

**Coursedog**

# **Scheduling for Student Success Framework**



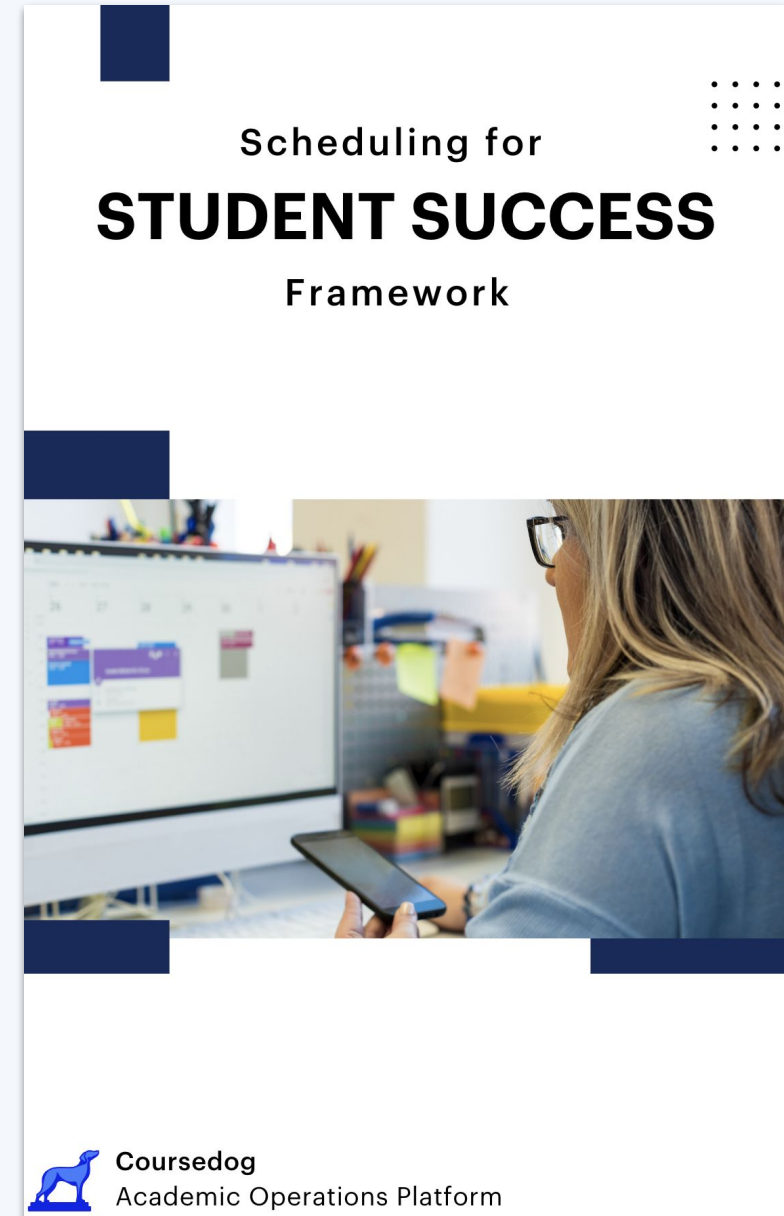
**Integrate Your Academic Operations for Student Success**

# Bake Best Practices into Your Schedule

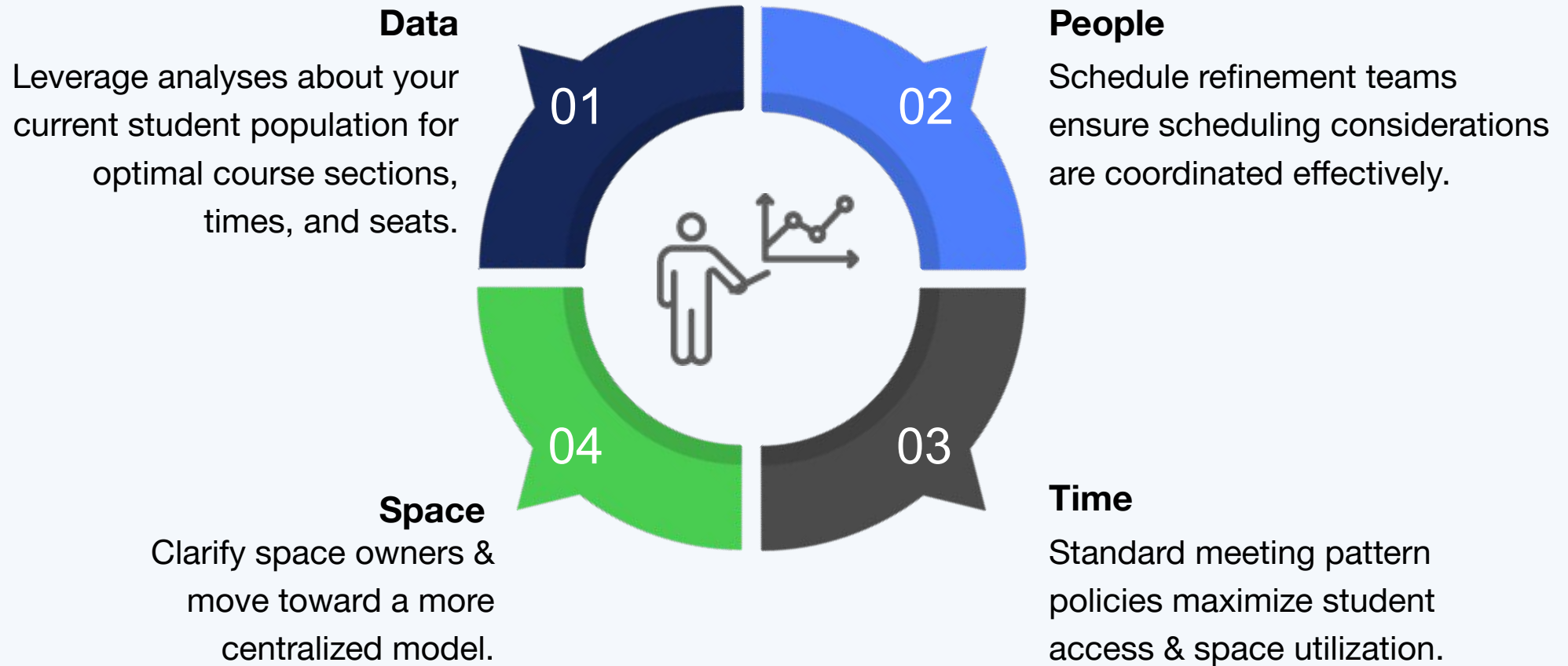
- Research-backed, best practices framework available exclusively for Coursedog institutional partners.
- Step-by-step recommendations for an academic schedule that maximizes accessibility for students, reduces avoidable scheduling barriers that impact progression.
- High level analysis of the efficacy of the academic schedule, process and how it supports, or undermines, your student success initiatives.



