



NEW RULES

Policies to Strengthen and Scale
the Game Changers



**COMPLETE
COLLEGE
AMERICA**

NOVEMBER 2016

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Foreword

To truly change a game, you must change the rules. Higher education often operates under old rules — rules that continue despite an increasingly diverse student population and improved understanding of human behavior and choice.

Under these old rules, fewer than half of students graduate on time, if at all, and troubling equity gaps exist based on income, race, and ethnicity.

We cannot keep doing the same thing and expect different results. It is time for **NEW RULES** — rules designed for big change, not marginal improvement.

This resource will help policymakers:

- **Set** the conditions for change using money and metrics to improve college outcomes.
- **Scale** and strengthen the Game Changer strategies with tools designed to help policymakers:

Listen — Understand the context, know the key facts, and ask the right questions.

Lead — Enact model policies using the detailed policy language, talking points, expected questions, and other advice Complete College America (CCA) provides.

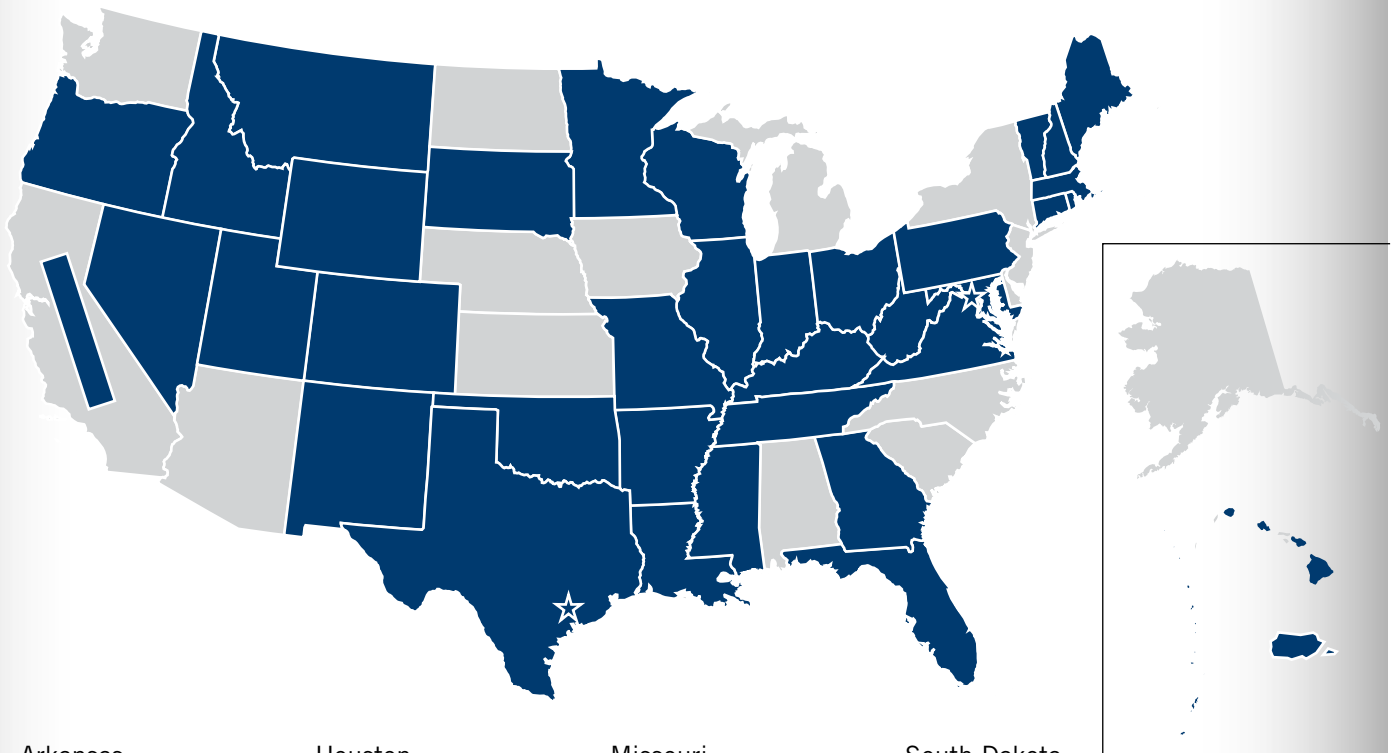
CCA is committed to providing ongoing and in-person assistance to policymakers looking to enact **NEW RULES** to significantly boost college completion and close achievement gaps.

COMPLETE COLLEGE AMERICA ALLIANCE OF STATES

Leading the college completion movement.








Complete College America has built an Alliance taking bold actions to significantly increase the number of students successfully completing college. That means achieving degrees and credentials with value in the labor market and closing attainment gaps for traditionally underrepresented populations.

■ Alliance members



- | | | | |
|-------------------------------------------------------|---------------|---------------|-----------------------------------|
| Arkansas | Houston | Missouri | South Dakota |
| Central Valley (CA)
Higher Education
Consortium | Idaho | Montana | Tennessee |
| Colorado | Illinois | Nevada | Texas |
| Commonwealth
of the Northern
Mariana Islands | Indiana | New Hampshire | Thurgood Marshall
College Fund |
| Connecticut | Kentucky | New Mexico | Utah |
| District of Columbia | Louisiana | Ohio | Vermont |
| Florida | Maine | Oklahoma | Virginia |
| Georgia | Maryland | Oregon | West Virginia |
| Hawaii | Massachusetts | Pennsylvania | Wisconsin |
| | Minnesota | Puerto Rico | Wyoming |
| | Mississippi | Rhode Island | |

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College completion is good policy ...



More college graduates deliver the results policymakers want.

College completion gets people good jobs.

A completed degree or credential unlocks access to hundreds of good-paying jobs not available to those who did not graduate. A college degree translates into more than \$1 million in extra earnings over a person's career.

College completion fuels economic development.

A college-educated workforce offers area employers the talent pool they need to grow and innovate. This fuels the new economy and supports workforce needs across industries.

College completion benefits the state budget.

College graduates earn more, pay more in taxes, and use fewer government services compared to those who did not go to college or did not finish.

College completion closes equity gaps.

A college degree or credential is a great equalizer — providing a path to prosperity for all, regardless of their parents' education level or line of work.

College completion builds stronger families.

College graduates have stronger financial foundations but are also less likely to get divorced, less likely to have children outside of marriage, and more likely to send their own children to college.

College completion drives civic engagement.

College graduates are more likely to be educated about their government and involved in shaping their communities.



... especially if you avoid these pitfalls

Follow these recommendations to ensure that your efforts produce transformative results.

Do not let anyone convince you that some students cannot succeed.

Be steadfast in the philosophy that all students can succeed if higher education serves all students. Options ranging from short-term workforce credentials to doctoral degrees provide choices for students no matter their interests and abilities.

