

NJ Community Colleges Promising Practices

Best Practices in Strategic Course Scheduling for Student Success

June 13, 2024



1:45 pm – 2:45 pm EST



Ad Astra Northeast Team



Emily Peck

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Agenda

- Introductions & Background
- By the Data
- A Framework for Change
- Digging In to Move the Needle
- Future Plans
- Questions and Discussion

By the end of this presentation, you will be able to understand how Bergen's recent partnership with Ad Astra and approach to efficient, effective resource management and scheduling solutions has enabled us to make progress with our goal of **aligning the course schedule to better serve our students.**



2024
NJ COMMUNITY COLLEGE
OPPORTUNITY SUMMIT





Introduction





Dr. Anthony J. (A.J.) Trump

Vice President of Student Affairs

Bergen Community College

“Insanity is doing the same thing over and over and expecting different results.”

-Albert Einstein



Dr. Andrew Tomko

Vice President of Academic Affairs
and Provost

Bergen Community College

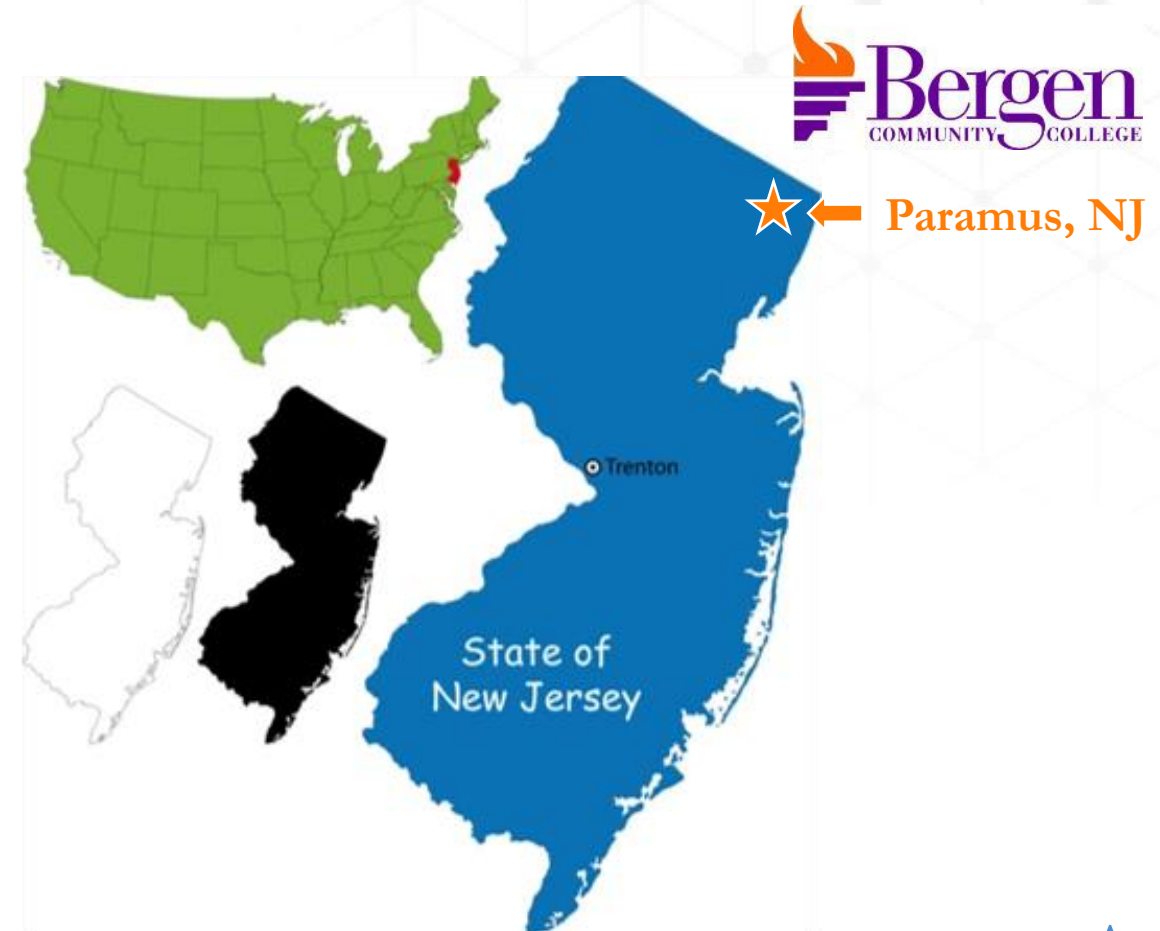
*“Nothing so aggravates an
earnest person as a passive
resistance.”*

