

# The **Instructional Capacity** Playbook

Realigning Resources to Meet Changing Enrollment Patterns

Academic Affairs Forum





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# **Academic Affairs Forum**

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# **Table of Contents**

Introduction
Track and Predict Changing Student Demand11
1: Curricular Interdependency
2: Predicted Course Demand
3: Multi-term Registration
4: Central Course Wait Lists
Increase Capacity in High-Demand Areas25
5: Enrollment Growth Funding
6: Faculty Line Reassignment
7: Overflow Capacity in Bottleneck Courses
Reallocate Underutilized Capacity
8: Section Consolidation
9: Small Course Consolidation39
Reduce Curricular Bottlenecks
10: Track Consolidation
11: Streamlined Prerequisite Pathways
Better Balance Faculty Workloads45
12: Departmental Teaching Dashboard
13: Faculty Activity Dashboard
14: Differentiated Instructional Roles
EAB Support in Academic Resource Allocation

### Realigning Resources to Meet Changing Enrollment Patterns

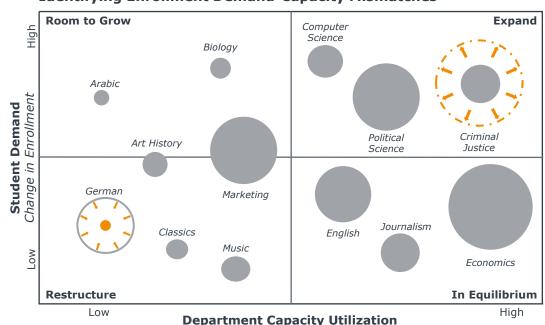
### **Changing Enrollment Patterns Create Challenges for Higher Education Institutions**

Colleges and universities both public and private are increasingly dependent on enrollment to generate essential revenue. Yet at the same time, enrollments have become significantly more volatile. Institutions are seeing greater variability in enrollments at the course, department, and college/school levels due to a range of factors:

- Demographic changes leading to declines in the number of new high school graduates in many regions
- Changing student preferences driving growth in programs perceived to be more career aligned and declines in many arts and humanities programs
- · Increased competition for students across institutional types and geographical regions
- Better support for early college and transfer leading to students coming in with significant numbers of credits
- Changing pedagogical models (online, hybrid, part time, accelerated) that allow for rapid increases in student numbers
- Students increasingly "swirling" inside and outside the university: dropping courses, changing majors, switching institutions, and leaving higher education altogether

As a result, most institutions are experiencing rapid growth in some programs or academic units, sharp declines in others, and unpredictable swings in enrollment with significant implications for capacity and financial sustainability.

### **Identifying Enrollment Demand-Capacity Mismatches**



Source: EAB Academic Performance Solutions data analysis.

Course Section Fill Rates

# Realigning Resources to Meet Changing Enrollment Patterns

# Typical Models for Allocating Instructional Capacity Premised on Sustained Annual Growth

Historically, policies and practices for setting course schedules, determining departmental budgets, and allocating faculty lines evolved in a context of steady, across-the-board growth:

- Course schedules set by rolling over the last like term and making small adjustments based on increased enrollments
- Budgets created by taking the previous year as the base and dividing incremental revenue proportionally across academic units
- · Faculty lines added as departmental enrollment grows

These approaches were broadly effective in a context of year-over-year growth, but they begin to collapse in the face of rapid increases or declines in enrollments at the course, program, or department level. Traditional resource allocation policies have few mechanisms for dealing with reduced demand. Course offerings, historical budgets, and faculty lines are treated as departmental property-- once granted, they can never be rescinded.

# **Growing Mismatches Between Student Demand and Instructional Capacity Create Tension on Many Campuses**

Uneven growth creates bottlenecks in certain parts of the university even as it leaves underutilized capacity in other areas. The growing tension between volatile enrollments and inflexible capacity manifests in a number of different ways:

### **Negative Impacts of Uneven Growth**

Faculty	Students	Institutions
<ul> <li>Larger classes</li> <li>More adjuncts</li> <li>Unequal workloads</li> <li>Rising pressure to improve output</li> <li>Unwanted competition among high- and low-growth units</li> </ul>	<ul> <li>Harder to get the right classes at the right times</li> <li>Popular majors increasingly difficult to enter</li> <li>Complex requirements and options hard to navigate</li> </ul>	<ul> <li>Unable to keep up with areas of high demand</li> <li>Rising cost per student due to underutilized capacity</li> <li>Resentment of administrators struggling to manage tight resources</li> </ul>
Faculty are working harder and fear that quality is declining	Students are paying more but struggling to graduate in their desired major	Universities are turning away students but struggling to cover rising costs

### Realigning Resources to Meet Changing Enrollment Patterns

### **Quality Metrics Traditionally Based on Maintaining Minimum Input Levels**

Incremental growth led to the development of accepted, if untested, practices designed to ensure quality standards:

- Course enrollments were capped on the assumption that adding more students reduces the quality
  of instruction
- Target student-to-faculty ratios were premised on the idea that lower ratios support higher quality instruction
- Standard faculty course loads were defined to ensure adequate time to prepare for teaching, support students, meet service obligations, and pursue research

These ratios were both resource allocation tools ("x many additional students requires y additional faculty lines") and quality control mechanisms. In fact, many were built into rankings such as *US News* and World Report, despite the fact that little pedagogical research had been done to determine optimal class sizes, course loads, or student faculty ratios. Increased enrollment volatility (and constrained funding) has made it difficult or impossible to maintain these traditional metrics for all programs, leading to concerns that quality is being abandoned in the name of efficiency.

# The Period of Sustained Enrollment Growth Led to a Proliferation of Offerings Now Defended in the Name of Quality

In addition to minimum input targets designed to protect quality, colleges and universities often came to define greater varieties of small specialized offerings as higher quality:

- Small courses
- Independent study
- · Hundreds of specialized majors
- · Minors, tracks, and specializations
- · Niche programs with small numbers of majors
- · Extensive general education requirements
- Large numbers of elective courses

While some students and faculty certainly found value in these offerings, their costs were rarely considered. Proliferation of low demand courses and programs led to underutilized capacity and higher costs. More choices and requirements also extended time to degree and generated excess credits. While canceling all small courses or eliminating all low-enrollment majors would clearly limit student choice and potentially reduce quality, understanding the capacity implications and the tradeoffs implied by proliferation is critical for optimizing quality in an environment of unpredictable enrollment change.

## Realigning Resources to Meet Changing Enrollment Patterns

### Managing to Averages Was Never a Particularly Effective Way to Preserve or Enhance Quality and Is Increasingly Impossible to Sustain

Bright-line rules to maintain quality (such as course enrollment caps or student faculty ratio targets) have a number of important limitations:

- · Based on tradition rather than evidence
- · Assume that the only way to improve or maintain quality is to add additional resources
- · Rarely used to reduce resources when enrollments decline
- Based on averages across the institution, college, or department rather than actual student or faculty experience
- · Fail to recognize differences across disciplines

Understanding and managing trade-offs requires a shift from static, averaged indicators to dynamic and granular metrics.

### **New Metrics for Understanding Instructional Capacity**

It is clear that the traditional assumptions must be updated in the current era. The chart on the following page details the untested assumptions behind institutions' traditional responses to changing enrollment patterns, and new analyses that will allow universities to be more agile in matching capacity to demand while balancing resources among academic units.

# Realigning Resources to Meet Changing Enrollment Patterns

# **New Metrics for Understanding Instructional Capacity**

Old Metric	Untested Assumption	Traditional Response	New Analysis
Student: Faculty Ratio	A lower ratio suggests higher quality; the average number of students per faculty reflects the typical student experience	Add tenure lines if enrollment increases, or cap program enrollment to maintain ratio	Student credit hours per instructor (by rank) at department level
Standard Course Load	Number of courses is a better measure of workload than the size of courses; most faculty teach the standard load	When instructors exceed standard load, add more instructors or pay them overload	Percentage of students in each class size
Standard Workload (e.g. 40:40:20 distribution of teaching, research, service)	All faculty should strive for the same balance of teaching, research, and service; all faculty work should be counted equally for promotion and tenure	Translate all other activities into course equivalencies; link merit increases to annual performance reviews	Total faculty contributions (including journal editing, presentations, student advising, etc.)
Average Class Size	Smaller classes have better learning outcomes; most students are in average-size classes	Add more sections to keep average class size small	Class size distribution
Maximum Section Size	Maximum section size is based on pedagogical necessity	Add more sections when enrollment hits maximum	Section fill rate analysis
Minimum Credits Required for Degree	Most students will complete the degree with minimum credits	Reduce number of required credits to 120	Curricular complexity
Previous Term Course Enrollment	Enrollments do not change significantly from like term to like term	Roll over course schedule from previous like term	Registration trend analysis Cross credit matrix/ major migration
Classroom Utilization (hours per week)	There aren't enough rooms for all courses	Require a percentage of courses to be scheduled outside of prime time	Room type bottlenecks (by size, technology, location)
Major/Degree Production (by program or department)	The primary purpose of every department is to produce graduates of its major	Cut funding for departments with few/ declining numbers of majors	SCH production (for majors, non-majors, gen ed courses) by course and by level; "native junior" graduation rate <sup>1</sup>

i.e. graduation rate of students who started in the major after they have reached junior status, three years, or 60 SCH. Measuring graduation rate at this point reduces the influence of general education and service courses on results.

## Realigning Resources to Meet Changing Enrollment Patterns

# Allocating instructional resources appropriately requires negotiating difficult trade-offs through a shared governance process that engages faculty and

**academic leaders.** No equation (much less an untested guideline or set of benchmarks) can determine the ideal alignment of resources with institutional mission. Managing instructional capacity is as much a political problem as a logistical challenge. Better data and strong faculty engagement can lead to more productive conversations about how to work with departments to respond to changes in student demand.

In many cases, an analysis of the data reveals the illusion of capacity constraints. Often the real problem is not an absolute scarcity of resources, it is lack of transparency around how resources are currently being utilized.