Draw distinction between academics and structure.

Argue that state and institutional stakeholders must work together to ensure an optimal structure in higher education, while respecting faculty control over matters of curriculum.

Be aware of turf.

For institution-level policies, resolutions adopted at the state level are a good way to drive change and signal state priorities without excessive intervention.

Talk to stakeholders before going public.

To generate goodwill and ensure full understanding of the history and context, talk to your state's higher education chief and leadership of two-year and four-year institutions before making policy proposals public.

Set the conditions for change.

If it matters, measure it and tie funding to it. Money tends to focus minds.

Listen. Lead. In that order and with urgency.

If you enact the **NEW RULES**, your talking points, handouts, and other tools are provided and tested to boost returns on your valuable investments of time and effort.

MONEY Pay for outcomes, the RIGHT way



SET THE CONDITIONS FOR CHANGE

Meaningful metrics. Outcomes that matter.

Invest money in the results the economy needs: momentum and completion.

COMPLETION

Degrees conferred OR Graduation rate

TIME & AFFORDABILITY

On-time graduation rate OR Average time to degree

EQUITY

Graduation rate of minority groups OR Percentage gap between racial groups

MOMENTUM

Gateway course completion OR Completion of 30 credits

Real money. Base budgets.

Outcomes-Based Funding Strength Test: How Does Your Formula Stack Up?

CRITICAL COMPONENTS

Does the formula reward institutions for underrepresented students' success?

NO WEAK YES STRONG

What percentage of total operating funding flows through the formula?

0% WEAK 50%+ STRONG

Can institutions lose money year over year if they do not perform well?

NO WEAK YES STRONG

STRENGTHENERS

Are metrics aligned to established state goals?

NO WEAK YES STRONG

How many metrics are there?

7+ WEAK 3-6 STRONG

Are all public institutions included in the model?

NO WEAK YES STRONG

Do the metrics change over time?

YES WEAK NO STRONG

How is success defined?

FIXED GOAL WEAK CONTINUOUS IMPROVEMENT STRONG

Is the formula tailored to the differing missions of two-year and four-year institutions?

NO WEAK YES STRONG



METRICS **Ask the right questions and then use data to drive change now**

Get answers to these straightforward, common-sense questions.

- How many students complete degrees and credentials?
- How long does it take students to graduate?
- Are students reaching critical momentum points?
- Are students' time and money being used efficiently?

Unless equity gaps are closed, we fail. Ask for the results by race, ethnicity, age, and income.

Use the resources at your disposal.

Complete College America collects important data from Alliance members every year to measure the following:



ENTRY: placement in remediation, success in remediation, success in gateway courses



MOMENTUM: completion of 24 and 30 credits, retention, course completion rate, transfer rate



COMPLETION: degrees conferred, on-time graduation rate, overall graduation rate, time to degree, credits to degree

Learn and teach others with Complete College America's two-page data reports. Find them at completecollege.org/resources.



ANECDOTES ARE COMPELLING, BUT DATA WIN ARGUMENTS.

An anecdote tells an interesting story. But when you hear one, it is hard to know if it is the exception or the rule. Data's job is to tell the difference. Separating stories from statistics leads to more informed decisionmaking.

15 to Finish



CONTEXT

THE PROBLEM

Students reasonably assume that if they attend school full time, they will graduate on time. But an on-time pace is 30 credits per year — more than the minimum 12 credits per semester required for full-time status. If students do not enroll in 15 credits per semester or make a plan to attend school during the summer, they have no chance of graduating on time. **The cost of extra time is staggering — roughly \$150,000 for each additional year.**¹



Fifteen to Finish benefits all students but helps minority students more because only 19 percent of African American students and 20 percent of Latino students are on track to graduate after their first year compared to 33 percent of white students.

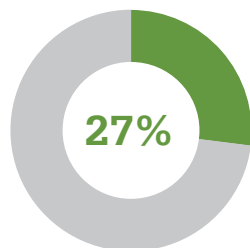
THE SOLUTION

All full-time students should be advised to enroll in 15 credits each semester or craft a plan for summer enrollment. Financial aid dollars, as well as institutional process and practice, should support that standard.

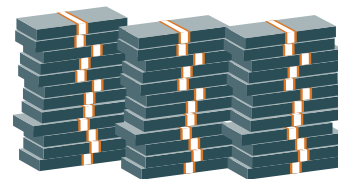
THE BIG PICTURE

The vast majority of students do not take enough credits to graduate on time, costing them significantly more time and money.

Full-Time Students Completing 30 Credits Per Year



Cost of Additional Year



\$150,000
per student

(tuition, lost wages, and retirement and other costs)

¹ <https://www.nerdwallet.com/blog/loans/student-loans/victory-lap/>



MYTH BUSTING

Ask these questions to separate fact from fiction:

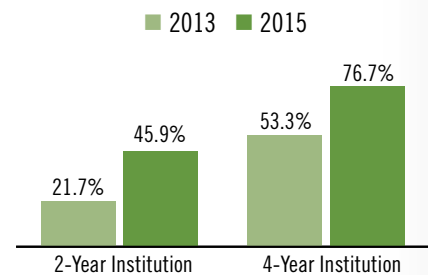
- What do you currently do to make sure students know what it takes to graduate on time?
- What is the current on-time graduation rate for full-time students?
- What are the on-time graduation rates for low-income students and minorities?
- What percentage of the student population is ages 18–24 and attending full time? Do they graduate on time?
- How many years can a student get state financial aid?
- What do students do when they run out of financial aid before graduation?
- What percentage of degree programs require more than 60 credits for an associate degree or 120 credits for a bachelor's?
- How much money would students save in tuition if credit caps were in place?



POLICY IN ACTION

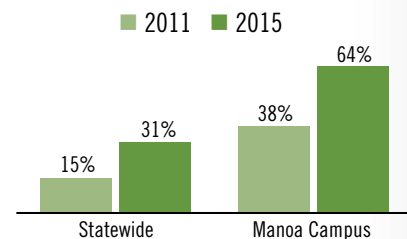
Indiana set a standard of 30 credits per year for its need-based 21st Century Scholars financial aid program. This program proved that changing behavior in a big way is possible if the system is built for it. Now, more than three-quarters of scholarship recipients at four-year institutions and nearly half at two-year institutions complete enough credits to graduate on time.

**21st Century Scholars
Completing 30 Credits per Year**



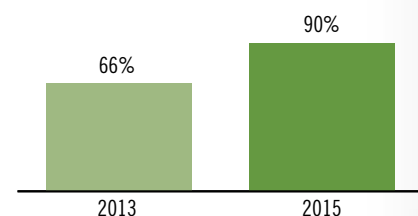
The **University of Hawai'i** conducted an aggressive 15 to Finish marketing campaign. In just one year, the state saw double-digit percentage point increases in the proportion of students taking 15 credits.