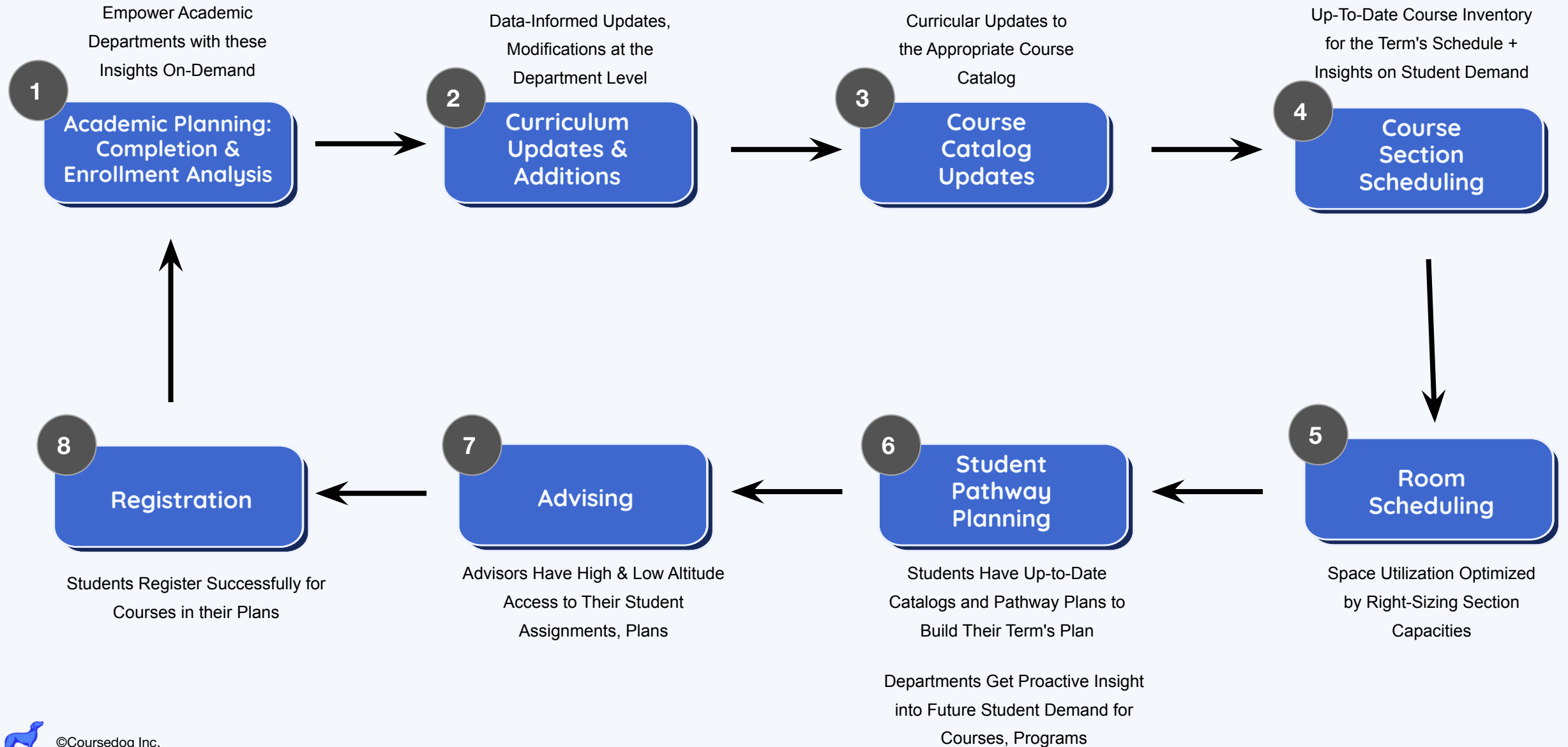
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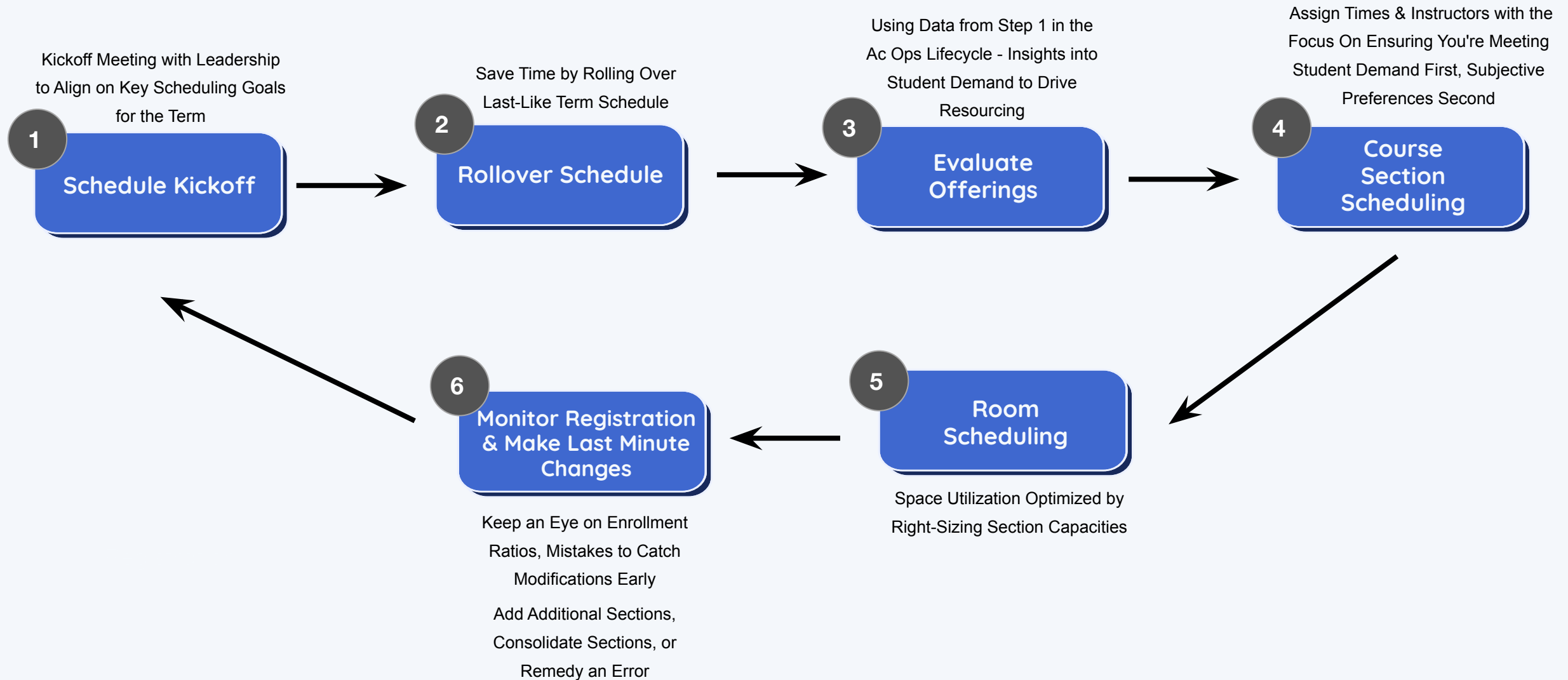
# THE TENETS OF Scheduling for Student Success