This brief describes a number of approaches for supporting those conversations:



# **Track and Predict Changing Student Demand**

- 1. Curricular Interdependency
- 2. Predicted Course Demand
- 3. Multi-term Registration
- 4. Central Course Wait Lists



# **Increase Capacity in High-Demand Areas**

- 5. Enrollment Growth Funding
- 6. Faculty Line Reassignment
- 7. Overflow Capacity for Bottleneck Courses



# **Reallocate Underutilized Capacity**

- 8. Section Consolidation
- 9. Small Course Consolidation



### **Reduce Curricular Bottlenecks**

- 10. Track Consolidation
- 11. Streamlined Prerequisite Pathways



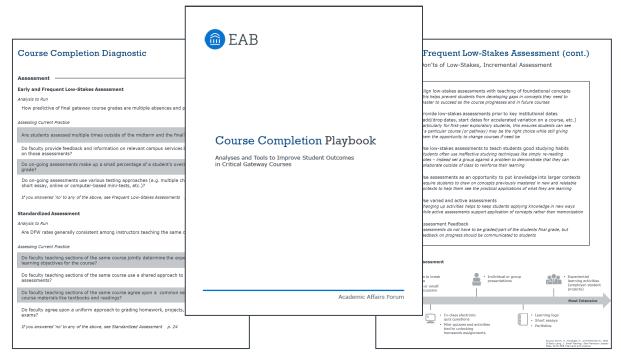
# **Better Balance Faculty Workloads**

- 12. Departmental Teaching Dashboard
- 13. Faculty Activity Dashboard
- 14. Differentiated Instructional Roles

# **Enhancing Student Learning in Large Courses**

# Insights from the Course Completion Playbook

Any effort to match instructional capacity to demand should not ignore the critical steps to ensuring student success and learning in large courses. Controlled studies of course redesign initiatives demonstrate that, contrary to common belief, changes in pedagogy can measurably improve completion rates and student learning outcomes even at larger class sizes. EAB's **Course Completion Playbook** provides diagnostic tools and resources for institutions to redesign courses and provide the right student supports, so that institutions can ensure that maximizing capacity does not come at the expense of rigor.



Search for the Course Completion Playbook by name on eab.com.

### **Steps to Addressing Course Completion Rates**









Resources

Engage Faculty

### **Tactics for Improving Course Completion Rates**









# Track and Predict Changing Student Demand



#### UNDERSTANDING THE PROBLEM

Rolling over the schedule no longer produces an accurate picture of demand in an increasingly volatile enrollment environment. In previous years, enrollment was easier to predict from year to year, allowing academic units to base the schedule on the previous year's course offerings, with minor adjustments for overfilled sections. Today, demand patterns and the changing mix of credits students bring in mean enrollments are less constant across terms and years, and adjusting capacity becomes more difficult close to course start dates.



#### **STRATEGY**

**Predict demand accurately and early to reduce mismatches between course offerings and enrollment.** Rather than adjust teaching assignments or hire adjuncts in reaction to demand mismatches, a more effective approach is to develop an accurate picture of demand before building the schedule, and then offer multiple opportunities to track changes in demand once students register. To account for student movement between majors, use historical data on how students have migrated between majors. Gather registration and wait list data early and frequently, giving units more time to reassign capacity to areas of most need.



#### **PROMISING PRACTICES**

# 1: Curricular Interdependency (p. 12)

- Analyze the number of majors vs. service enrollments
- Allows departments to separate service demand from native demand

# 2: Predicted Course Demand (p. 13)

 Using interdependency data, admissions data, and projected and current enrollment by major, it is possible to predict future enrollments in each course

# 3: Multi-term Registration (p. 14)

- Allow students to register for courses a full year in advance
- Gather registration and demand data earlier, providing more time to account for mismatches

# 4: Central Course Wait Lists (p. 20)

- To account for demand changes during the registration periods, allow an unlimited number of students to wait list themselves for each course
- Limit the number of wait lists each student may join

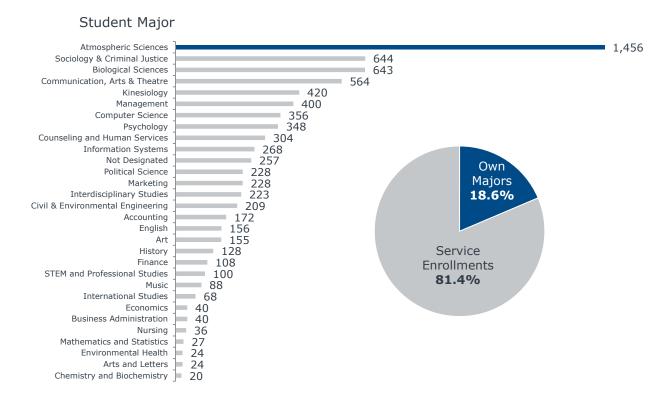
# **Curricular Interdependency**

## Measure Departmental and Course Enrollment by Student's Home Program

Today, most departments measure their own headcount but do not systematically track and measure enrollment in programs whose students enroll in service courses. Understanding the portion of service enrollments in each department (or course) allows academic leaders to measure their programs' contribution to students' success outside of their own majors. Curricular interdependency also helps departments predict demand. Enrollment changes in programs with the highest number of service enrollments are a critical predictor of course demand.

### **Department of Atmospheric Sciences**

Student Credit Hours Enrolled



In the department-level interdependency chart shown above, Atmospheric Sciences majors contribute only 19% of enrollments in Atmospheric Sciences courses. In order to understand how enrollment in the department's course offerings will change from term to term, the department chair must pay close attention to enrollment changes in Sociology, Biology, and Communication. Taken together, these departments contribute more students to Atmospheric Sciences courses than the department's own majors. The interdependency analysis helps break down information silos between departments and encourages an institution-wide perspective on enrollment changes and course demand.

# **Predicted Course Demand**

### Combine Historical Data with Enrollment Trends to Predict Course Fill Rates

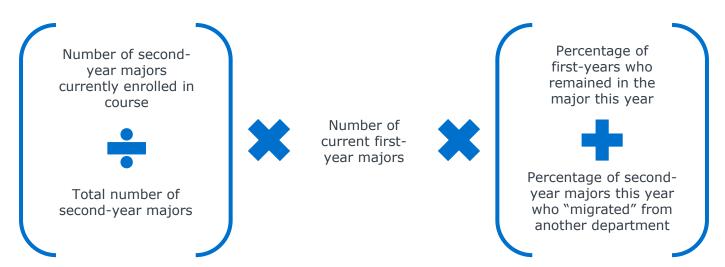
With a strong understanding of course-level capacity and curricular interdependency, academic leaders are well equipped to predict course demand and right-size instructor assignments before the schedule is set. The below analysis from the **University of Missouri** takes into account historical section demand by major and level of student and compares those patterns with enrollment projections. The analysis has three steps:

- 1. **Assess what share of students take a course by their major and level.** for example, what share of freshman math majors took Calculus 101? What share of freshman engineering majors? Aggregating this analysis over several years can improve the accuracy.
- 2. **Multiply that share by enrollment projections by major and level.** If 10% of freshman math majors take Calculus 101, and the institution is expected to have 100 freshman math majors the following year, then the demand for Calculus 101 from that major/level combination is 10.
- 3. **Aggregate these projections across all major/level combinations.** After calculating demand from freshman math majors, add in estimates from freshman engineers, sophomore math majors, etc.

### **Predicting Course Enrollment by Major**

How many seats will we need for second-year majors next year?



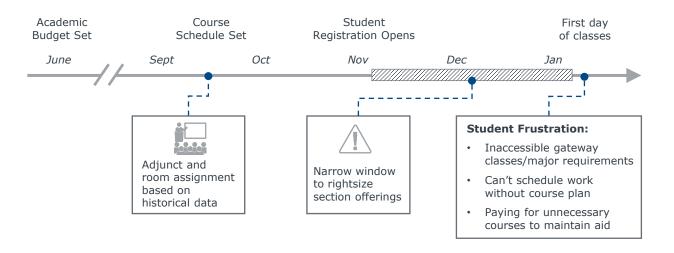


Much like the other recommended analyses in this toolkit, understanding course demand requires the integration of data from multiple sources on campus. Academic units can no longer conduct these analyses in silos. The benefit of analyzing enrollment at the college or even institutional level is clear: the above analysis was 99% accurate when performed at the University of Missouri.

### Supply-Demand Mismatches Often Require Hurried Resolutions

Even with the ability to gauge demand in advance, there will inevitably be some mismatches between student demand and course availability. Once students actually register for courses and a theoretical degree plan is converted into a tangible schedule, the effects of section selection come into play, and space and instructor availability needs become more acute. These complex concerns require significant time and effort to resolve, but the design of typical registration processes constrain the time a department has to respond to an influx of registration data, as depicted below.

### Lose-Lose: Time Constraints Impede Remedies, Disadvantage Students



At a university using the semester system, the spring term schedule is typically set in September or October. Students register in November, leaving until January to address mismatches in course supply and demand. For much of this narrow window, faculty and staff are away from campus for winter break. This results in frustrated students who are locked out of critical courses and unable to plan their personal and work schedules. Some students will select unnecessary courses just to maintain full-time status for financial aid requirements. Meanwhile, faculty, department chairs, and deans scramble to close sections and open others, with a short timeline for hiring adjuncts to fill needs, especially at institutions located in areas with low instructor availability.

# Multi-term Planning Extends Response Time to Adjust for Registration Data

To extend the response time to account for mismatches between demand analysis and capacity, **Michigan State University** moved to a multi-term registration process, which allows students to register for multiple terms at a time. Multi-term registration provides a longer-term view of student demand for courses while giving faculty more time to accommodate that demand. At Michigan State, the schedule is set in the winter, and students register for a full year of courses in March.

### MICHIGAN STATE Reaping the Advantages of a Full Year of Registration Data UNIVERSITY **Alleviating Pressure on Fall Term Capacity** Full-year offerings distribute upper-division enrollments, enhancing first-year seat availability Yield reports and preset first-year schedules reduce uncertainty over incoming class seat availability February/ Fall Classes Spring Classes March Start Start Departments set schedule **Increasing Both Speed and Precision of Response** for next fall and spring Full-year registration data enables proactive degree audit analyses that spot course availability gaps that delay graduation Full-year More time to identify and intervene with non-registered, at-risk students registration opens

Michigan State now has a year in advance to plan for spring demand, account for space and instructor needs, contact nonregistered students, run degree audit analyses, and contact seniors missing required courses. Multi-term registration also inherently reduces demand bottlenecks, because students now distribute their enrollments across two terms, leaving more seats open in fall term for incoming students. To include incoming students in their demand analysis, Michigan State also uses enrollment deposit reports by intended major to determine new student demand and to create a preset schedule for first-year students.