Students Taking 15 Credits



Mississippi Valley State University, a historically black university, increased its percentage of full-time students taking 15 credits in the first semester from 66 percent in 2013 to 90 percent in 2015 after conducting a 15 to Finish campaign and training advisers on the 15 to Finish message.

**Full-Time Students Taking
15 Credits in the First Semester**





NEW RULES

STATE ACTION

- **Coordinate a statewide 15 to Finish campaign** using data and marketing materials provided by Complete College America.
- **Set a standard** of 30 credits per year as the benchmark for full-time financial aid programs.
- **Cap credit hours** for a degree at 60 for an associate degree and 120 for a bachelor's degree, except in special cases such as accreditation, to ensure that 15 to Finish leads to on-time graduation.

INSTITUTION ACTION

- **Use banded tuition** so that students pay no more for 15 credits than they do for 12.
- **Create financial aid packages and degree maps** based on the 15 credit standard, and train advisers to counsel full-time students into 15 credits each term or 30 per year.
- **Ensure sufficient course availability** so that all full-time students can register for 15 credits each semester.
- **Reward students** who complete 15 credits per semester or 30 per year with priority registration, premium parking, preferred housing selection, and other campus perks.



Get started crafting your own policies using the detailed policy language found on the thumb drive on the inside front cover of this report and at completecollege.org.



STAKEHOLDER P.O.V.

NACADA, the Global Community for Academic Advising, has committed to sharing 15 to Finish materials with its members.

Academic advisers may reject the notion of 15 credits as the default because they have, with the best intentions, been advising students into lighter course loads. Show them Complete College America data proving that speeding up, not slowing down, is what ensures success.

Financial aid professionals will rightly be worried about how changes to financial aid rules will affect their internal processes. Devise implementation plans to minimize the burden on financial aid offices.

Institutions serving significant part-time or **nontraditional populations** will likely be skeptical or outright opposed to these policies. Reiterate that these policies are for full-time students but ask them to think about how part-time students can graduate faster.

Currently enrolled students, especially those taking lighter course loads, may find it unfair that rules are changing. Grandfather current students to avoid this critique and the public outcry that may come with it.



TALKING POINTS

- Significant percentages of college students **do not graduate** on time.
- The key reason: Students **assume** that if they attend **full time** they will graduate **on time**.
- This assumption is **false**. Full time is 12 credits; on time is 15.
- Higher education is **structured around the 12-credit standard**, designed for **delayed** graduation.
- Every **additional year** of college costs a student roughly **\$150,000** in additional tuition and foregone income and retirement.
- In our state, we should **refuse** to let our students incur these **life-altering costs** because of how **we** built the system.
- **Advising, financing, and incentives** must be updated to the **15-credit standard** to support on-time graduation.



BE READY FOR QUESTIONS

“Are you saying all students will need to take 15 credits?”

No, but let’s make sure we are not delaying their graduation simply because we **did not advise them** properly.

“Aren’t you worried that students’ grades will suffer if they take too many courses?”

The truth is that **speeding up**, not slowing down, **gets the best results**. Students who take more courses each semester get **better grades** and are **less likely** to drop or fail their courses.

“What about the single working parents and other students with complicated lives?”

They are the **least likely** to be able to afford the **\$150,000 price tag** for delayed graduation that results from additional tuition, lost wages, and foregone retirement. These students may benefit from spreading courses over the **full year**, including summer.

“What if students have a death in the family or a learning disability and don’t complete their credits?”

These students could use an **appeals process** to keep their financial aid. Other students could earn their eligibility back if they **meet the benchmark** the next year.

“Does the state have the capacity or expertise to run a 15 to Finish campaign?”

Our state works with **Complete College America**, a nonprofit that has developed **free resources** to support this campaign.

“What about the fact that many institutions charge more for 15 credits than they do for 12?”

Students should weigh the **short-term** and **long-term** costs. Fifteen credits may cost up to **\$1,000** more per term, but that is far less than the **\$150,000** for the additional year. Institutions can **defray the additional cost** by converting to a **banded tuition** model.

“Won’t banded tuition just shift the cost to students taking 12 credits?”

No, banded tuition will make it in students’ **financial best interest** to take 15 credits and **lower the long-term cost** of their degrees. This makes short-term and long-term cost structures consistent with one another.

Corequisite Remediation



CONTEXT

THE PROBLEM

Some students inevitably will start college with deficits in math and language skills. Well-intentioned efforts created a system to deal with that fact — a series of stand-alone “remedial” courses that cost money but do not grant college credit. This gauntlet created several points of attrition (students exiting) before college-level courses even begin, and students drop out more often than they fail.

THE SOLUTION

Entering students should be enrolled in the college-level “gateway” course, while those who need additional support co-enroll in a course or lab during the same semester that provides just-in-time academic support, referred to as “corequisite remediation.”

CLOSE

the
GAP

Corequisite Remediation benefits all students but helps minority students more because more than half of African American students and a third of Hispanic students drop out when they are in the remedial pipeline compared to a quarter of white students.



THE BIG PICTURE

Students placed in remediation are more likely to drop out than to fail.

Of Those Entering a 2-Year College ...



51.7%

Enroll in Remediation



22.3%

of Those Students Complete Remediation and Associated College-Level Courses in 2 Years



9.5%

Graduate within 3 Years



MYTH BUSTING

Ask these questions to separate fact from fiction:

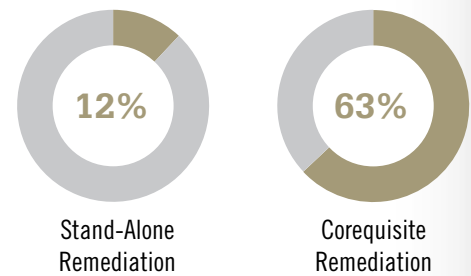
- What percentage of your remedial students stay enrolled past the first semester?
- What percentage of your remedial students graduate?
- How many students take stand-alone remediation each year?
- What is the total cost to these students?
- Have you seen the data from the six states that scaled Corequisite Remediation?
- Can our state match the tremendous success of states that have doubled or tripled the success of underprepared students by using Corequisite Remediation?