# Academic Operations Lifecycle



# Academic Scheduling Lifecycle



# Few institutions comprehensively track performance metrics with regard to their academic schedule.

- Course scheduling is tied to two of the institution's most expensive resources: facilities & faculty.
- Schedule optimization can boost student retention rates & reduce time to completion.
- Imbalance between seats offered and seats needed exist at many institutions.

**72% of institutions do not use data to project course demand.**



# How to Schedule for Student Success

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## Schedule Kickoff

Kickoff Meeting with Leadership to Align on Key Scheduling Goals for the Term

- We recommend scheduling a meeting between scheduling administrators & institutional leadership prior to kicking off a new planning cycle to discuss goals for improvement for the upcoming term(s).
  - At the end of the planning cycle, we recommend scheduling another meeting between institutional leadership and scheduling administrators to de-brief on whether the goals were accomplished.
- Analyzing the key scheduling success metrics to inform each term's future schedule
  - Knowing which courses fill too soon—or which ones are underfilled—can help determine how to schedule those classes in the future.

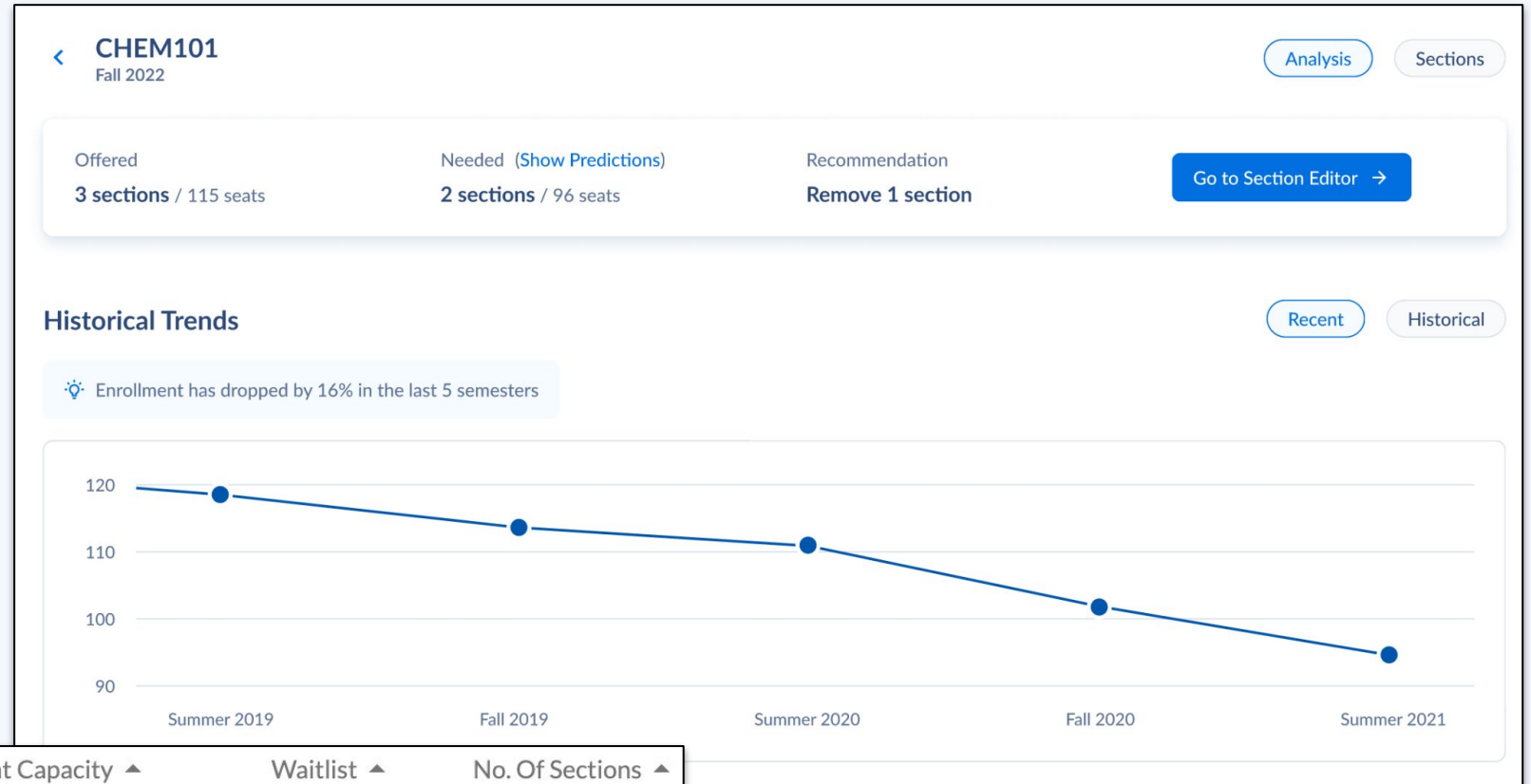
**A balanced schedule means you are offering the right number of seats & sections to meet the needs and demands of your students throughout your academic schedule.**