While the transition from single-term to multi-term registration requires a significant lift from faculty and departmental staff, it ultimately frees up time later in the year, because faculty only need to make minor tweaks rather than setting an entire term's schedule.

# Avoiding the Potential Pitfalls of Multi-term Registration

After over 20 years of experience with multi-term registration, Michigan State has learned two key lessons about student registration eligibility and academic advising. Under multi-term registration, students could remain registered for courses for which they are financially or academically ineligible after the first term. It is critical to have a policy of canceling courses for students who have missed prerequisites or who have unpaid balances. It is also critical to conduct checks for academic and financial eligibility regularly throughout the year.

### **Lessons Learned from 20 Years of Multi-term Registration**







Students enroll in spring term courses for which they are financially and academically ineligible





# Conduct periodic data quality checks to maintain accuracy

- Prerequisite checks conducted throughout term
- Unpaid balances result in automatically dropped schedules





Annual registration period removes forcing mechanism for regular advisor contact





### Mandatory appointments and riskbased caseload management

- Prevent overwhelming advisors during single registration period
- Keep track of high-risk students outside of registration period

Secondly, requiring students to register only once per year removes the forcing mechanism for students to have regular contact with their academic advisors. To ensure advisor facetime for those students most in need of support, administrators at Michigan State instituted a risk-based caseload system for advising. Advisors can view which of their advisees have urgent concerns based on grades or other indicators. They can then send outreach messages to students asking them to attend an inperson meeting. Advisor capacity permitting, mandatory advising appointments might work as an alternative at other institutions.

### Policies to Increase Student Participation and Improve Predictive Capacity

**Cleveland State University**'s experience with multi-term registration provides important implementation lessons with regard to two commonly asked questions about the practice: How can we encourage students to take advantage of the option to register for more than one term, and how do we accommodate changes that occur after a student's initial registration (such as failing or dropping a prerequisite course when registered for the post-requisite the following term)?



### **Increasing Student Adoption**



#### **Default Registration Option**

Show all available terms on main registration page to "nudge" students toward participation, and alter language to reinforce year-long planning



#### **Targeted Email Outreach**

Send monthly awareness emails throughout summer and fall to students who haven't registered for additional terms

### **Improving Predictive Capacity**



### **Post-requisite Audits**

Audit prerequisite course progress at the add/drop deadline, withdrawal deadline, and end of term to reduce artificial post-requisite demand



#### **Course Wait Lists**

Use wait lists to dynamically adjust section enrollment, justify additional sections, and forecast need for additional adjuncts

To maximize student participation, Cleveland State ensured that fall, spring, and summer terms are all clearly visible on a student's primary registration webpage (rather than hoping they will find a separate link to additional terms at the end of the process), and advisors conduct targeted outreach over the summer to students who registered only for the fall term.

Changes in registration are resolved through three sequential post-requisite audits: student registration status is checked after the add/drop deadline, after the withdrawal deadline, and at the end of each term in order to substitute any student no longer eligible for their next scheduled course with the next student on that course's wait list. The substitute student then has 24 to 48 hours to accept a spot in that course before it is offered to the next student in line.

# Multi-term Registration Policy and FAQ

### **Multi-term Registration Policy**

Starting with priority registration on February 27, 2017, degree -seeking students will now be able to register for Fall 2017, Spring 2018 and Summer 2018 simultaneously. The multi-term registration process provides you with the opportunity to:



- Plan ahead for the classes you need for the entire academic year
- Secure your schedule for Fall, Spring and Summer at the same time.
- Register Now; Pay Later tuition for future terms will not be due any earlier!

#### **Multi-term Registration Frequently Asked Questions**

#### What is multi-term registration?

Multiple term registration allows degree seeking students to register for an entire academic year at one time.

#### Do I have to register for all the terms at one time?

No, you are not required to register for all terms<sup>1</sup>. You can register for any of the open terms you choose.

# Can students register for any term or do I have to register for fall first, spring second and then summer?

Though not required, registering for the terms in order is highly recommended as it will allow you to meet any prerequisite requirements needed for a later term.

#### How can I change my class schedule in advance?

You can drop and add courses for any term until the deadlines posted in the academic calendar. You are strongly advised to consult with your academic advisor prior to making adjustments to your schedule.

#### Do I have to pay for all the terms at once?

No, the billing cycle for future terms does not change.

What happens if I drop a class that is a prerequisite for a course for which I registered for a future term? Students will be dropped from all courses for which they do not meet the pre-requisites.

### Can I place myself on a course wait list for any term?

Yes.

#### I have a hold on my account. How will this affect my ability to register for terms?

Student with holds preventing registration will be blocked from registering for any term until the hold is resolved.

#### Do I need to see my academic advisor every semester?

You are strongly encouraged to seek advising every semester<sup>2</sup>. This assures that you are still on track for your degree plan and is an opportunity to discuss your current classes.

Cleveland State has not made multi-term registration mandatory but encourages students to participate through a marketing campaign.

Note: Institutions considering multi-term registration should also consider a proactive monitoring and outreach policy for academic advisors, to ensure that students meet with academic advisors outside of registration periods.

# Example Academic Calendar with Multi-term Registration

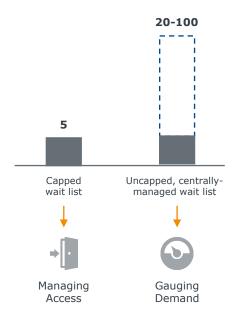
In a multi-term registration system, students can still update their course enrollments each term, and institutions should perform course eligibility checks multiple times throughout the year. The below calendar demonstrates how the academic year might look when students are able to register for multiple terms at a time.

Date	Event or Deadline
May 1-12, 2017	Registration opens for Fall 2017 and Spring 2018
August 21-25, 2017	Student course fees due for Fall 2017
August 21-25, 2017	Prerequisite checks conducted
August 28-September 1, 2017	Fall 2017 courses cancelled for ineligibility (Academic advisors will reach out to affected students)
August 28-September 1, 2017	First-year student registration and course assignments
September 5-December 18, 2017	Fall Term 2017
December 4-15, 2017	Registration reopens for Spring 2018 course adjustments
January 8-12, 2018	Student course fees due for Spring 2018
January 8-12, 2018	Prerequisite checks conducted
January 15-19, 2018	Spring 2018 courses cancelled for ineligibility (Academic advisors will reach out to affected students)
January 22-May 18, 2018	Spring Term 2018
April 30-May 11, 2018	Registration opens for Fall 2018 and Spring 2019

# Manage Wait Lists Centrally and Do Not Limit Wait List Size

Most institutions allow students to place themselves on a wait list for full courses, but these wait lists are typically managed by individual instructors and are limited to a handful of students. Uncapping and centralizing wait lists allows institutions to size excess demand for course additions once the registration period has begun. Automating the wait list through existing registration systems frees up instructor time for curriculum planning and other activities. Typical registration systems allow central administrators to manage course wait lists and set wait list size limits, including setting no limit or setting a limit well above the registration capacity. (For example, if uncapped wait lists are not an option, administrators could set wait list size to 200 students or more.) Viewing wait lists centrally ensures that administrators can easily identify capacity-constrained courses and those where demand is well below the registration capacity.

# Getting a True Picture of Student Demand



# Preventing Students from Gaming the System



No wait-listing for multiple sections of the same course



Include wait-listed courses in credit-hour maximum



The most common faculty concern around uncapped wait lists is that some students will use wait lists to optimize their schedules based on preference rather than need—not just gaining entry to required courses, but repeatedly altering their registration in an attempt to secure popular course times and instructors. Solutions include barring students from wait-listing themselves for more than one section of a course, or including wait-listed courses in the maximum number of credit hours allowed (usually 18-19). Some institutions even charge students a fee if they drop a large number of courses during the registration period. While a powerful incentive, this policy may unintentionally harm students who are struggling financially, and institutions should consider it only as a last resort. Financial registration holds are a common barrier to students that can delay graduation if not paired with proactive outreach and financial counseling and support.

## Priority Registration and Section Expansion Process Map



#### Missed Milestones

Students who have already missed a course designated as a "milestone" in their academic program are the most important population to target for priority registration.



# Give Priority Registration

Before spring registration period



### **Super-Seniors**

Students who have already completed over 120 credit-hours (or four years of instruction) are an ideal target for seat cap overrides to ensure quick graduation.



#### **Re-enrolled Students**

Re-enrolled students who did not register during the scheduled period often need seat cap overrides in order to be placed in required courses they have missed.



Override Seat Cap



After spring registration period



#### **Transfer Students**

Transfer students starting in the fall can register early through an online orientation module to minimize seat competition with returning students.



**Provide Pre-term Registration Option** 

Before fall registration period



#### **Over-Filled Wait List**

When wait list size reaches minimum section size, add a new section of the course, taught by a faculty member whose scheduled class did not meet the minimum.





**Open Additional Course Section** 

After fall registration period

# Student-Facing Wait List Policy



#### **Registration Wait List Policy**

Wait lists are a new feature that is available for classes in CampusNet. If a course is full, you can add yourself to the wait list, and if seats open up in that course, you will be sent an email notifying you of your opportunity to enroll.

When you add yourself to the wait list, you will be given a position number. The lower your position, the higher your priority to enroll in the course (e.g. position 1 means you are 1st in priority, position 6 means you are 6th in priority)<sup>1</sup>.

If you are notified that a space has opened in the course you must enroll in the course quickly (typically within 24 hours) or you will be dropped from the wait list.

In order for you to take advantage of this opportunity, the following policies have been implemented:

- It is the responsibility of the student to check the status of the wait list and monitor email to determine if a wait list opportunity has been granted. Students who fail to monitor this status and miss an enrollment opportunity will be dropped from the wait list.
- Any degree seeking student eligible to enroll in a course that has reached its authorized capacity may add themselves to that course's wait list. A student is wait listed in the order in which he/she attempts to register for the course.
- A student on the wait list is not officially enrolled in that course and is not eligible to receive a grade in that course.
- Being on a wait list does not guarantee registration in the class or that a new section will be made available for the same time frame or instructor.
- If a student no longer wishes to remain on the wait list, they should drop their wait list status.
- Tuition/fee charges for wait listed classes will not be included in your account until you are actually registered for the class.
- Departments have the right to increase course capacity to allow specific students to enroll in classes. This will not affect the wait list positions.

