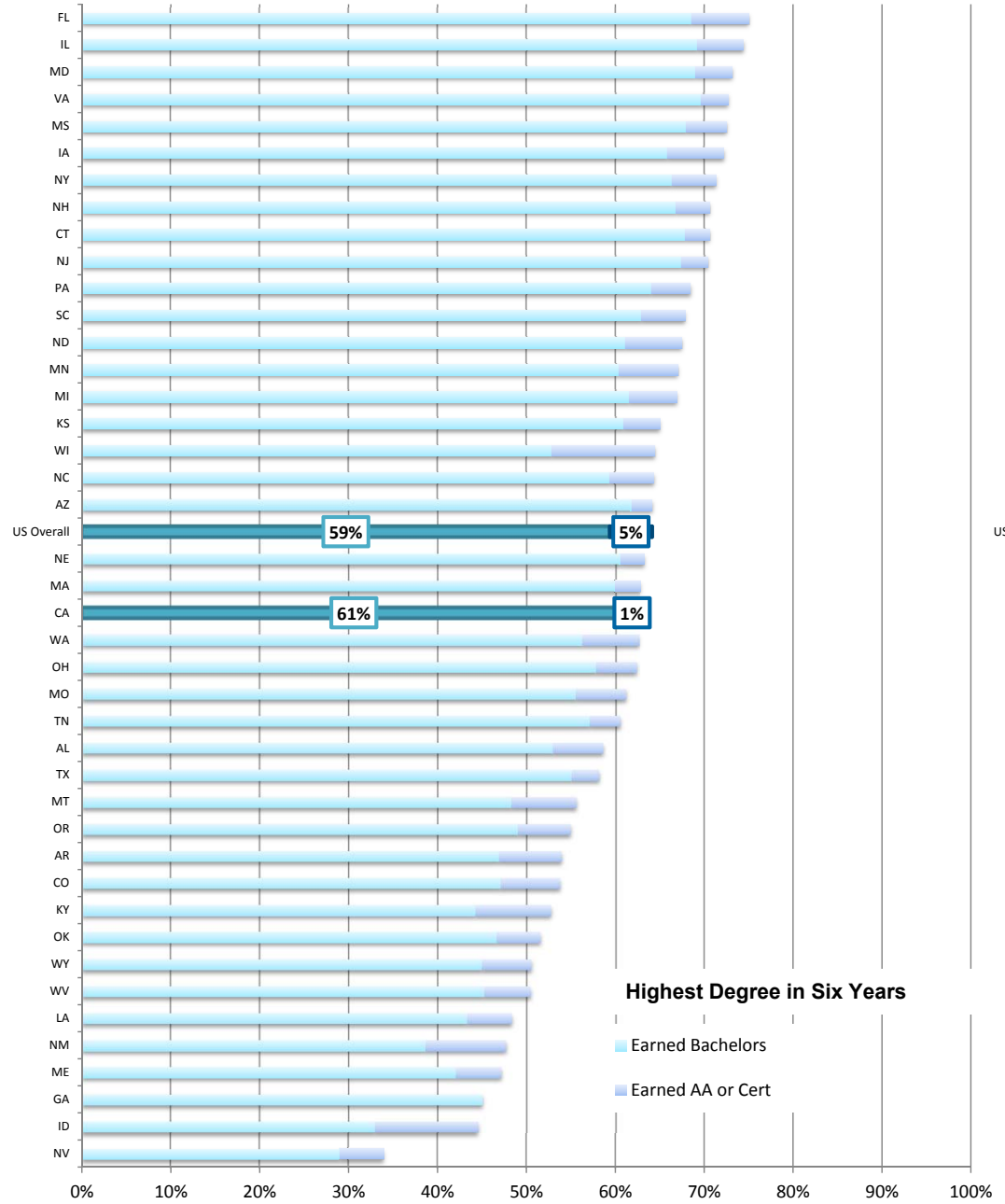
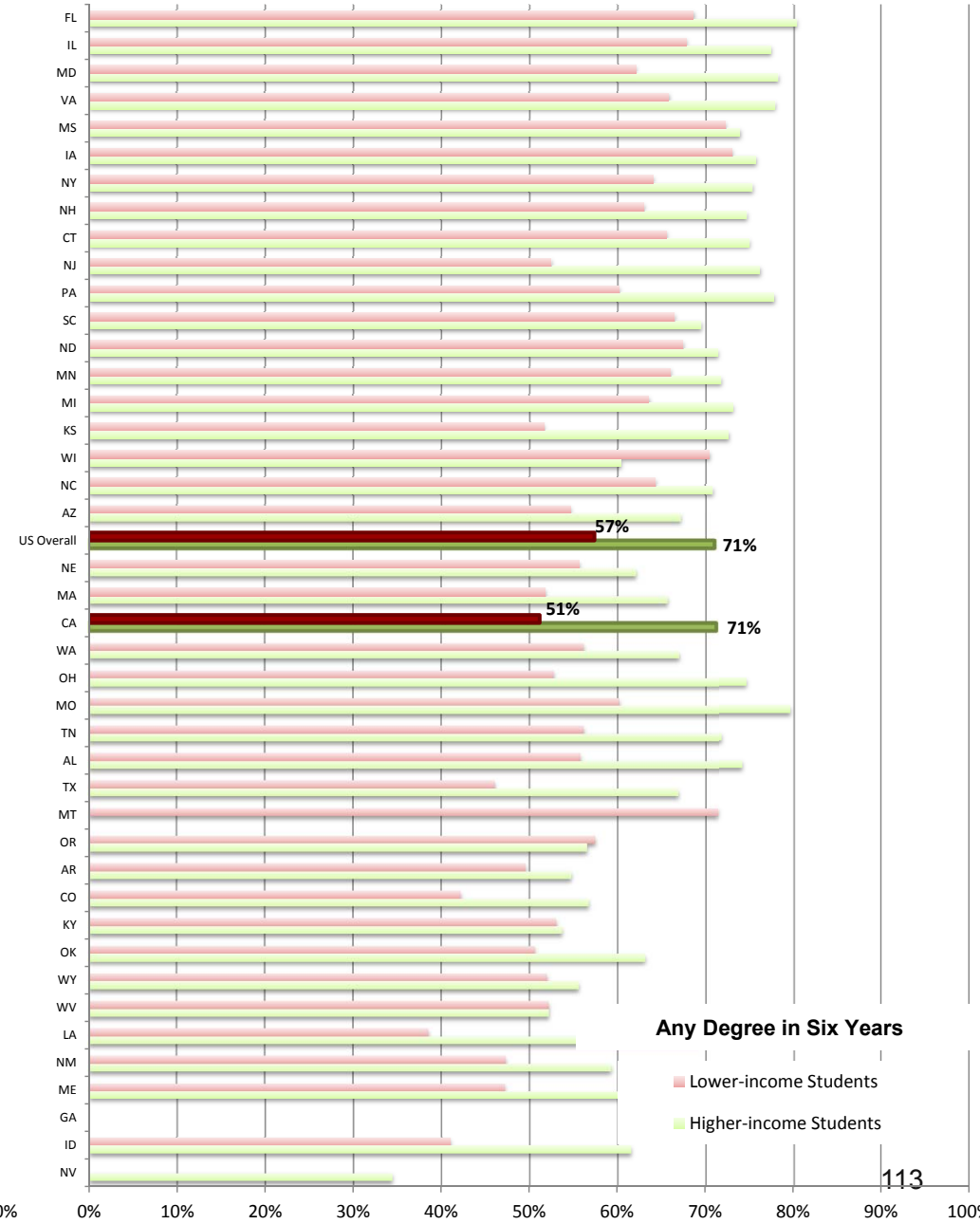