## Space & Section Scheduling Must Be Flexible as Demand Shifts

## Cannot Continue Scheduling From Historical Experience Alone

## Questions to Consider During the Scheduling Kickoff Meeting

- ✓ Are our academic programs evolving to match student need?
- ✓ Do all students have equitable access to our courses?
- ✓ Does our academic schedule align with student demand?
- ✓ Are we reaching capacity with our available space?



Term ▾	Enrollment ▲	Max Enrollment Capacity ▲	Waitlist ▲	No. Of Sections ▲
2021 Spring Term	0	40	0	3
2020 Fall Term	45.83	48.33	10.5	6
2021 Summer Term	45.83	48.33	10.5	6



# How to Schedule for Student Success

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## Rollover in the SIS

Rolling over the class schedule creates efficiency but also means you may be keeping the same broken schedule.

For your first semester using Coursedog, we recommend to consider re-building the schedule from scratch based on student demand and the latest understanding of how to create accelerated pathways to completion for students. For future semesters, consider rolling over in your SIS and then making needed modifications.



# How to Schedule for Student Success


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## Evaluate offerings


Evaluate what classes are needed for students to complete their credential on-time and evaluate potential addition and reduction candidates.


### Key data points at play to aid your decision making:





- Enrollment ratios
  - *Analyze sections whose fill rates were below 70% & above 95% respectively.*
- Sections bundled at prime time
  - *Review if more than 60% of sections were scheduled in primetime, and locate potential for modifications.*
- Room, space utilization
- Student demand\*


**All Sections**  
 947 Offered / 823 Needed


**Underfilled**  
 124 sections (13% of sect.)


**Overfilled**  
 204 sections (22% of sect.)


**Students Enrolled**  
 3,456 students

STATUS	CODE	COURSE NAME	OFFERED (PLANNED)	NEEDED (PROJECTED)	TYPE
	BIO205	Organic Chemistry	2 sections 65 seats	4 sections 147 seats	+ Addition
	BIO151	Introduction to Biochemistry	3 sections 121 seats	5 sections 189 seats	+ Addition
	BIO209	Developmental Biology	2 sections 47 seats	4 sections 91 seats	+ Addition
	CHEM115	Intensive Organic Chemistry	2 sections 89 seats	3 sections 114 seats	+ Addition
	CHEM105	Fundamentals Of Physiology	6 sections 185 seats	5 sections 163 seats	- Removal

### Meeting Patterns

DAYS	TIMES	ATTRIBUTES	USAGE	AVERAGE SEAT UTILIZATION	AVAILABLE ROOMS
Monday Wednesday	2:30 PM - 3:45 PM	EMW	96	64.16%	2126



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# Essential Reports When Scheduling for Student Success

## Section Fill Rates

### Overfilled



876

SECTIONS

32%

PERCENT OF OVERFILLED  
SECTIONS

### Underfilled



763

SECTIONS

28%

PERCENT OF UNDERFILLED  
SECTIONS

- An overfilled section is identified when the enrollment ratio for the section is overloaded, calculated as being above 95%.
- An underfilled section has an enrollment ratio below 70%.

**The enrollment ratio at the section level is the total enrollment in the course section divided by the total max enrollment for the section.**