- Herman Melville

Institutional Background

Established 1963

- **Largest community college in the state** and ranked #1 for associate degree graduates
- **Hispanic Serving Institution (HSI)** - 40.4% of students in the Fall of 2022 identified as Hispanic
- Represents the most populous county in the state (~1 million residents, 2023) in one of the largest commercial hubs and economies in the U.S. (adjacent to New York City)
- Collective bargaining environment with over 200 full-time faculty and 4 major bargaining units





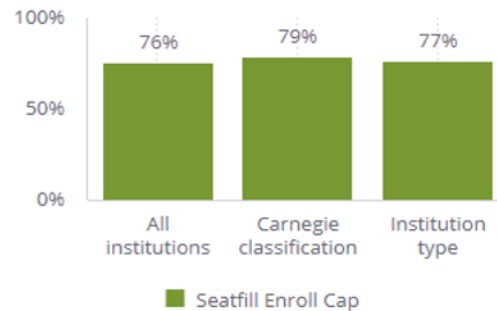
By the Data



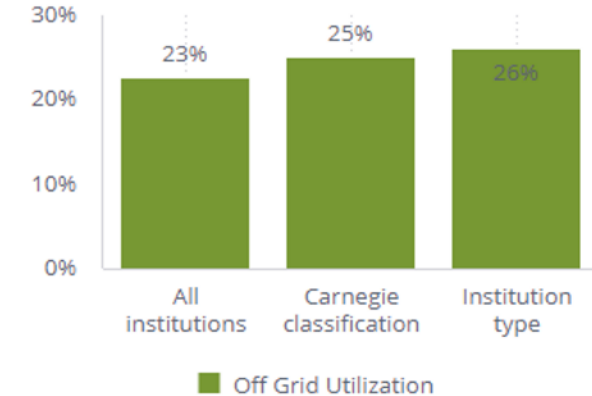
Baseline Data – HESI[®] Analysis

- Ad Astra's Higher Education Scheduling Index (HESI[®]) measures how effective your scheduling practices are against your peers.

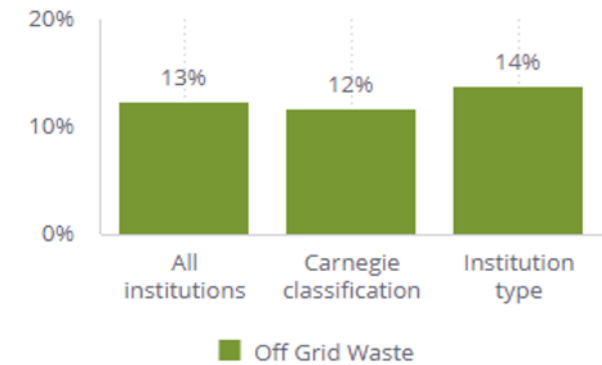
Seat Fill Enrollment Cap
65%
All Inst. Percentile 18%



Off Grid Utilization
48%
All Inst. Percentile 6%



Off Grid Waste
20%
All Inst. Percentile 14%



Degree Velocity[®] Summary

Analysis Term

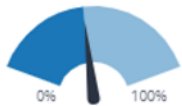
- 2023FA - Fall 2023
- 2024FA - Fall 2024
- 2024SP - Spring 2024

Student Count

9,305

Pathway Count 97

Degree Velocity

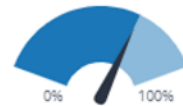


45%

Productive Credits / Year

13.3

Productive Ratio

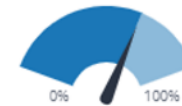


68%

Total Credits / Year

19.5

Total Velocity



66%

Time To Degree (Years)

4.5

Credits To Degree

88



Meeting Pattern Analysis

Fall 2022 – Paramus & Hybrid Campus, Classrooms

- **785** meeting patterns used for 2,020 sections
 - Avg. sections/pattern: 2.6
- **14%** of all sections fall into top 10 most-used meeting patterns
- **62%** of meeting patterns only used once

Fall 2022	
TR 11:00 AM - 12:15 PM	47
MW 11:00 AM - 12:15 PM	45
TR 9:30 AM - 10:45 AM	43
TR 1:45 PM - 3:00 PM	41
MW 9:30 AM - 10:45 AM	36
MW 1:45 PM - 3:00 PM	36

Meeting Pattern	On-Grid Utilization	Off-Grid Utilization	Waste Hours	Off Grid Waste
MW 9:30 AM - 10:45 AM	17%	32%	430	19%
MW 11:00 AM - 12:15 PM	21%	41%	520	23%
MW 1:45 PM - 3:00 PM	19%	25%	547	24%
TR 9:30 AM - 10:45 AM	17%	35%	663	29%
TR 11:00 AM - 12:15 PM	17%	47%	567	25%
TR 1:45 PM - 3:00 PM	15%	34%	640	28%
Total	18%	35%	3,367	25%