## Wait List Frequently Asked Questions for Faculty/Staff



#### What is a registration wait list?

A registration wait list is an electronic list of students who are waiting to register for a filled course. Students may sign up on a wait list when they attempt to register for a section that has reached its capacity. The first student on the Registration wait list is notified via email when a space becomes available. This student then has a defined period of time, typically 24 hours, to register for the section. If the student does not register for the section within the specified timeframe, they will be dropped from the registration wait list for that section and the next student on the list will be notified.

#### What does the department or the instructor need to do about the registration wait list?

Departments and instructors don't *need* to do anything with the registration wait list. It is handled electronically. Departments may *choose* to manage their wait lists. If they want this ability:

- The wait list managers are required to attend training provided by the Registrar's Office.
- They must publish their policy for managing wait lists on their departmental website so faculty and students may review them at any time. The Registrar's Office also publishes a list of links to departmental wait list policies so that students can find the policies in one location.

# May students sign up for the wait list for a course for which they do not meet the prerequisite, section restrictions, etc.?

No, students must meet all prerequisites for a course before they sign up for the wait list. They must also meet all course restrictions attached to the section before being able to add themselves to a wait list.

### How does a student sign up for a registration wait list for a section?

A student may sign up for a registration wait list at the time they attempt to register for a section that is full.

#### Where can I see how many students are wait listed for courses?

- a) The Enrollment Status Report includes a count of how many students are wait listed for each course. The report includes options to print courses with wait list registration or those that are wait list eligible. A download is also created.
- b) The waitlisted Students Report, has options to report on wait listed students. Criteria allows reporting by College, Department, Subject, or Course.

### When a seat is available, is the next student on the list automatically registered for the class?

Students are not automatically registered for a class. They are notified via their university email account that a seat is available. Students are given a window from the time of notification to register for the class.

## Wait List Frequently Asked Questions for Faculty/Staff (cont.)

#### May a student sign up for more than one Registration wait list?

Students' registered classes and wait listed classes cannot add up to more than 18 credit hours, i.e. the credit hour maximum allowed for one term.

If a student registers for one section of a class and he/she is on the Registration wait list for other sections, will he/she be automatically dropped from the Registration wait list of the other sections?

No, students must drop themselves to be removed from any registration wait list.

The student received an email informing him/her that a space was available in a section and he/she could register. However, the student did not read it in time to register before the deadline. Now what?

Students are responsible for routinely checking their university email. Students who miss the deadline must re-add themselves to the wait list if they still wish to register for the course.

# May students still be on a Registration wait list if they have failed the in-progress prerequisite the prior term?

Once a student has signed up on a registration wait list, they are not dropped from it unless they drop themselves. However, if they are notified that a seat is available in a section for which they have failed their in-progress prerequisite, they will receive a Prerequisite Not Met registration error and will not be able to register for the section.

# Will students be able to register for one component of a multi-component course and be on the wait list for other components?

No, students must register for all components (lecture and lab and/or discussion) of multi-component courses. They may sign up on the wait list for a preferred section of a lab/discussion and 'exchange' it (drop the one they are registered in and add the one they want at the same time) if a space becomes available but they must register for all components initially.

#### Will students be able to wait list for a section that causes a time conflict on their schedule?

Yes, students will be able to sign up for a wait list that will cause a time conflict if they have the opportunity to register for the section. They will not be able to register for this section without resolving the time conflict. This gives students flexibility in creating a schedule.

# May a student sign up on a wait list for a single section multiple times to increase their chances of getting in the class?

No, students may only be signed up one time per section. If they are dropped from that wait list or drop themselves from the wait list, they may sign up again.

#### May a student sign up for a wait list if they have a registration hold?

No, a registration hold will prevent the student from both registering for a class and signing up for a wait list.

# Increase Capacity in High-Demand Areas



#### **UNDERSTANDING THE PROBLEM**

**Departmental resources have not kept up with enrollment increases in high-demand programs.** In programs with high and growing student demand, faculty are often overloaded and unit leaders must hire adjuncts to teach courses. Students are unable to register for required courses. Often, demand is driven by general education and service enrollments, which disadvantages service departments in the traditional headcount-based model of faculty line allocation.



#### **STRATEGY**

Reassign resources to areas of greatest demand where possible, and create overflow capacity where constraints persist. To ensure that capacity paces with demand in fast-growing departments, central administration should proactively direct funding not just toward programs with increasing enrollment but also the departments that provide service courses to their students. Then, once resources have been exhausted, programs should look to off-cycle options for course scheduling to ensure that student demand is met at the individual course level. Ideally, central incentives can be provided to departments that do so.



#### **PROMISING PRACTICES**

# 5: Enrollment Growth Funding (p. 26)

- Assign funding and faculty lines to units based on course-level enrollment
- Enrollment trend taken together with curricular interdependency calculation drives resource allocation
- Service units gain resources to accommodate growth in courses

### 6: Faculty Line Reassignment (p. 27)

- After faculty retirement, reallocate portion of salary not used for new hire to a central strategic fund
- Enrollment drives full faculty line allocation while strategic fund expands research and service capacity in low-enrollment or low-growth units

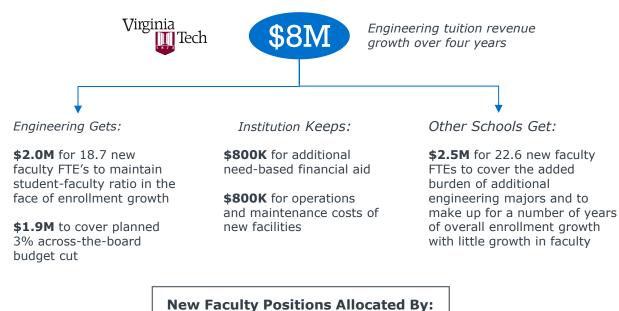
# 7: Overflow Capacity for Bottleneck Courses (p. 29)

- Create capacity for highdemand courses during summer, winter sessions; online; and in accelerated, late-start format
- Provides more flexibility for faculty and students and can be a revenue generator for academic units

# **Enrollment Growth Funding**

### In Times of Growth, Make Central Investments in Quality

Tuition revenue is a critical lever in any budget model. The Virginia Polytechnic Institute and State University (Virginia Tech) planned for rapid enrollment growth in its College of Engineering, leading to an increase in tuition revenue in an otherwise lean time (Virginia Tech was planning for a 3% across-the-board budget cut). Rather than the traditional model of using this revenue solely for Engineering's priorities or adding it all to a central fund, Virginia Tech allocated funds based on the wide-ranging impacts of growth. Approximately half of the planned \$8 million in revenue from new enrollments in Engineering was returned to Engineering for faculty lines and other strategic funding. Because more enrollments require increased capacity in campus facilities and increased financial aid, another \$1.6 million was held centrally and allocated to these items.



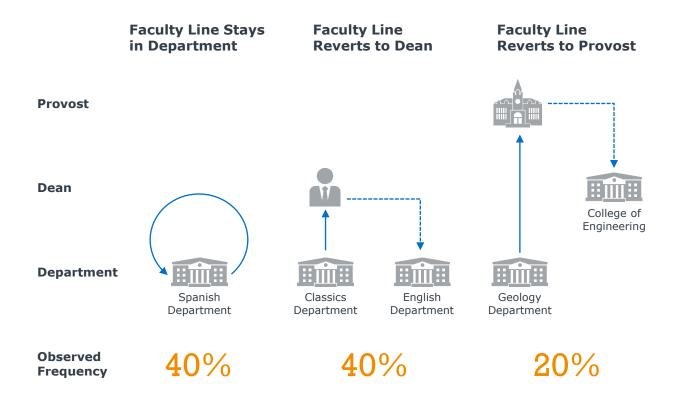
- · Credits taught to engineering majors
- · Total growth in weighted SCH
- Total increase in majors

Then, the remaining \$2.5 million was allocated to schools that provide service courses to engineering students, proportional to growth in SCH provided to engineering majors. For example, approximately 50% of credit hours taught to engineering majors are in the College of Engineering, while another 25% are provided by the College of Science. After adopting the enrollment growth funding model, Virginia Tech's College of Engineering used new tuition revenue to add approximately 18 faculty FTEs. The College of Science added nine FTEs. In other words, growth in faculty lines was proportionate to growth in course-level enrollments, so that increased demand in Engineering could not negatively impact capacity and student-faculty ratios in other colleges and schools.

# **Faculty Line Reassignment**

## Over Half of Institutions Reassign Vacant Lines Cross-Departmentally

Faculty line recapture and reallocation is probably one of the most important ways of reallocating resources in response to changing enrollment. When faculty lines open due to a faculty member leaving or retiring, institutions have an opportunity to reassess whether the line is needed in the current department given enrollment shifts that occurred during the faculty member's time in seat or changing research priorities. Theoretically, the most strategic way to reallocate lines would be to revert all vacant lines to the provost; however, limited provost insight into department-level trends and perceived competition for lines make this a less-popular strategy.

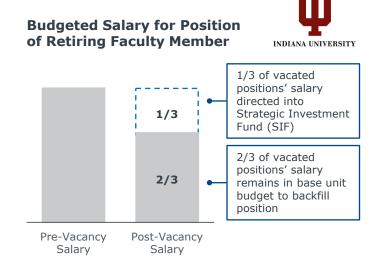


Based on EAB interviews with member institutions, it is rare for faculty lines to revert to the central administration. Nearly half of institutions, however, revert faculty lines to deans, who often have the most immediate window into enrollment changes in the units they oversee. About 40% of institutions keep faculty lines in the department, about 40% distribute the line to the dean, and the remaining 20% of institutions allocate faculty lines to the provost.

# **Faculty Line Reassignment**

### One-Third of Retirees' Salaries Directed into Central Fund in Perpetuity

**Indiana University** takes a more balanced approach to reallocating vacancy savings. In 2013, they offered an Early Retirement Incentive Plan (ERIP) to faculty and staff. For each retirement, two-thirds of the previous salary reverts to the dean to backfill the role or reallocate to a different department within the college. The remaining one-third is directed into the central Strategic Investment Fund where it can be better aligned with enrollment needs. Longer-tenured, higher-paid faculty who opt for retirement are most often backfilled with someone less experienced; Indiana simply codifies this common practice.