POLICY IN ACTION

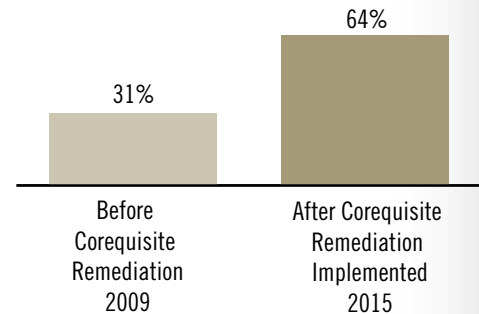
All institutions governed by the **Tennessee Board of Regents** converted to Corequisite Remediation. In the traditional model, roughly 12 percent of students passed the gateway course. With co-requisite, 63 percent did so. In other words, more than five times as many students now pass the gateway course than before the change. Tennessee proved that this approach works across all levels of academic preparation: Results were similar across all ACT scores and were nearly identical in **Georgia, West Virginia, Indiana, and Colorado.**

Remedial Students Passing Gateway Courses



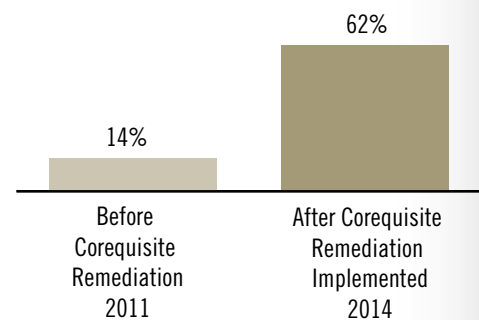
The **Colorado Community College System** was one of the first states in the nation to enact a new state policy that explicitly called for Corequisite Remediation. The system's chief academic officer convened faculty leaders from all campuses in a review of the research and experimentation that has resulted in an approach in which more than 5,000 otherwise traditional remedial students are now in corequisites. The reforms resulted in success rates that improved from 31 percent to 64 percent.

Students Passing Gateway Courses



Under the traditional remedial model at the **West Virginia Community and Technical Colleges**, only 14 percent of students placed into remedial math were completing the associated gateway course within two years. Armed with evidence that corequisite support could achieve meaningful improvements, Chancellor Jim Skidmore led West Virginia to make the switch to Corequisite Remediation. Within just one year of the reforms, success rates skyrocketed to 62 percent.

Remedial Math Students Passing Gateway Math Courses within Two Years



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NEW RULES

STATE ACTION

- Require institutions offering remediation to **publicly report** a target date by which the institution could offer a corequisite option to the vast majority of students, with a timeline supporting that implementation date.
- **Set a state guarantee** that students will have access to gateway math and English during their first year of enrollment. Require institutions to uphold that guarantee or offer the course for free.
- **Fund transitional costs** of converting to Corequisite Remediation, such as professional development and instructor credentialing.

INSTITUTION ACTION

- **End mandatory placement** into stand-alone remediation.
- **Offer a corequisite option** for all gateway math and English courses.
- **Train advisers** and build degree maps such that all students take gateway math and English courses in the first year.



Get started crafting your own policies using the detailed policy language found on the thumb drive on the inside front cover of this report and at completecollege.org.



STAKEHOLDER P.O.V.

Corequisite Remediation has the support of Achieving the Dream, the American Association of Community Colleges, Education Commission of the States, Jobs for the Future, and the Charles A. Dana Center at the University of Texas at Austin.

Developmental educators will argue that students pass their remedial courses, but these educators often do not address the question of gateway course completion.

Accreditors require additional credentials from an instructor of a college-level course than an instructor teaching stand-alone remediation. Faculty may need some professional development or additional credentialing to make the corequisite model work at scale since many more students will go directly into college-level courses.

Converting to a corequisite approach takes time. **Institutional leaders** may convey that they need three to five years to fully scale the model. Watch out for unnecessarily long implementation timelines but do not expect institutions to fully implement it the next academic year.



TALKING POINTS

- **More than half** of community college students enter **without the skills** needed to go directly into college-level courses in math and English, and those numbers are higher for **low-income** and **minority** students.
- These students are currently required to take prerequisite **“remedial”** or “developmental” courses that **cost money** but **do not count** toward the students’ degrees.
- The problem is not that students do not pass the remedial course. It is that they **drop out** afterward, **before they try** the college-level course.
- Across the country, colleges are employing a **new approach**: delivering the remedial content as a corequisite in the **same semester** the student takes the **gateway** college course.
- This approach **works** because it **eliminates the attrition** point between the remedial course and the college-level gateway course.
- The **results are compelling**: Only **22 percent** of remedial students nationally ever complete the college-level gateway course, but students in Corequisite Remediation do so at a rate of **60 percent** or more.
- This strategy is **undeniably successful** and **should be implemented** wherever in the state remediation is being offered.



BE READY FOR QUESTIONS

“Is it really in students’ best interest to place them into college-level courses if they aren’t ready?”

Looking at the **success rates** of the corequisite approach, it clearly is. It is not in students’ best interest to send them into a **remedial path** that is most likely to end with the **student dropping out**.

“How do institutions figure out if a student is college ready?”

As it turns out, not very well. Students often take a placement test **without being told why** they are taking it or being given the **opportunity to prepare**. In places that have ended mandatory remediation, it has become clear that many, many students who test below the cut score on the placement test are **able to succeed** in college-level courses.

“What are the costs associated with Corequisite Remediation?”

To the students, the **costs are lower**. They will no longer pay for a series of courses that do not count toward their degree and will graduate faster, **saving them time and money**. Short-term transition costs to the institution may result from the need for faculty to **increase their credential level** so that more sections of college-level gateway courses can be offered.

“In Corequisite Remediation, does the student take two courses at the same time, or is it organized some other way?”

There are a **variety of models**. Some include two courses — one remedial and one gateway — that a student takes in the same semester. Others offer two **different versions** of the gateway course, one of which embeds more preparatory material into the curriculum than the other. Another model **adds a lab** to the gateway course for students in need of additional support.

Math Pathways



CONTEXT

THE PROBLEM

There is a costly mismatch in college math. For too long, the default math course for the vast majority of students has been College Algebra — a course designed solely to prepare students for Calculus. Millions of students are forced to struggle through polynomial factoring and logarithmic functions with no intentions of using these skills in future coursework or a career. Many will not make it: College Algebra frequently ends college dreams. Even those who pass will have missed the opportunity to learn statistical and quantitative reasoning skills they need for their life and career.

THE SOLUTION

Students who are required to take only one math course in college should take a course that is designed to help them navigate the increasingly data-driven world. That way, more students will take and pass gateway math without the need for remediation, and graduates will be better equipped to understand the mathematical content they will face in their lives and careers. Mathematicians nationwide recommend pathways for statistics, quantitative reasoning, College Algebra/Calculus, and technical math.



Math Pathways benefit all students but help minority students more since only 64 percent of schools serving the highest percentages of African American or Latino students offer Algebra II, compared to 88 percent of schools serving the lowest percentages of minorities.

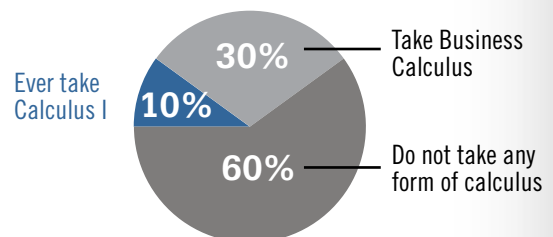


THE BIG PICTURE

Very few students who take College Algebra ever start Calculus, which is a key course for science, technology, engineering, and math majors.