# How to Schedule for Student Success

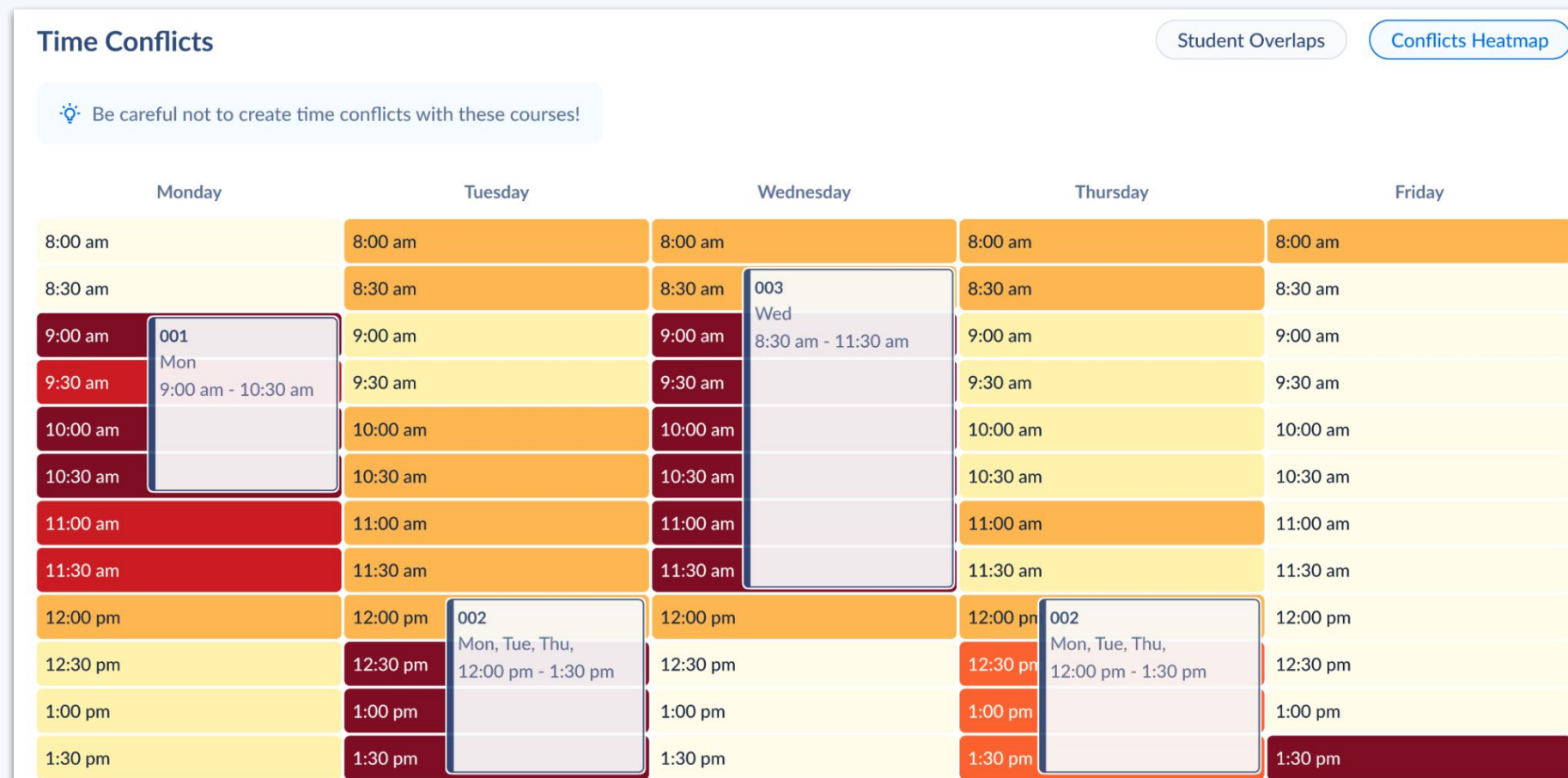
4

## Course section scheduling

This is where we recommend to lean on your standard meeting patterns and how that can complement faculty preferences. We recommend asking faculty: What times are you not able to teach this class? You'll also want to check to minimize time conflicts for classes students often take together in the same term (e.g. Bio 101, Comp 101).

### Key data points at play to aid your decision making:

- Sections bundled at prime time
  - *Aim for no more than 60% of sections to be scheduled in prime time.*
- Instructor capacity
- Scheduling conflicts



# Essential Reports When Scheduling for Student Success

## Primetime Bundling & Conflicts

### Meeting Patterns

193

MEETING PATTERNS

1

PRIME TIME MEETING  
PATTERNS

0.52%

PERCENT PRIME TIME  
MEETING PATTERNS

### Conflicts

1483

NUMBER OF CONFLICTS

38.4%

PERCENT OF SECTIONS WITH CONFLICTS

- Primetime bundling looks at the percentage of courses scheduled with non-standard timeblocks during primetime hours
- Conflicts between co-reqs, pre-reqs, and gen ed courses that are scheduled at the same time force students to choose between courses they need to take.



# How To Work Toward a Balanced Academic Schedule

- Meeting patterns:
  - We recommend for most institutions to create & implement meeting pattern policy. Creating a standard meeting pattern policy is important to ensure that students are able to enroll in the classes they need to complete their studies and to maximize space utilization on campus.
- Bottlenecks, Conflict Avoidance:
  - Proactively create rules that protect against course conflicts
  - For example, do not allow co-requisite and prerequisite courses to be offered at conflicting times or at intervals that overlap.

**A balanced schedule means you are offering the right number of seats & sections, at the right times, to meet the needs and demands of your students throughout your academic schedule.**

# How to Schedule for Student Success

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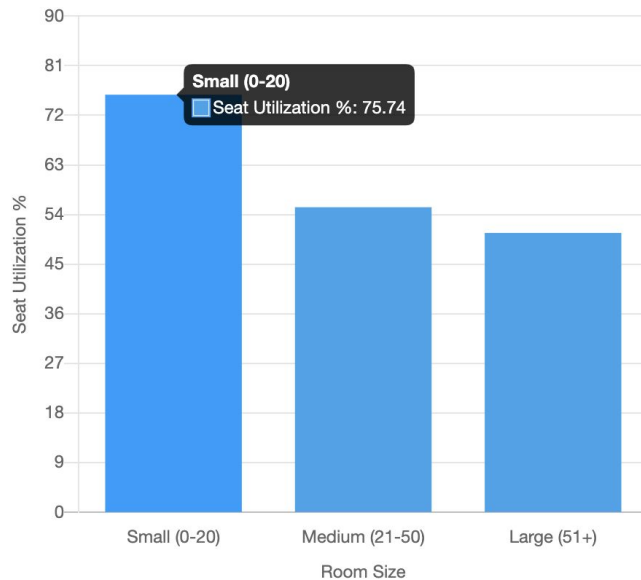
## Room scheduling

Try to centralize room governance as much as possible. Take a hard look at historical mismatches between class capacity and enrollment before approving de-centralized assignments or making the same room assignment as last year.

Key data points at play to aid your decision making:

- Room, space utilization

Seat Utilization By Room Size



### Room Scheduling

Assign Rooms

YES

NO

Minimum Seat Utilization

85 %

### Usage

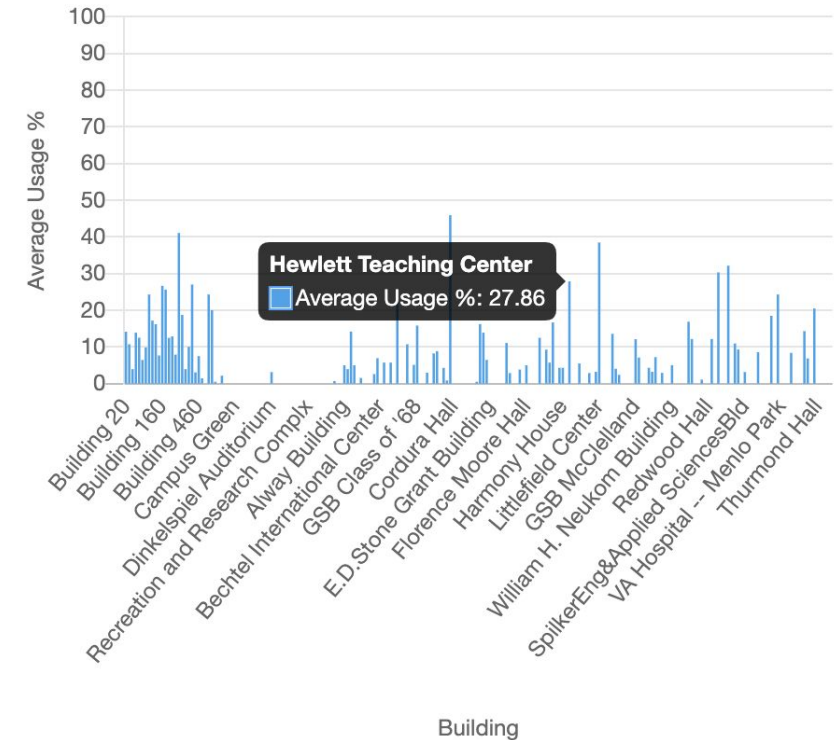
3%

AVERAGE USAGE

55%

AVERAGE SEAT  
UTILIZATION

Average Usage by Building





# How to Schedule for Student Success

6

## Monitor registration

Create a standardized workflow for change requests to ensure proper data governance (adding a section, deleting a section or making a change to adjust an error during scheduling).

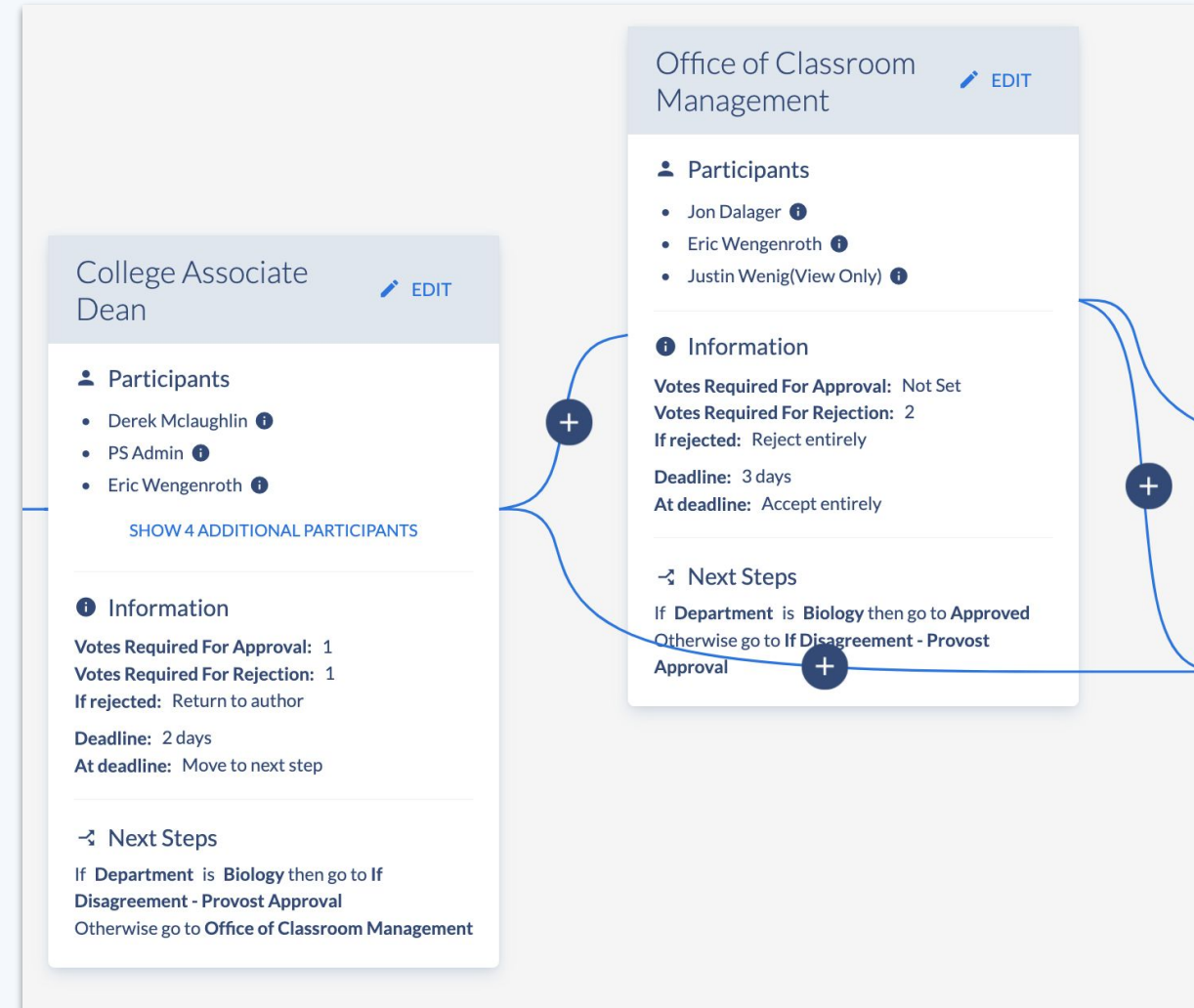
Key data points at play to aid your decision making:

- Enrollment ratios

COURSE CODE	SECTION TYPE	ACTUAL ENROLLMENT	MAX ENROLLMENT
ACC2203	Lecture	77	80
ACC2203	Recitation	50	50
ACC2101	Recitation	30	35
ACC2101	Recitation	29	35
ACC2101	Recitation	30	35
ACC2101	Lecture	30	30



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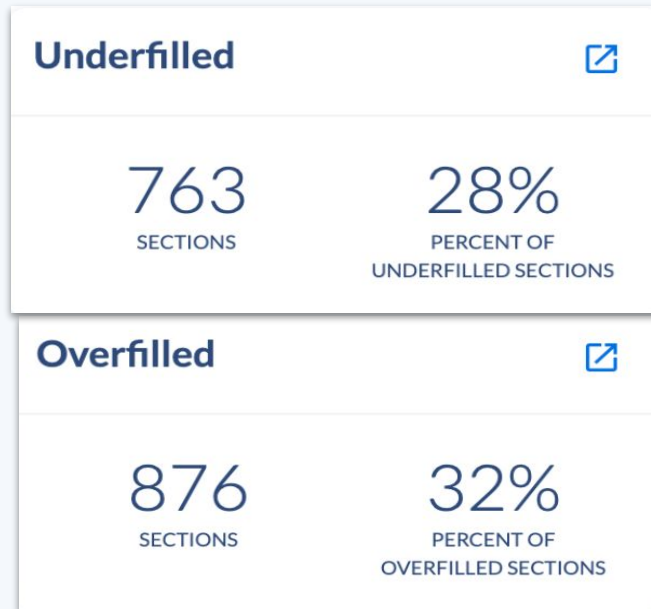
# How to Schedule for Student Success

6

## Last minute changes

Key data points at play to aid your decision making:

- Underfilled sections
- Overfilled sections



Monitor courses that fill above 95% to consider adding an additional section and courses that fill below 70% (or whatever threshold you set at your institution) for cancellation.