### Pre-ERIP<sup>1</sup> Department Budget

Department of Sociology	
Tenured Professor	\$120,000
Dedicated to SIF	\$0

### **Post-ERIP Department Budget**

Department of Sociology			
Tenure-Track Professor	\$80,000		
Dedicated to SIF	\$40,000		

"I come from the corporate world, where savings means savings. But that's not how higher education traditionally works—savings means reallocation."

MaryFrances McCourt, Senior Vice President and Chief Financial Officer Indiana University

Rather than fully reallocating lines to the department or reverting it to the provost, just two-thirds of each retiring faculty member's pre-vacancy salary is reallocated as a permanent line item in the unit's budget. To ensure every college has the flexibility it needs, the one-third reallocation is not enforced at the individual position level, but instead as an overall target for the dean. An illustrative example is shown above. For research and prestige, the dean may choose to backfill one faculty position with a well-known, higher-paid professor. Conversely, he or she may choose to not backfill one position at all. Deans can allocate salary dollars from vacant positions as they see fit, so long as the new salary total is two-thirds or less of the original salary total.

# Schedule High-Demand Courses Off-Cycle and/or Online

While high-demand courses during the standard academic term may lack enough capacity to meet demand, courses outside of the traditional academic year are typically scheduled without central oversight and are often under-filled. The intersession between holiday break and spring term is often unused altogether or treated as an optional enrichment opportunity. Faculty and administrators often assume that online courses are a way to recruit distance learners, but perhaps counterintuitively, most students enrolled in online courses live on or near the offering campus. It is typically sustainable to offer a one-time stipend to faculty who work with instructional designers to move a course online.<sup>1</sup>

### Four "Hidden" Sources of Overflow Capacity

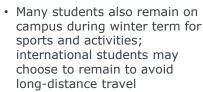


#### **Summer Term**

- Many students are already on campus during the summer term (e.g. athletes)
- Summer courses also appeal to transfer students, who may be missing requirements and wish to become familiar with the campus

#### **Intersession**









#### Online

- Accommodate student demand while keeping per-student costs low
- Create scheduling flexibility, especially asynchronous and self-paced sections
- Opportunity to enroll distance learners, study abroad, co-op students

#### Accelerated Late-Start

- May be offered in person or online
- Often useful to target students who withdrew from a full load
- Shorter courses create more time for other faculty activity (research, travel, etc.)



Many universities are experimenting with shorter (often seven-week) course offerings that meet course demand from students who withdraw early in the term, are unable to register for a preferred or required course, desire enrichment, or missed a requirement in an earlier term (often the case for transfer students).

To ensure enrollment and promote student success, universities can market summer, winter, accelerated, and online offerings directly to students who are required to take the offered courses. Students who have not met the full-time requirement or those who are missing required courses in their degree plan are especially critical populations to target for these courses.

# Provost Grant Incentivizes Faculty for High-Demand Offerings

To incentivize faculty to provide summer courses with significant student demand, the provost and summer session office at **Purdue University** chose to move to a responsibility center management (RCM)-inspired funding model for summer courses only—with a failsafe to cover high-demand courses that do not break even. To determine which courses the provost's office will help fund, summer session office staff identify a list of high-impact summer courses through quantitative analysis of course fill rates and DFW rates, supported by qualitative feedback from academic advising staff.



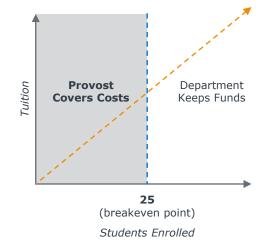
#### Clear Time-to-Graduation Criteria

### A Risk-Free Proposition to Units



### **Summer Course Funding Criteria**

- Bottleneck (85-100% fill rate)
- · Gateway course
- · High DFW rate
- · Validated by advisors



Then, if a designated course enrolls fewer than 25 students (the estimated breakeven point based on average faculty pay at Purdue), the provost will cover the cost of instruction under the "Provost's Guarantee" incentive program.

If enrollment for a Provost's Guarantee course surpasses the breakeven point, academic units retain any additional revenue as discretionary funds in the summer RCM model. This additional layer to the guarantee encourages academic units and instructors to help promote summer courses to students. Demonstrating the power of this incentive, 56% of Purdue's 300+ summer courses were drawn from the list of Provost's Guarantee courses in the first year of the program. Notably, only 5% of guaranteed courses actually required payout by the provost's office, highlighting the accuracy of Purdue's course screening process in identifying demand.

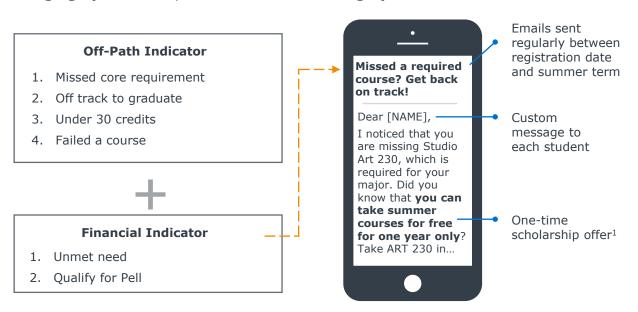
### Segmented, Personalized Outreach to Students with Off-Path Indicators

To help departments meet and exceed the enrollment breakeven point, Purdue also conducts a targeted marketing campaign to ensure that students who need the courses most are made aware of relevant opportunities in summer. Purdue identifies key groups of students who could benefit from summer enrollment, such as students who have accumulated fewer than 30 credits over the past academic year, failed a course, or missed a core requirement. Each of these students gets an email tailored to their circumstance and identifying the course that suits their needs.



#### **Triaging by Academic, Financial Need**

### **Highly Personalized Outreach**



The messaging is also tailored based on financial need. Purdue employs one-time scholarships available to first-time summer enrollees that enable summer enrollment in conjunction with an oncampus internship or research experience. Purdue also offers need-based summer aid. For instance, students who are on need-based state scholarships, but are off-track to accumulate 30 credits by the end of the academic year (required for aid renewal in Indiana), are eligible for summer aid that covers tuition and fees, room and board, and books. Depending on the capacity of an institution's financial aid budget, strategically awarding financial aid could improve student recruitment for summer enrollment in both the short- and long-term. Furthermore, research at the Virginia Polytechnic Institute and State University (Virginia Tech) indicates that students who enroll in summer term once are more likely to enroll again. By enticing enrollment with a single scholarship, Purdue likely motivates recipients to enroll in future summer terms.

# Incentives for High-Demand Intersession Course Offerings

The **University of Maine (UMaine)** saw a similar opportunity in the intersession period between fall and spring terms. Like Purdue, UMaine screened course offerings based on two criteria: historical barriers to student progression (general education bottlenecks, highly sequenced courses, and major requirements), and courses amenable to compression into a fully-online, 5-days-per-week, 3-week format. Faculty who teach these courses are then offered overload pay as well as a \$500 grant to work with instructional designers to develop accelerated courses.

### **Designing a Robust Winter Session**

Degree-Advancing Impact

· General education bottlenecks

· Sequenced courses

· Major requirements

Format

100% online

· 3-week duration

· 5 days per week



- Receive extra pay for course overload
- One-time \$500 bonus to work with Instructional Design



### **Making It Financial Aid-Friendly**



Billing Overlap

- Winter Session billed as part of spring term
- Allows students to apply spring aid to winter credits

To address potential student affordability and access issues that might impact student demand for intersesssion courses, UMaine administrators moved the winter session dates later, so that it could be billed as part of the spring term. Students can now pay for winter session as part of their regular spring term tuition. The change to billing is exceptionally critical for students using financial aid, as federal and state aid<sup>1</sup> frequently does not cover intersession courses.

### UMaine's Three-Week Pilot Sees Exceptional Academic Success

UMaine piloted its restructured winter session in January 2016. As planned, faculty offered a total of 20 three-credit courses, mainly major requirements, sequenced courses, and general education bottlenecks. Many of these courses had already been adapted into a compressed and/or online format for summer session, so were good candidates for further acceleration.

# A Growing Catalog of Catch-Up Options...



20

3 credit hour courses available

#### Major Requirements & Sequenced Courses

- · Intro to Child Development 201
- Principles of Microeconomics 120
- Intro to Creative Writing 205
- · Intro to Food and Nutrition 101
- · Intro to Native American Studies 101
- · American Government 100
- General Psychology 100

#### General Education Bottlenecks

- Intro to Astronomy 109
- Human Sexuality 351
- · Intro to Mass Communication 100
- · Maine and the Sea 211
- · Intro to Maine Studies 101
- · The Art of Listening to Music 101
- Fundamentals of Music 101
- Intro to Philosophy 102

# ...Keeps Students on Track to Four-Year Graduation

#### Credit Accumulation on the Rise

≈650

-

+4%

Students taking 15 CH (spring 2015 vs. 2016)

+2,000
Total credit hours

accumulated

Enrolled students





No decrease in spring term credit accumulation

### **Participants Excel Academically**

81%

>

66%

Winter students attained an A/B grade

A/B grades for fall term course equivalent

Early results from the pilot indicate that winter session is having the intended impact on graduation. UMaine saw 650 students enroll in winter session, which led to a four percentage point increase in the number of students taking 15 credits in spring 2016 vs. spring 2015. Reduced credit attempts during the regular term are one of the main concerns with building out a robust alternative term; however, UMaine's winter session resulted in 2000 additional credit hours accumulated, with no decrease in spring term accumulation. Given the success of the intersession pilot, UMaine is looking to scale the benefits to more students by easing bottlenecks in upper-division courses. By adding availability in winter, UMaine can meet excess demand without compromising the smaller class sizes typically associated with upper-level courses.

### Accelerated Terms Build Flexibility into Busy Faculty Schedules

To accommodate accelerated courses, **Temple University** built seven-week sessions within its traditional fall and spring academic terms. "Parts-of-term" A and B are each half the length of a traditional term. As part of Temple's "Fly in 4" campaign—a comprehensive, campus-wide graduation guarantee—this mini-term initiative works in conjunction with robust summer session programming to provide multiple alternatives for degree progression and support students in reaching the 30 credit completion benchmark required by the graduation guarantee each year.