Source: Dunbar, S. 2005. Enrollment flow to and from courses below calculus. In *A Fresh State for Collegiate Mathematics: Rethinking the Courses below Calculus*, N. B. Hastings et al. (Eds.). Washington, DC: MAA Notes, Mathematics Association of America.

Students Taking College Algebra



MYTH BUSTING

Ask these questions to separate fact from fiction:

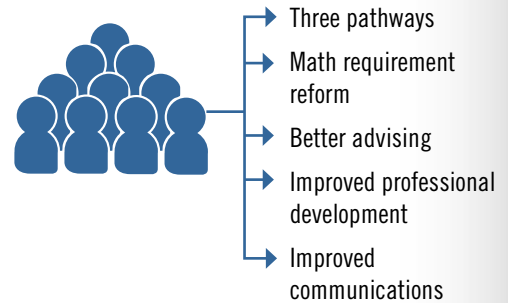
- What do your math faculty members say is the purpose of College Algebra?
- What percentage of those who pass College Algebra go on to take Calculus?
- What percentage of students who take College Algebra end up retaking it because they withdrew or failed?
- Why are students advised to take College Algebra when their programs do not include Calculus?



POLICY IN ACTION

The **Colorado Department of Higher Education** convened a task force of math faculty as part of an overall completion strategy. The result is a set of recommendations by math leaders for creating three clear pathways, statewide reforms in math requirements for many high enrollment academic programs, improved advising strategies, a blueprint for improved professional development, and a commitment to improved communication among institutions on the implementation of Math Pathways. Already, many programs have realigned their math requirements to align with the new Math Pathways.

Math Faculty Task Force



The **Nevada System of Higher Education** was facing low gateway math completion rates at public institutions and even lower graduation rates for students who did not complete gateway math in their first year. In response, the system convened math faculty to develop a strategy to improve these outcomes. The group recommended a policy so that the vast majority of students would have the opportunity to complete gateway math courses within their first academic year. The system adopted the recommended policy shortly thereafter.

All public postsecondary institutions, by policy, now
PLACE STUDENTS IN GATEWAY COURSES IN THEIR FIRST ACADEMIC YEAR

Ohio adopted a remediation-free standard that set in motion conversations among math faculty leaders on what math students really need. At the same time, difficulties were surfacing with math courses receiving approval for transfer through the Ohio Transfer Module. Against this backdrop, math faculty convened to create Math Pathways with clear learning outcomes that transfer seamlessly through the Transfer Module. Ohio embraced another of the group’s recommendations, overturning a policy that required Intermediate Algebra as a prerequisite for all gateway math courses.

Implemented **REMEDATION-FREE STANDARD** and enabled
SEAMLESS TRANSFER OF MATH CREDITS



NEW RULES

STATE ACTION

- **Examine enrollment and success rates** in various gateway math courses with a specific focus on the impact of **College Algebra** on a student's long-term educational outcomes.
- Create a leadership group of math faculty from across all institutions to **evaluate the relevance of various math gateway courses** to fields of study and **develop recommendations** for Math Pathways.
- **Align statewide transfer and articulation frameworks** to accommodate Math Pathways at all public institutions.

INSTITUTION ACTION

- **Establish** a rigorous Quantitative Reasoning, Statistics, and/or technical math gateway course and offer sufficient sections to accommodate all students outside of science, technology, engineering, and math (STEM) disciplines.
- **Revise program requirements and degree maps** such that a course other than College Algebra is the default math course for students outside of STEM disciplines, and train advisers on the new pathways.
- **Offer a meaningful pathway into STEM** disciplines for students who enter college without having had access to precalculus or calculus coursework in high school.
- **Align assessments** of college readiness to students' Math Pathway.



Get started crafting your own policies using the detailed policy language found on the thumb drive on the inside front cover of this report and at completecollege.org.



STAKEHOLDER P.O.V.

Math Pathways have the support of Achieving the Dream, the American Association of Community Colleges, Education Commission of the States, Jobs for the Future, and the Charles A. Dana Center at the University of Texas at Austin — a national leader in mathematics.

Some will **misunderstand or misrepresent** Math Pathways as watering down mathematical rigor. Addressing this misunderstanding head on is best: Proactively state that this is not about just getting students through their math course, it is about giving them skills they will use in their life after graduation.

Math faculty will likely be the most natural supporters of Math Pathways, but they will also bear the heaviest burden for implementing them. Support the math department's professional development and ensure that it can secure classroom space to teach new sections or new courses.

Provosts and department chairs in other disciplines must also be convinced about the value of Math Pathways because they are the ones who must alter their degree requirements, which may have been in place for decades.

Advisers often encourage students to “keep doors open” by taking College Algebra or Calculus if they are undeclared or if there is any chance they might change majors. Establish the premise that if a student cannot pass College Algebra but can pass another course, College Algebra is the closed door.



TALKING POINTS

- The United States is **27th in the world** in mathematical competency, far below global competitors like China and the European Union.¹
- The **default math** course for many students is **College Algebra**, a course designed solely to prepare students for Calculus.
- **Sixty percent** of students who take College Algebra do not go on to take Calculus, making the **College Algebra course irrelevant** to their college and career goals.
- At the same time, College Algebra has **lower success rates** than any other course, even more advanced courses like Calculus.
- College Algebra not only is a **stumbling block** for students en route to a degree, but it also does not serve them well long term even if they do master the content.
- College graduates need to be **mathematically literate** in today's increasingly data-driven world, which means colleges need to **rethink** their approach to math.



BE READY FOR QUESTIONS

“Aren't you just watering down math to get more students through college?”

Quantitative reasoning courses are actually **quite challenging**, with assignments like analyzing a data set and writing an essay about the findings. They are built around the skills needed for **academic and career success**, so they are not only rigorous, they are **relevant**.

“Is there a cost to implementing Math Pathways?”

There are plenty of **free resources** to help faculty and advisers with implementation, many developed through a partnership with **Complete College America** and the **Dana Center** at the University of Texas at Austin, which is **leading the way** in Math Pathways.

“Will we need to add math faculty?”

Because the new math courses are **more interactive** in nature, they may require a smaller student-faculty ratio. If the courses require **additional instructors**, these costs should be viewed as an **investment in student retention**, which improves the bottom line.

“Can underprepared students still pursue STEM fields?”

Students from lesser resourced school districts may have the **aptitude** but not the **prior coursework** needed to start directly in Calculus. Math Pathways include an efficient **pathway to college-level calculus** coursework for such students rather than tracking them into other disciplines.