### New Request

Request Type

Section Change

CANCEL

CREATE REQUEST

### Enrollment Settings

Enrollment Capacity

30

Waitlist Capacity

0

Actual Enrollment

30

DELETE SECTION

CANCEL

SAVE SECTION



# Successful Scheduling Benchmarks

Metric	Summary	Industry Average	Best in Class
Enrollment Ratio	Total enrollment divided by total max enrollment)	70%	85%
% of Balanced Sections	Enrollment Ratio is between 70% and 95%	35%	60%
% of Underfilled Sections	Enrollment Ratio (total enrollment divided by total max enrollment) is below 70%	40%	25%
% of Overfilled Section	Enrollment Ratio (total enrollment divided by total max enrollment) is above 95%	20%	10%
% of Primetime Hour Scheduling	Percentage of classes that are scheduled with non-standard timeblocks during primetime hours	64%	45%



# Glossary of Student Success Scheduling Metrics

## ○ **Enrollment ratio**

- The enrollment ratio is a useful metric to understand section utilization and to help you identify sections as being either underfilled, balanced, or overfilled.
- Total enrollment divided by total max enrollment

## ○ **Balanced section/schedule**

- A balanced schedule means you are offering the right number of seats & sections to meet the needs and demands of your students throughout your academic schedule.
- Enrollment ratio between 70-95%

## ○ **Underfilled section**

- Underfilled sections are a drain on instructional resources – paying for the instructor, room, facilities for a section that's only 10-15% filled when you could combine that section with another and eliminate that expenditure for the un-needed section.
- Enrollment ratio is below 70%

# Glossary of Student Success Scheduling Metrics

- **Overfilled section**

- Means you are not offering too few course sections for courses that are in high demand
- Enrollment ratio above 95%

- **Primetime hour scheduling**

- The most popular days/times for scheduling academic sections, where room utilization is often disproportionately high.
- Percentage of courses scheduled with non-standard timeblocks during primetime hours

- **Academic space utilization**

- Proportion of time an assignable space is actually used for the intended purpose, as well as proportion of seating capacity when assignable space is a classroom.
- A common scheduling-related academic bottleneck: Physical space limitations and room capacity - restricting a learning experience to the size of the room.

# Glossary of Student Success Scheduling Metrics

- **Instructor capacity**

- The number of sections, credit hours faculty can teach
- Instructors/faculty are often a common scheduling-related academic bottleneck: course availability on many college campuses are sometimes driven by the scheduling preferences of faculty

- **Scheduling conflicts**

- Double booked rooms, instructors, overlapping sections of co-requisites
- Force students to choose between courses they need to take

## Northern Arizona University Supports Student Progression with Data-Informed Scheduling Practices



"Coursedog has provided us with a system to ensure best practices are being utilized for both processes and policies which has assisted in making our course scheduling much more efficient. Coursedog is successful because of the flexible and collaborative approach they have taken in partnering with our institution, and we are excited to expand our partnership to further streamline our academic operations."

**Ian Wischmeier, Registrar**



Using Coursedog analytics, reduced scheduling conflicts by 60% to drastically reduce barriers to student access.



Using Coursedog analytics, reduced overfilled sections by 14% to promote a more accessible, student-centered academic schedule.

# Let's Establish Your Scheduling Baselines

Metric	Summary	Industry Average	Best in Class	Your [Historical Term, Year] Results	Your [Future Term, Year] Results
% of Balanced Sections	Enrollment Ratio is between 70% and 95%	35%	60%		
% of Underfilled Sections	Enrollment Ratio (total enrollment divided by total max enrollment) is below 70%	40%	25%		
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% of Primetime Hour Scheduling	Percentage of classes that are scheduled with non-standard timeblocks during primetime hours	64%	45%		



# Slide Bank



# Academic & Event Scheduling Architecture

External Data Sources  
(e.g. room features)

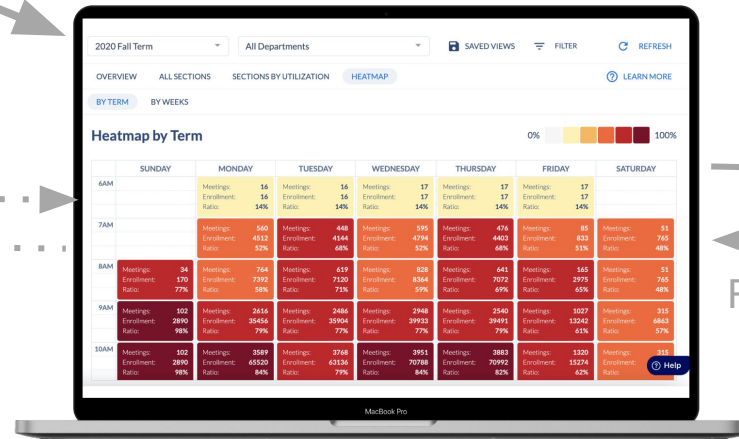


## Academic Scheduling

- Section + room optimization
- Policy & rule enforcement
- Course demand projections