### Temple University Builds "Parts-of-Term" to Accommodate Accelerated Courses





# For Faculty, More Flexible Options for Course Offerings and Workload



Ability to offer popular courses more frequently



Flexibility to test 1-2 credit courses in new parts-of-term



Fast-track fulfilled teaching obligation to allow travel/leave<sup>1</sup>

### Existing Accelerated Courses a Natural Starting Point



Dr. Jodi Levine Laufgraben Vice Provost, Academic Affairs Assessment & IR

Both students and faculty benefit from the added flexibility in the academic calendar. Temple faculty can offer high-demand courses more frequently and have the flexibility to test new courses in accelerated or nontraditional formats. A study on accelerated courses at Western Kentucky University cites an additional benefit: faculty can take a seven-week "mini-sabbatical" during the part-of-term when they are not offering an accelerated course.

Temple has asked faculty who already offer accelerated courses to be the first to experiment with the new schedule. By starting with these instructors before rolling out part-of-term options for high-demand courses, Temple ensures that faculty new to the format will have experienced mentors once they begin transitioning their courses to parts-of-term.

eab.com

77

## **Overflow Capacity for Bottleneck Courses**

## Aligning Financial Aid Policy with the New Academic Calendar

Parts-of-term are not without operational challenges, as many university systems and processes are built around the traditional academic calendar. For students, the most consequential of these challenges is establishing financial aid eligibility. To proactively address this concern, Temple University systematized financial aid disbursement and refunds to align with the new complexity parts-of-term added to the academic calendar.

### Working Out Kinks in Financial Aid1



Disburse aid based on initial credit load, not projected full-time enrollment

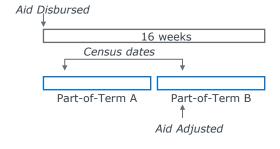


A grace period between census dates allows students dipping below 12 SCH to restore full load before aid adjustments



Recover unused aid overages from students dropping below initial credit load after 2nd accelerated term drop/add date

#### The New Aid Adjustment Cycle





## Accelerated Pathways: Beyond "All or Nothing" Without the Added Cost

When a student needs to withdraw from a course, having options in that second half of term allows them to stay on track to four-year graduation without any additional cost or debt like if they were to take a summer course."

Dr. Jodi Levine Laufgraben Vice Provost, Academic Affairs Assessment & IR

At the beginning of the term, Temple disburses student aid based on a student's current enrollment, not projected enrollment (i.e., the financial aid office does not assume a student will take a part-of-term B course if a student is enrolled in 12 credits). Temple's aid office has determined that it is better to adjust aid retroactively rather than provide more upfront funding and subsequently require some students to repay unused aid. Likewise, because of the two-part term structure, Temple does not readjust aid immediately when student drops a course in the first part-of-term; they give the student a chance to sign up for a part-of-term B course. If a student does reduce their credit load from their initial enrollment, Temple waits until the final census after part-of-term B to ask the student to return their unused aid dollars.

For an example academic and financial calendar with parts-of-term, see the following page.

For full-time students. Full-time indicates a +12 credit hour load.

# **Overflow Capacity for Bottleneck Courses**

## Example Academic Calendar with Late-Start Courses



Temple University – Fall Term 2015 Acade	emic Calendar		
Saturday, August 1 - Sunday, August 23	Early Term Start Courses		
Monday, August 24	Full Term 16-week Courses and 7-week Courses (7A) begin		
Monday, August 31	Last day to add or drop a 7-week (7A) course		
Friday, September 4	Last day to add or drop a Full Term 16-week course		
Monday, September 7	Labor Day (no classes held)		
Friday, September 18	Last day to withdraw from a 7-week (7A) course		
Monday, September 28	Undergraduate midterm progress ratings begin		
Monday, October 12	7-week Courses (7A) end Undergraduate midterm progress ratings end		
Tuesday, October 13	7-week Courses (7B) begin		
Monday, October 19	Last day to add or drop a 7-week (7B) course		
Tuesday, October 20	Last day to withdraw from a Full Term 16-week course		
Wednesday, October 21	Final grading for Full Term 16-week Courses begins		
Wednesday, October 28	Priority registration for Spring 2016 begins		
Monday, November 9	Last day to withdraw from a 7-week (7B) course		
Monday, November 23 - Wednesday, November 25	Fall Break (no classes held)		
Thursday, November 26 - Sunday, November 29	Thanksgiving Holiday (no classes held)		
Monday, December 7	Full Term 16-week Courses and 7-week Courses (7B) end		
Tuesday, December 8 - Wednesday, December 9	Study Days		
Thursday, December 10 - Wednesday, December 16	Final Exams		
Thursday, December 17	Diploma Date		
Friday, December 18 at 11:59PM (ET)	Final grading for Full Term 16-week Courses ends		

# Reallocate Underutilized Capacity



#### UNDERSTANDING THE PROBLEM

A proliferation of small and under-filled courses increases teaching demands on faculty without a proportional increase in SCH production. Many institutions have sought to reduce the breadth of curricular offerings by setting a strict enrollment minimum. This approach overlooks the impact on students, especially when there is a pedagogical necessity for small courses. However, too many small courses put pressure on academic leaders to hire adjuncts to meet capacity needs in higher-demand courses.



#### **STRATEGY**

**Consolidate small and underutilized course sections while preserving student access to instruction.** Ultimately, many under-filled courses have capacity across sections or across similar courses to reduce the total number of section offerings without locking students out. While any approach to section consolidation must be a qualitative decision made by chairs in consultation with faculty, a comprehensive analysis of each academic unit's offerings can identify potential areas of consideration. Even consolidating a small number of courses allows departments to redirect faculty time and financial resources to research and other priorities.



### **PROMISING PRACTICES**

## 8: Section Consolidation (p. 38)

- Analyze total enrollments across all sections of each course to determine whether fewer sections could accommodate all demand
- Allows institutions to reduce overload and adjunct hires, or to reallocate more time to other faculty priorities

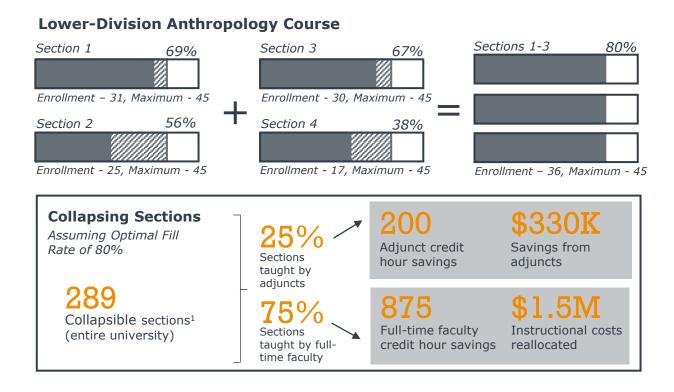
### 9: Small Course Consolidation (p. 39)

- Target very small courses such as independent study, research, or internships for consolidation
- Enrolling multiple students per section increases opportunities for peer interaction and discussion while maximizing instructional capacity

## Section Consolidation

## Significant Gains from Combining Sections Within a Single Course

The below example shows how four sections of a lower-division anthropology course with fill rates ranging from 38% to 69% could be consolidated resulting in three sections with an 80% fill rate. Not all under-filled sections should be collapsed or consolidated (some are scheduled to accommodate students taking co-requisites scheduled at the same time as the other sections of the course, for example). However, institutions that have gone through the process indicate that the savings from even a small number of consolidations still merit the effort.



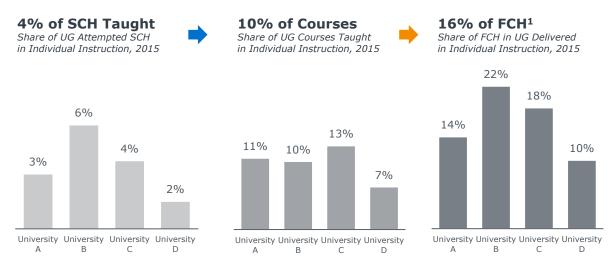
The above calculation shows the theoretical cost savings possible if an institution collapses all of its "superfluous" sections (i.e., those that can be consolidated without reducing the overall course enrollment). Adjuncts taught approximately 200 faculty credit hours' worth of effort, meaning that the institution could realize about \$330K in labor savings from not re-hiring those instructors. For the remaining sections taught by faculty, rather than direct cost savings, the \$1.5 million number listed above represents the instructional costs the institution was able to reallocate to other priorities. While again, few institutions would find reason to collapse all under-filled sections, these numbers demonstrate the potential value of such an effort.

## **Small Course Consolidation**

## Independent Studies Are 'Bigger' Than They Look

One area where many institutions have identified opportunities to increase capacity is in very small courses, particularly those designated as independent study. Independent study constitutes about one-tenth of the total courses taught at the average institution, but they have a significant impact on faculty workload. At four public institutions studied by EAB, up to twice as large a proportion of faculty instructional time was spent on these courses. As the research and service demands on faculty increase, the current state may become unsustainable.

### Case Study: Independent Studies at Four Public Institutions



### **How Can We Balance Independent Study Investments?**

Members point us toward two potential solutions: combining very similar independent studies into one course, and removing some small courses to reduce complexity.

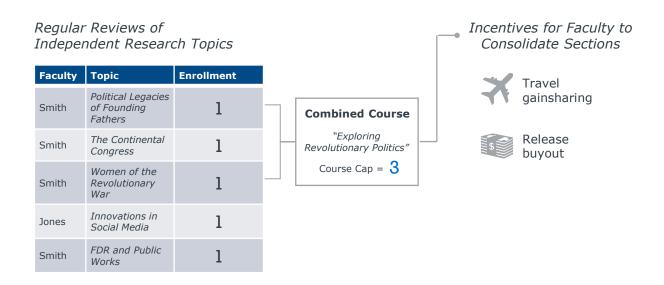
With independent study, the pedagogical reasons for keeping courses very small are clear. Independent studies require highly customized student work plans and significant one-on-one interaction between students and faculty. However, institutions have been able to reallocate some capacity and reduce curricular complexity by strategically consolidating a small number of these courses (as shown in the example on the following page).