¹ <https://www.oecd.org/unitedstates/PISA-2012-results-US.pdf>

Structured Schedules



CONTEXT

THE PROBLEM

More students than ever before are older, working, and having to constantly figure out work, child care, and transportation schedules around their class schedules that change from semester to semester. This constant juggling — and the costs that come with it — create an unnecessary barrier for students that often leads to delays in completion.

THE SOLUTION

Students have a predictable, consistent class schedule for the duration of their degree or certificate program. Time on campus is consolidated so students have fewer commuting costs. Class schedules are designed around students' needs and structured to facilitate on-time completion, even for students with competing obligations.

CLOSE the GAP Structured Schedules benefit all students but help older and low-income students more because they are more likely to work more hours and older students make up the majority of part-time students.

THE BIG PICTURE

A typical class schedule that works well for someone living on campus is a nightmare scenario for working and commuting students.

Typical Class Schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8 a.m.					
9 a.m.	Commuting		Commuting		Commuting
10 a.m.	Class	Commuting	Class	Commuting	Class
11 a.m.		Class		Class	
12 p.m.	WASTED TIME	WASTED TIME	WASTED TIME	WASTED TIME	WASTED TIME
1 p.m.					
2 p.m.	Class	WASTED TIME	Class	WASTED TIME	Class
3 p.m.	Commuting		Commuting		Commuting
4 p.m.	Work & Family Obligations	Class	Work & Family Obligations	Class	Work & Family Obligations
5 p.m.		Commuting		Commuting	
6 p.m.		Work & Family Obligations		Work & Family Obligations	
7 p.m.		Work & Family Obligations		Work & Family Obligations	
8 p.m.					
9 p.m.	Study	Study	Study	Study	Study
10 p.m.					

And this schedule will change every semester!



MYTH BUSTING

Ask these questions to separate fact from fiction:

- What percentage of students start out full time and drop to part time in a future semester?
- How many years does it take your nontraditional students to graduate, on average?
- What percentage of your nontraditional students drop out before they graduate?
- How do you currently determine when you offer a particular course?
- How hard do you think it is to renegotiate child care and work schedules every four to five months?
- If you yourself went back to school and kept working in your current job, what type of schedule would work best for you?



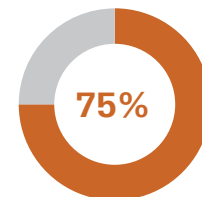
POLICY IN ACTION

In 2015, **Texas** enacted state policy requiring all 50 community college districts in the state to implement block scheduling for at least five certificate and associate degree programs in nursing, allied health, and career and technical education. By fall 2016, all colleges had implemented this change, with several institutions extending it to additional programs.

ALL 50 COMMUNITY COLLEGE DISTRICTS HAVE BLOCK SCHEDULING
for at least 5 certificate/associate degree programs

In **Tennessee**, the 27 Colleges of Applied Technology offer programs in a block from 8 a.m. to 3 p.m. Monday through Friday with mandatory attendance. These structured programs graduate 75 percent of their students, significantly outperforming the community colleges that use an a la carte approach to course scheduling.

Graduation Rate from Programs with Structured Schedules



The **University of Montana (UM) Western** is the only public college in the country to offer Experience One, an innovative program in which students participate in a structured schedule and take only one course at a time. The semester is divided into four-credit blocks with students meeting five days a week for three to four hours a day in either a morning or an afternoon session. UM Western has seen significant increases in graduation rates, and the majority of its students are enrolled with 15 credits or higher.

Majority of UM Western students enroll with **15 OR MORE CREDITS**



NEW RULES

STATE ACTION

- **Provide data** showing the percentage of students who switch from full-time to part-time enrollment.
- **Establish a policy** that institutions serving commuter or adult populations must offer **30-credit-per-year** Structured Schedules with morning, afternoon, and evening options for their highest enrollment programs.
- **Establish a policy** that institutions with a significant population of **part-time students** must also establish **Structured Schedules** that use year-round enrollment to allow part-time students to graduate on time and other schedules that lead to graduation within **150 percent** of standard program length.

INSTITUTION ACTION

- **Create Structured Schedules** built around student demand for high-enrollment programs with on-time and extended-time (150 percent) options.
- **Default students** into Structured Schedules when offered, and require those who request a customized schedule to see an adviser each term.
- **Establish a mechanism** for students to continue enrollment in a Structured Schedule despite disturbances such as course withdrawal.



Get started crafting your own policies using the detailed policy language found on the thumb drive on the inside front cover of this report and at completecollege.org.



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Block scheduling means that **instructors** have less input into when they teach. This will prove challenging for adjunct professors who have other professional obligations and may not be able to teach when needed.

Due to the logistical nature of implementing block schedules, **department heads, registrars, advisers,** and others will find them easier to implement if all necessary parties are involved from the beginning.

Departments that teach **general education** courses for students in other departments will need to teach those courses when other departments need them. A central coordinator of those logistics, such as a provost, can smooth the process.



TALKING POINTS

- To meet state goals for educational attainment, significant numbers of **adults** and other **nontraditional students** will need to go back to college for a degree or credential.
- For our adult students, **time** and **money** are in **short supply**.
- Hours spent **on campus** and **commuting** to school **require students to pay** transportation costs, secure child care, and/or forego wages.
- When class schedules **change each semester**, students need to **rearrange** work, child care, and transportation. If they cannot, they may take fewer classes or take the semester off, putting them at **greater risk** of not graduating.
- Not surprisingly, evidence shows that when schedules are **predictable and consolidated**, a lot more students **graduate**.
- If we want higher education to be **student-centered**, Structured Schedules should be offered in any institution with a mission to serve **nontraditional students**.



BE READY FOR QUESTIONS

“Aren’t these Structured Schedules less flexible?”

Current scheduling practice is **not as flexible** as it seems. Required courses are offered when **faculty** want to teach them, and students must **rearrange everything** to get to campus whenever that is.

“Will this hurt enrollment and revenue?”

Retaining students is good for the **bottom line**, and Structured Schedules retain students. Students for whom the Structured Schedule will not work can **still enroll**, but they will do so with significantly **more academic advising** if they opt out of the Structured Schedule.

“Is there a cost to implementing Structured Schedules?”

Institutions may need to hire **additional faculty** or secure **additional labs** and classrooms, but they may be able to simply use what they have more efficiently. These **investments** will generate better retention, more revenue, and better resource allocation long term.

“Why is the policy limited to nontraditional students?”

It **prioritizes** nontraditional students. In general, **younger students** with **campus housing** and on-campus jobs do not have to **juggle** their **time and money** as much as **adults balancing work, family, and school**.

“Why is the state interfering in how the institution operates?”

Academics — what content is taught — remains the complete purview of college faculty. **Structure** — when and where content is taught — is the **responsibility** of all stakeholders.