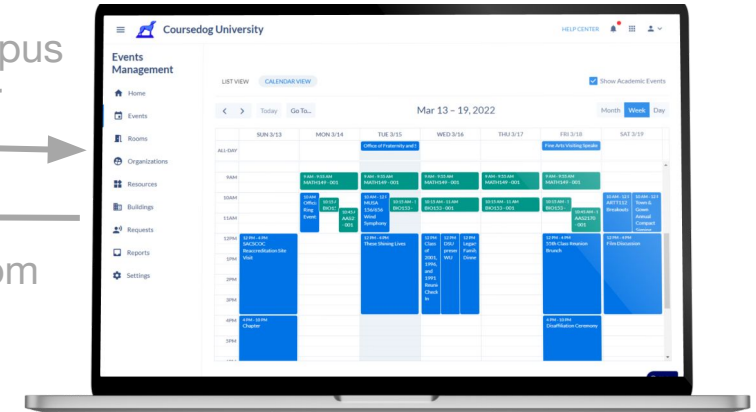
## Event Scheduling

- Configurable request forms
- Public event website
- Custom approval workflows



Master Campus  
Calendar

Real-Time Room  
Availability

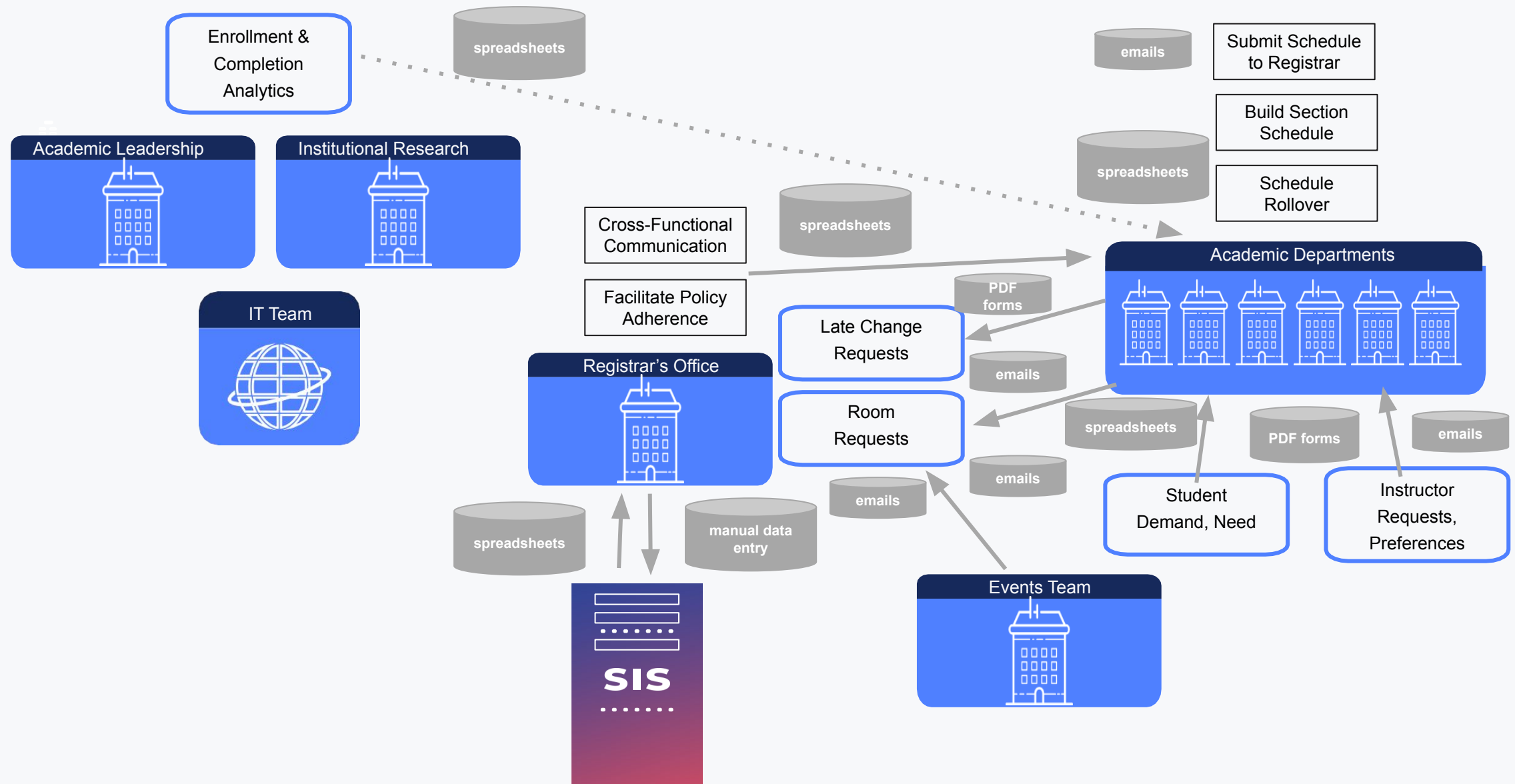


Department Schedules

- Instructor preferences
- Room criteria, needs



## Traditional Decentralized Academic Scheduling in Action



# Institutional Leaders Facing These Challenges

“Scheduling is so important because if we are not creating and delivering programs that are accessible, then enrollment will go down.”

Vice President, Academic Affairs:  
Community College

“Faculty were frustrated and students faced challenges progressing toward their degree.”

Vice President, Academic Operations:  
4-Year Public University

“We have to be strategic and intentional with our scheduling and space utilization to best optimize the resources we have.”

Vice President, Academic Affairs:  
Community College

“Faculty were frustrated and students faced challenges progressing toward their degree.”

Vice President, Academic Operations:  
4-Year Public University



# How to Schedule for Student Success

## Rollover

Rolling over the class schedule creates efficiency but also means you may be keeping the same broken schedule.

It should be re-evaluated based on student demand and the latest understanding of how to create accelerated pathways to completion for students.

### Key data points at play to aid your decision making:

- Enrollment ratios
- Instructor capacity
- Sections bundled at prime time
- Room, space utilization
- Student demand\*

## Evaluate offerings

Evaluate what classes are needed for students to complete their credential on-time and evaluate potential addition and reduction candidates.

### Key data points at play to aid your decision making:

- Underfilled sections
- Overfilled sections
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## Time scheduling

We recommend asking faculty: What times are you not able to teach this class? Check to minimize time conflicts for classes students often take together (Bio 101, Check 101)

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# How to Schedule for Student Success (cont.)

## Room Scheduling

Try to centralize room governance as much as possible. Take a hard look at historical mismatches between class capacity and enrollment before approving de-centralized assignments or making the same room assignment as last year.

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