## **Small Course Consolidation**

### Deans Incentivize Faculty to Modify Independent Studies into Group Courses

The below example represents how an institution could consolidate independent study courses into small group courses. Institutions should regularly review independent research topics to identify topics that are closely aligned. By combining the three courses below related to American Revolutionary politics, the institution encourages students working on related topics to collaborate and participate in the types of discussions that enhance learning, while simultaneously reducing Professor Smith's course load from four sections to two.

### **Routinizing Independent Study Reviews**



Independent study consolidation requires faculty instructors to revamp lesson plans and redesign courses to promote student discussion. Therefore, these efforts should be accompanied by incentives to consolidate courses, such as using some portion of cost savings realized by consolidation to add to the instructor's travel budget or buy out course releases for the instructor to work on research.

## Reduce Curricular Bottlenecks



#### UNDERSTANDING THE PROBLEM

Complex prerequisite pathways and non-degree-granting tracks lead to under- and overenrolled courses and excess credits, while reducing options for student course-taking. Demand for individual courses is often driven by prerequisite requirements and rigid curricula, leading to increased workloads and making it more difficult for students to path themselves through the curriculum. Students may graduate with more than the required number of credits, while common prerequisites are overfilled.



#### **STRATEGY**

**Diagnose areas of curricular over-complexity to simplify rigid prerequisite pathways and sub-degree tracks.** Progressive institutions have identified two areas where curricula can be streamlined to reduce instructional cost and improve student success. The first of these areas is specialized tracks that do not contribute to students' diplomas, which often make curricula unnecessarily rigid and inflate demand in courses that are otherwise not required. The second is reducing the complexity of entire degree plans and prerequisite pathways.



### **PROMISING PRACTICES**

# 10: Track Consolidation (p. 42)

- Reduce or eliminate curricular "tracks" that are not degree granting
- For courses in tracks, consider cancelling lowenrollment courses while allowing higher-enrollment courses to fulfill elective requirements

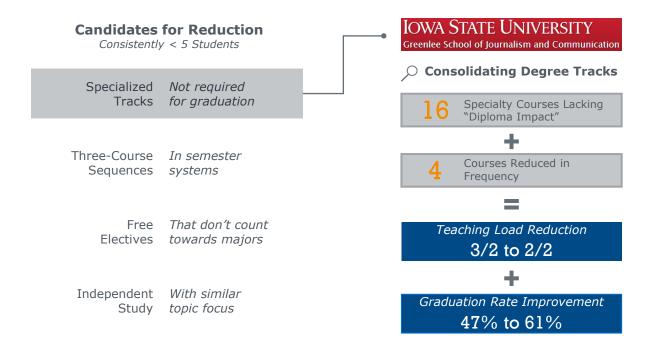
# 11: Streamlined Prerequisite Pathways (p. 43)

- Analyze degree plans to determine a complexity "score" for curricula
- Consider simplifying complex pathways or those that rely too heavily on one prerequisite; one strategy is to add a program-specific introductory course

## **Track Consolidation**

### Reducing Non-Degree-Applicable Courses Benefits Faculty and Students

The Greenlee School of Journalism and Communication at **Iowa State University** took a systematic approach to reducing the number of small course offerings by focusing on non-degree-applicable "tracks" within its degree programs. Rather than eliminate all courses with fewer than five students, the Greenlee School asked faculty to consolidate courses in specialized tracks, those in extensive sequences, and very small electives or independent study.



The Greenlee School canceled 16 courses that were part of specialized tracks and reduced the frequency of four additional courses. Higher-demand courses that had once contributed to tracks remained as electives.

As a result of track consolidation, the Greenlee School was able to reduce faculty teaching loads to 2/2, which increased the department's research productivity and the number of grants and awards its faculty received. The reduction in student time spent on non-degree-advancing courses also substantially increased the school's four-year graduation rate.

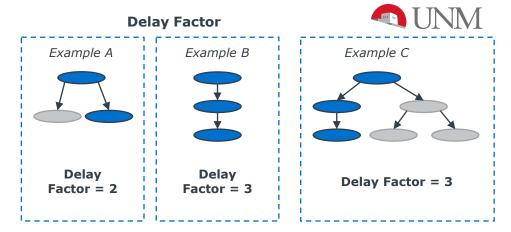
## Streamlined Prerequisite Pathways

### Using Degree Map Analysis to Identify Curricular Bottlenecks

Beyond increasing the number of instructors or increasing the number of students per course, there is a third way to increase capacity: changing the patterns of demand at the curricular level. Curricular requirements can create bottlenecks when one course is required for a large number of majors. Conversely, restructuring requirements to avoid these curricular-level bottlenecks reduces capacity constraints. In order to help faculty identify critical areas for curricular reform, an analysis from researchers at the **University of New Mexico** visualizes departmental curricula as tree diagrams with each course as a node.

Definition: The length (in connections) of the longest path on which a given course falls

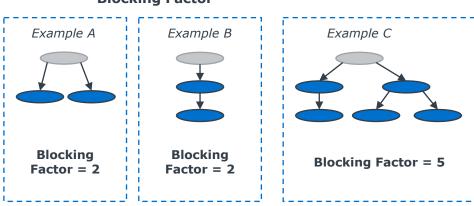
Calculation: Sum the connections between courses which are linked to a given course (in blue, below); this sum is the **Delay Factor** of that course



### **Blocking Factor**

Definition: The number of other courses to which a given course is a prerequisite

Calculation: Sum all of the courses which can only be taken after completing a course (in blue, below); this sum is the **Blocking Factor** of that course





There are two critical elements which are used in the University of New Mexico analysis, shown above: **Blocking Factor**, which denotes the number of courses to which a given course is a pre-requisite, and **Delay Factor**, which denotes the longest path on which a given course falls. The sum of a course's Blocking Factor and Delay Factor is **Course Importance**, a measure of how crucial that course is in determining a student's progress through the curriculum. Courses that enable many other courses will have a higher Course Importance score, as will those that are on very long consecutive prerequisite pathways.

Source: Abdallah, et al., "Curricular Efficiency: what Role Does It Play in Student Success?" 2014; Abdallah, Heileman, Kozlick, and Slim, "The Complexity of University Curricula According to Course Cruciality," 2014; EAB interviews and analysis.

## Streamlined Prerequisite Pathways

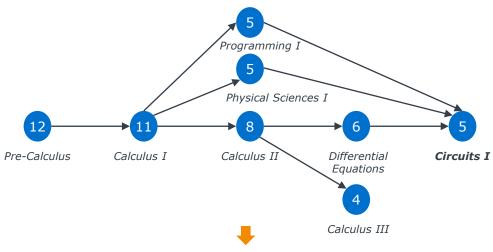
## Leveraging Curricular Bottleneck Analysis to Reduce Complexity

The examples below show how the curricular complexity analysis can help academic units identify opportunities for curricular streamlining. A degree pathway's curricular complexity score is the sum of all courses' importance scores.

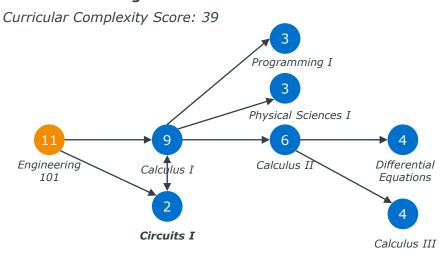
The example on the top shows the complexity of the pathway students had to complete in order to enroll in Circuits I in an electrical engineering program. Students had to complete programming, physics, and advanced mathematics in order to progress to introductory-level electrical engineering work. The curriculum was confusing to students and created course bottlenecks, especially in the math sequence.

### **Before Streamlining**

Curricular Complexity Score: 56



#### **After Streamlining**



The revised curriculum after streamlining appears above. A new course, Engineering 101, was added. The course served as a prerequisite to Circuits I, focusing on engineering-specific applications of the material. The changes significantly reduced the complexity of the curriculum while improving student learning outcomes (by providing more foundational engineering knowledge). Students could also progress much more quickly to electrical engineering-specific coursework that relates to their interests and career goals.

# Better Balance Faculty Workloads



#### UNDERSTANDING THE PROBLEM

Changes in student demand, as well as growing research and service requirements, result in unbalanced workloads. While most institutional policies have a 'standard' course load and distribution of effort (across teaching, research, and service) in reality, faculty workloads vary enormously. Faculty in units with rising student numbers often struggle to keep up with demand, while faculty in units with declining demand may teach well below the standard load. Wide variation in research productivity and heavily skewed service obligations (often correlated with race and gender) result in inequitable workload allocations and lower overall productivity.



#### **STRATEGY**

Increase transparency, flexibility, and unit accountability to support departments in developing more balanced workload allocations. Comparing data on actual course loads and student credit hour production by department can reveal which units are under-resourced or over-resourced. Setting clear expectations is critical, though disciplinary differences mean that each department may require a unique set of targets. Strive to capture as much information about non-instructional workload as possible to ensure that all faculty contributions to institutional mission are valued. Within the constraints of overall unit goals, allow individual instructors' allocation of effort to vary depending career stage, unique strengths, and personal interests.



#### **PROMISING PRACTICES**

# 12: Departmental Teaching Dashboard (p. 46)

- Track credit-hour production and funded releases by department in a dashboard that allows deans to compare units side by side
- If the dashboard reveals workload disparities, drill down to understand what proportion is due to adjunct capacity vs. tenure lines

# 13: Faculty Activity Dashboard (p. 47)

- Track all faculty activity in a departmental dashboard, including activities that are not part of the standard workload for tenure and promotion (e.g. editing journals, advising students)
- Allow faculty to selfreport and make corrections to collected data to ensure accurate information and simplify data collection

# 14: Differentiated Instructional Roles (p. 49)

- For units with additional teaching needs, create fulltime, non-tenure-track roles for instructors
- These full-time, long-term contracted roles can reduce dependence on part-time adjuncts while improving student success
- Some non-tenure-track instructional faculty also participate in governance activities

## **Departmental Teaching Dashboard**

### Benchmark Course Offerings to Standard Workload, Less Releases

A simple way to set up a departmental teaching benchmark is to add up the statutory teaching capacity of all tenured and tenure-track faculty, then subtract all planned/funded releases. The resulting "theoretical course capacity" is the maximum number of courses the unit can schedule without hiring adjuncts. Deans and department chairs can then compare that theoretical capacity to the actual number of courses taught, and drill down to understand what percentage is taught by adjuncts an whether there are departmental disparities in courses or credit hour production by FTE.