Guided Pathways to Success



CONTEXT

THE PROBLEM

Students select from a dizzying array of programs and majors, frequently with no built-in career advising. Once they pick a major, they must track down degree requirements and roam the course catalog to piece together a degree plan — despite the fact that faculty have already established the optimal sequence. To make students discover that sequence independently wastes the time of students and their advisers and leaves far too much room for error.

THE SOLUTION

Students are placed on degree maps that take the guesswork out of semester-by-semester course selection and streamline the registration process. One-on-one career advising is replaced with a structured, intentional first-semester process for students to explore their academic interest area and related careers. Advisers, with significant time freed up, track student progress on degree plans, monitor early-alert systems, and reach out to students before the students realize they are vulnerable.



Guided Pathways to Success (GPS) benefit all students but help African American students more because 60 percent of African American students are enrolled in community colleges where advisers have twice as many students as those who advise at four-year research institutions.



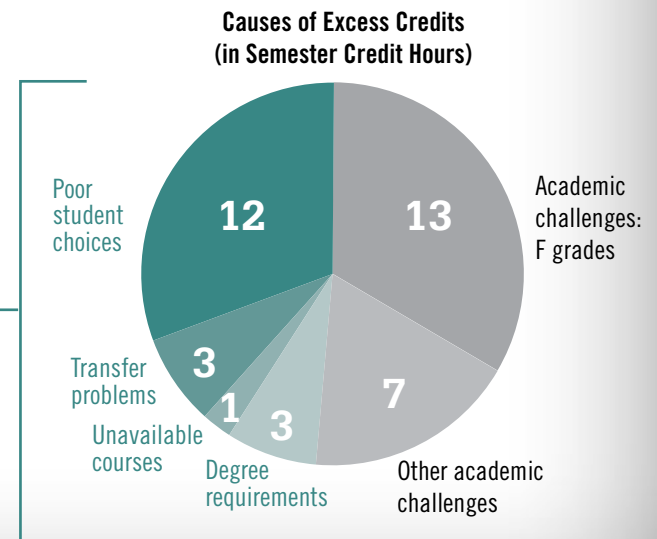
THE BIG PICTURE

Students take more credits than they need.

	NEED	TAKE
Associate	60	81
Bachelor's (non-flagship)	120	133
Bachelor's (flagship)	120	135

GPS directly addresses these problems.

Nearly half of the excess credits students accrue could be avoided with GPS in place.





MYTH BUSTING

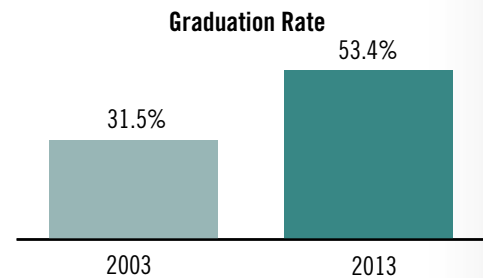
Ask these questions to separate fact from fiction:

- What is your current on-time graduation rate?
- What are the on-time graduation rates for low-income students and racial/ethnic minorities?
- How many credits, on average, do your students accumulate before they graduate?
- What is your current student to adviser ratio?
- How do students currently get advice about their choices of programs and majors?
- What percentage of your students change their major after the first year?
- How do you currently determine if a student is off track for graduation, and what do you do about it?

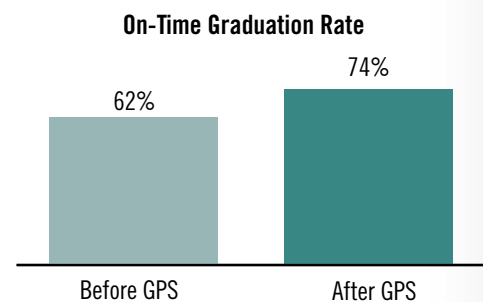


POLICY IN ACTION

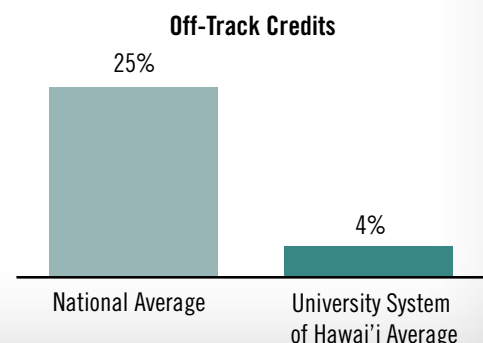
Georgia State University implemented degree maps and intrusive advising and as a result saw a 20 percentage-point increase in graduation rates. Perhaps even more notable, its achievement gap closed entirely, with African American, Hispanic, and Pell-eligible students graduating at greater rates than the overall student body.



Florida State University (FSU) combines degree maps with other strategies to increase graduation rates and close attainment gaps. In 10 years, FSU's graduation rate for all students has increased by 12 percentage points — to 74 percent. More significantly, the graduation rate for African American students has increased to 77 percent, for first-generation Pell students to 72 percent, and for Hispanic students to more than 70 percent.



The **University System of Hawai'i**, in support of its GPS efforts, developed a state-of-the-art technology system that defaults students onto their academic pathways and recalculates when they stray from that path. Preliminary results show that the system has reduced the average percentage of off-track credits to 4 percent for students at the University of Hawai'i, far below the national average of 25 percent and at the cost of zero additional advising resources.



NEW RULES



NEW RULES

STATE ACTION

- **Require institutions to provide students degree maps** and guaranteed **critical path courses**.
- **Set a mandatory tuition discount** for credit hours a student must take to graduate if those credits exceed the threshold of 75 for an associate degree or 135 for a baccalaureate degree, with certain exceptions for accreditation requirements, late transfers, late major changes, failed courses, or additional credentials.
- **Help students make informed choices** on program selection by using state data to evaluate and report career outcomes information for each academic program.

INSTITUTION ACTION

- **Require students to select a major or interest area** upon enrollment, and place students in a course first semester that explores introductory content and career options for the selected interest area.
- **Create, publicize, and customize degree maps** for each major and each student.
- **Automatically enroll students** in their mapped courses, requiring advising for any student wishing to deviate from the map.
- **Determine conditions for mid-semester and end-of-semester intrusive advising, and create an alert system** so that advisers know whom to help.



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Institutions may convey that they do not have or cannot afford the **technology** they need to implement these policies. View technology as an investment that will increase retention (and bring in tuition dollars), and look for products that have received Complete College America’s Seal of Approval.

Academic advisers may worry about the additional workload of intrusive advising. Assure them that the mapping in GPS means they will be doing intrusive advising instead of student schedule-building, not in addition to it.

Faculty may portray GPS as “limiting choice” or “prohibiting exploration.” Make it clear that a GPS structure still includes electives. Convey

that whatever cognitive value there is in students discovering their path on their own is not worth the \$150,000 cost of an extra year in college.