Figure 7. Degree Completion Rates among Former Dual Enrolled 17 year-olds who first matriculated at a **four-year college** at ages 18-20, by state and income





Career/Major Interest Areas

Begin with your CAREER in mind...

Business and Entrepreneurship

Communication and Creative Arts

Culinary and Hospitality

Education

Engineering and Manufacturing

Health Care

Human and Social Services

Information Technologies

Sciences

Personal / Professional Development

Public Safety

Sports and Fitness

A-Z List of Programs

[Click on Health Care]

Save 80% of the cost

College/University	University Costs 4 Years With Room & Board	*Bachelor's Degree Completion Cost through MyUniversity*	Savings!
Ashland University B.S. in Education	$157,416	$32,798	79%
Bowling Green State University B.S. in Biology	$75,400	$11,745	84%
Cleveland State University B.A. in Psychology	$85,227	$12,525	85%
Hiram College B.A. in Accounting & Fin. Mgmt	$160,600	$24,554	85%
Kent State University Bachelor of Bus. Admin.	$77,408	$12,893	83%
University of Akron B.S. in Sport Studies	$80,578	$12,811	84%
University of Toledo B.S. in Computer Science & Eng.	$83,177	$15,726	81%

*** LCCC's in county tuition is $3,077 per year for a full-time student*

Percent savings based on Bachelor's Degree with LCCC's *MyUniversity* Guarantee versus all 4 years at the university rates and incurring room & board.

The University Partnership of Lorain County Community College