	Dept. A	Dept. B	Dept. C	Dept. D	Dept. E	Dept. F
Tenured/ Tenure Track FTE						
x Standard Course Load						
- Approved Course Releases						
= Theoretical Course Capacity						
# of Courses Taught						
Courses per FTE						
Student Credit Hours per FTE						
Adjunct Share of SCH						

The dashboard helps deans allocate additional instructional resources, either tenure lines or adjunct funding, across departments and identify areas where there are significant disparities or where capacity has not paced with growth.

Rather than setting a specific numeric target by unit or even by individual FTE, the dashboard provides deans with the data they need in order to make well-informed resource decisions.

## Faculty Activity Dashboard

### Holistic Reports a Starting Point for Workload Allocation, Assessment

The standard workload and planned releases are a good starting point for measuring faculty contributions to the department, but of course they do not tell the whole story. **Binghamton University** takes a more holistic approach to measuring faculty activity through a dashboard that counts several different types of teaching and many varieties of scholarly activity, as well as release time given for administration (in \$). Administrators at Binghamton purposely avoided listing activities in terms of hours, to avoid the perception that quality is purely a function of time invested.



### **Defining Key Indicators...**



- Courses taught/ assigned load
- Undergraduate SCH
- Master's/PhD SCH
- · Independent study SCH
- Lab SCH
- Books, book chapters, & reviews



- Scholarship
- Journal articles
- · Research expenditures
- Release time (in \$)
- · Creative compositions
- Exhibitions, performances, keynotes



- Conference/poster presentations
- Editing books or book chapters
- Independent lectures
- · Admin. release time

### ... For Holistic Assessment



### **Annual Review of Total Productivity**

Dashboards provide single version of the truth for departmental "contribution to mission" meetings with provost's team deans, chair, and interested faculty.



### Avoids Measuring "Hours" or "% Time"

Moves productivity conversation away from irrelevant factors (time inputs) to value-driven factors (outputs, outcomes).



### **Department-Driven**

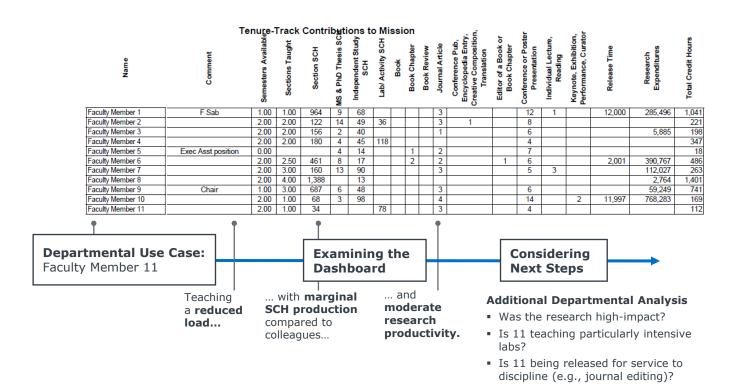
Central facilitates discussions of dashboard metrics, but departments use local knowledge to decide appropriate workload adjustments.

The teaching and service data comes from the institution's student information system (SIS) and the HR system, but each faculty member must enter their own scholarship info into the system every year. In order to ensure thorough data collection, institutions can embed the input system into day-to-day workflows. For example, one institution with a similar productivity dashboard requires faculty to enter conference budget requests or request summer research stipends through the same input system that the dashboard uses. There is also an intrinsic incentive for faculty to ensure all activity is correctly accounted for in their annual reviews.

## Faculty Activity Dashboard

### Using the Dashboard to Drive Departmental Decisions

Department chairs can use the faculty activity dashboard to more holistically assess the workload of each individual faculty member. For example, in the use case shown below, Faculty Member 11 is teaching a reduced load—one section rather than their two-section assigned load—and has relatively low teaching productivity in student credit hour terms. Their research productivity for the year was moderate compared to departmental peers, with no research expenditures. Using the dashboard, however, it is clear that Faculty Member 11 is teaching a large number of lab SCH (potentially high-intensity) and presenting at conferences, allowing for a more nuanced discussion of next steps.

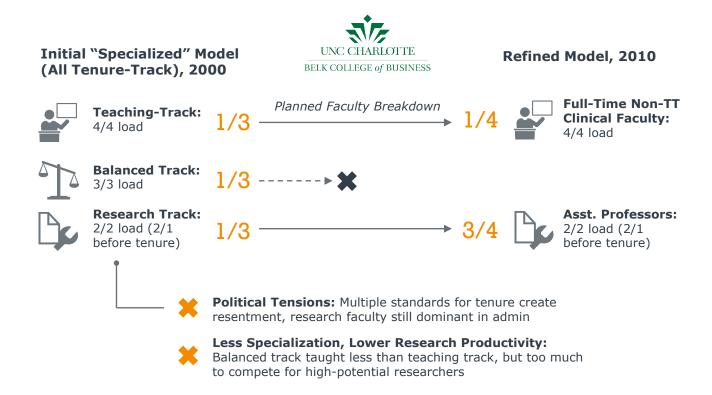


The dashboard is also used by central administrators to compare across departments and assess the needs of the college or school as a whole. During a yearly "contribution-to-mission meeting," the provost, dean, chair, and interested faculty use the dashboard to guide discussion of the department's achievements over the past year, priorities for the following year, and any necessary changes to workload allocation. For example, the meetings could be used to reallocate adjunct funding among departments within the college or school, determine whether new faculty lines are needed, or discuss the provision of additional releases.

## **Differentiated Instructional Roles**

### Multiple Tracks for Tenure Create Tensions, Limit Research Intensity

Many institutions have pursued multiple tenure tracks to allow faculty to specialize in research or teaching. The Belk College of Business at the **University of North Carolina at Charlotte** developed such a model in 2000, where faculty were hired for teaching, research, or combined "tracks" to tenure. However, this model led to political conflicts because it created two standards for tenure and reduced the research productivity of faculty on the balanced track. By 2010, research-track faculty still dominated tenure review committees and found it significantly easier to advance to full professor status.



To overcome the political problems with two definitions of tenure, the business school created a new class of full-time, non-tenure track teaching faculty ("clinical" faculty). Like the teaching-track tenured folks, they teach a 4/4 load, but operate under a system of renewable contracts of increasing length. Moving back to a single set of requirements for tenure (with research expectations) reduced political tensions. The business school is now in the process of phasing out the balanced track, most of whom will be replaced by higher-potential assistant professors on a 2/1 load. While clinical faculty cannot participate in the faculty senate, they do participate in committees and are consulted on policy and process decisions that are made in the business school. The new model allowed the Belk College to attract more prestigious research faculty and carve out time for publication in high-quality journals.

## Differentiated Instructional Roles

### 'Clinicals' Comparable to Tenured Colleagues in Student Success, Service

Similar clinical faculty models have been adopted at a number of institutions and across segments, and have not negatively impacted student success. A study of students taking courses under full-time instructional faculty at **Northwestern University** found that they were slightly more likely to take another course in the subject and had slightly higher grades than peers, correcting for student academic backgrounds. Other recent studies have confirmed that no significant differences in student course success result under full-time instructional faculty on long-term contracts.

# Full-Time, Non-TT Faculty Just as Successful in the Classroom...



2012 Study of Freshman Performance by Instructor Tenure Status (n=15,662)



Students 7.3 percentage points more likely to take another course in a subject after having a non-TT instructor



Student grades in subsequent courses are .1 points higher after having a non-TT instructor



"Almost all classes taught by non-tenure track faculty at Northwestern are taught by those with a longer-term relationship with the university."

Figlio, Schapiro, and Soter (2012)

### ... And in Service/Administration



Elected president of the faculty senate



- Direct a business communications program with 9 faculty
- Founded a research center in leadership ethics



 Direct economic education research center



 Direct psychological services center & community clinic

Full-time, non-TT faculty are also taking a more active role in service and administration, breaking down another traditional barrier between themselves and their tenured counterparts. One such faculty member at the **University of Southern California** even became president of the faculty senate in spring 2014, alongside a number of examples listed above of clinical faculty overseeing degree programs, running research centers, and managing clinics in health-focused disciplines.

## **EAB Support in Academic Resource Allocation**

### Additional Resources Within and Beyond the Academic Affairs Forum

### **Related Resources from the EAB Academic Affairs Forum Library**

EAB has compiled an extensive library of best practice studies, white papers, implementation guides, and toolkits to support our members in creating an effective resource allocation strategy. Find the below resources on *eab.com* or contact your dedicated advisor to learn more.



# **Breaking the Trade-Off Between Cost and Quality**

Sustaining Mission in an Era of Constrained Resources

The era of "quality at any cost" has come to an end in the face of declining state support and flattening net tuition revenues. This white paper explores how, with the right tools, academic leaders can continue to enhance quality by reallocating resources from lower impact activities to higher impact, mission-aligned priorities.



#### **Smart Growth**

Running the Academy by the Numbers

This report profiles smart growth strategies of top institutions that maximize their instructional capacity based on a thorough analysis of capacity, costs, and student demand at the level of academic programs and individual courses without abandoning quality standards such as section caps or faculty workload policies.



### **Optimizing Institutional Budget Models**

Strategic Lessons for Aligning Incentives and Improving Financial Performance

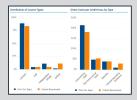
This study includes four executive-level lessons on budget design and a compendium of 29 budget model elements to help you develop a more strategic resource allocation system on your campus.



### **Revitalizing the Program Portfolio**

Elevating Academic Program Performance and Strategic Alignment

This report profiles how to use program review as a strategic tool by integrating data on academic quality, student demand, and resource utilization to improve and prioritize programs for investment and expansion.



### **Academic Performance Solutions (APS)**

APS enables institutions to actively use data to set strategic goals, garner consensus around change initiatives, and make tough decisions in allocating limited academic and financial resources. APS is a solution designed to empower academic and financial leaders with the department-specific performance and cost data—as well as reliable peer benchmarks—they need to shape conversations and inform decision—making around academic planning. APS' new web platform provides high-level key performance indicators as well as snapshot analyses of program performance and costs across colleges, departments, instructors, and courses.

The best practices are the ones that work for **you**.<sup>SM</sup>