Those who do **policy research** will tell you that the approach other states have taken on excess credits is a tuition surcharge — something that benefits institutions and punishes students when they accumulate too many credits. Complete College America champions a tuition discount instead because it creates the proper institutional incentive: Institutions get more money when students are on the most efficient path to graduation, and they lose money if students are not.



TALKING POINTS

- **Significant percentages** of college students **take longer** than two years to earn an associate degree and four years to earn a baccalaureate degree.
- Every **additional year** of college costs a student roughly **\$150,000** in additional tuition and foregone income and retirement savings.
- Students **will not graduate** on time if they cannot **get into** the courses they need, take courses that do not count toward graduation, or **change majors** late in the game.
- Roughly half of excess credits taken result from **poor student choices, unavailable courses, transfer issues, and degree requirements** — problems that can be solved if the institutions provide **better navigation** for students.
- In this state, we should refuse to let our students incur these **life-altering costs** because we **fail** to get them and keep them on the **path to on-time completion** and a good-fit career.



BE READY FOR QUESTIONS

“Aren’t students already informed about the courses they need to take?”

Sort of, but not really. At most institutions, the information is housed in **at least two different systems**, and students have to **figure out** how they fit together. It is no wonder advisers spend most of their time helping students with their schedules.

“Doesn’t an excess credits tuition discount penalize the institution for poor student behavior?”

The policy gives students an **extra semester** beyond what should be required to graduate before the discount kicks in. It also **exempts the institution** from giving the discount if excess credits are the results of accreditation requirements, double majors, minors, double-degree programs, late transfers, late major changes, and failed courses.

“Isn’t college about exploration and discovery?”

Of course it is. GPS suggests that students **explore** but that they do so through a **structured, intentionally designed** process. Student “exploration” that results from random, haphazard, or uninformed course-taking has never been proven to get students on the right path quickly.

“If we default students onto their maps, doesn’t that restrict their choices?”

No, it **guides** their choices. The policy allows for students to register for courses off map but only after speaking to an adviser and signaling that they **understand the consequences** of that choice.

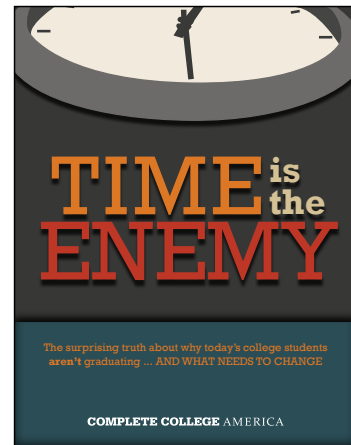
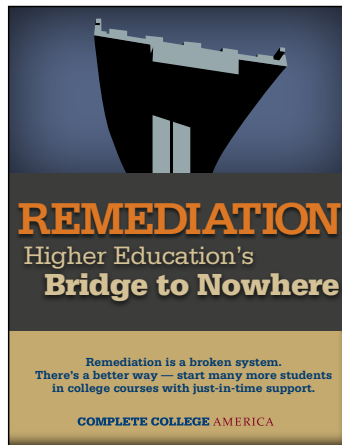
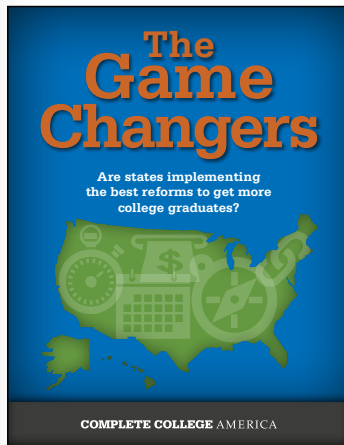
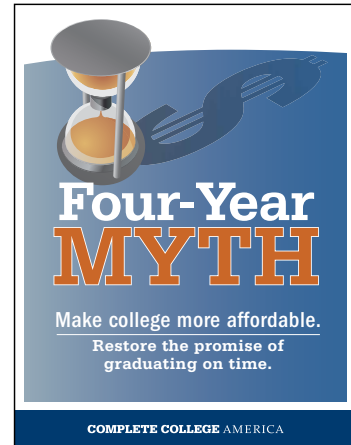
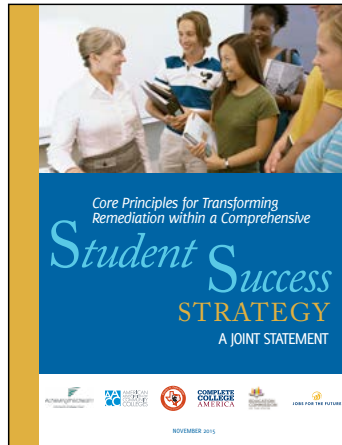
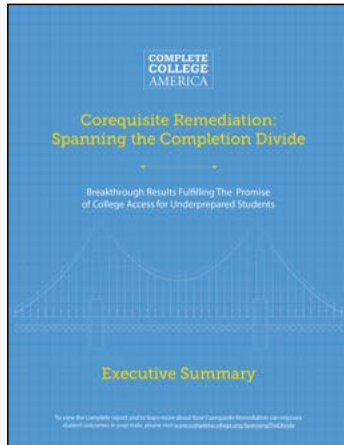
“Don’t advisers already have enough to do? Now they have to do intrusive advising too?”

Degree maps **automate scheduling**, and structured exploration replaces one-on-one career advising. This **frees up advisers’ time**, which they can then dedicate to serving students who **need them the most**.

Related Resources



Following are additional resources from Complete College America.



For a complete collection of reports, briefs, and presentations, visit completercollege.org/resources.

OUR PHILANTHROPIC PARTNERS

Barr Foundation, Bill & Melinda Gates Foundation, Carnegie Corporation of New York,
College Futures Foundation, Kresge Foundation, Lumina Foundation,
Michael & Susan Dell Foundation, and USA Funds.

ABOUT COMPLETE COLLEGE AMERICA

It's really about the states ... we're just here to help.

Established in 2009, Complete College America is a national nonprofit with a single mission: to work with states to significantly increase the number of Americans with quality career certificates or college degrees and to close attainment gaps for traditionally under-represented populations.

The need for this work is compelling. Between 1970 and 2009, undergraduate enrollment in the United States more than doubled, while the completion rate has been virtually unchanged. We've made progress in giving students from all backgrounds access to college — but we haven't finished the all-important job of helping them achieve a degree. Counting the success of all students is an essential first step. And then we must move with urgency to reinvent American higher education to meet the needs of the new majority of students on our campuses, delicately balancing the jobs they need with the education they desire.

Complete College America believes there is great reason for optimism ... and a clear path forward. With a little more support — and a lot of common sense — we can ensure that many more get the high-quality college education that will help them live productive and fulfilling lives. All Americans will share in the benefits of their success.

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