Fall 2023 Section Meeting Patterns

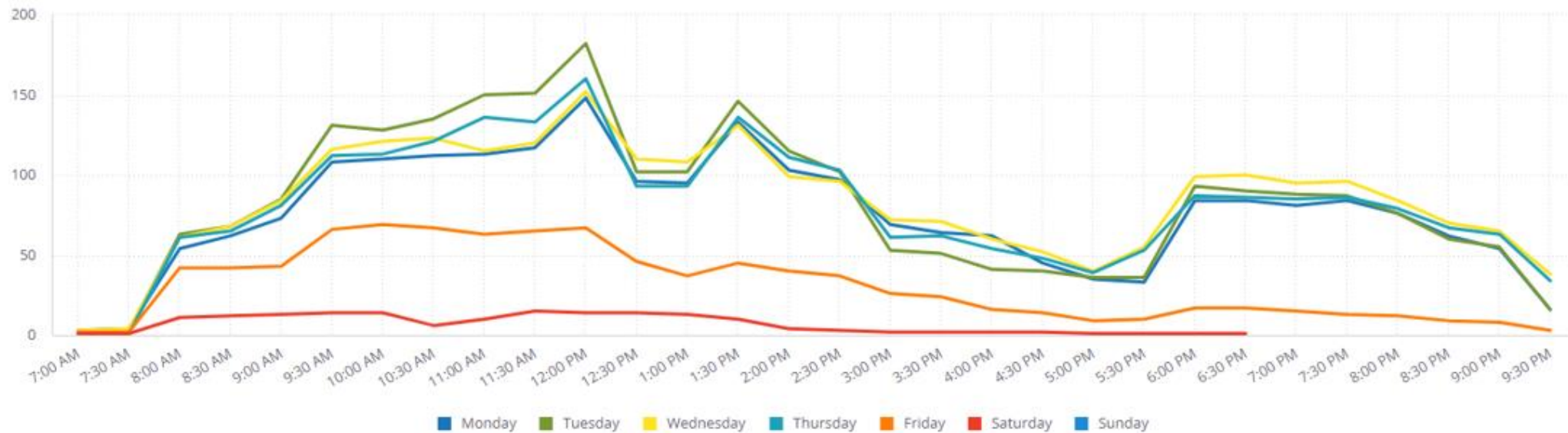
Rooms Scheduled
205

Total Meeting Patterns
744

Section Meetings Scheduled
1,854

ROOMS | SECTION MEETINGS

Section Meetings by Time of Day

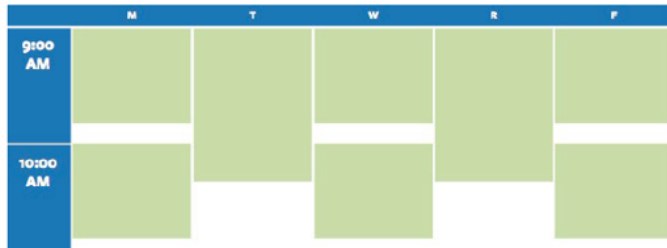


2023 Schedule Grid

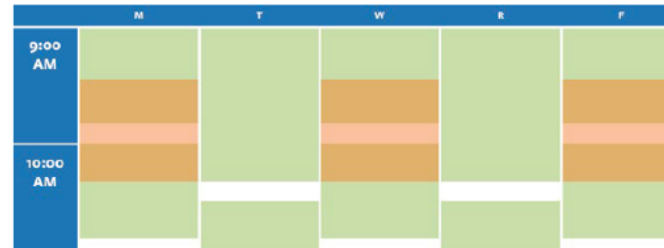
Of the 18 course block start times offered in the 15- and 12-week terms...

- 10 overlapped in meaningful ways due to off-grid utilization, created high off-grid waste. In addition, no time was left for department or student meetings.

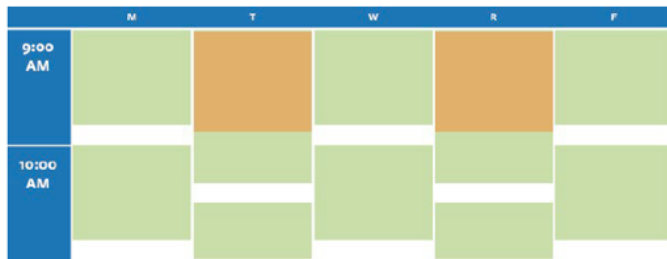
A Typical Primetime Meeting Pattern Grid



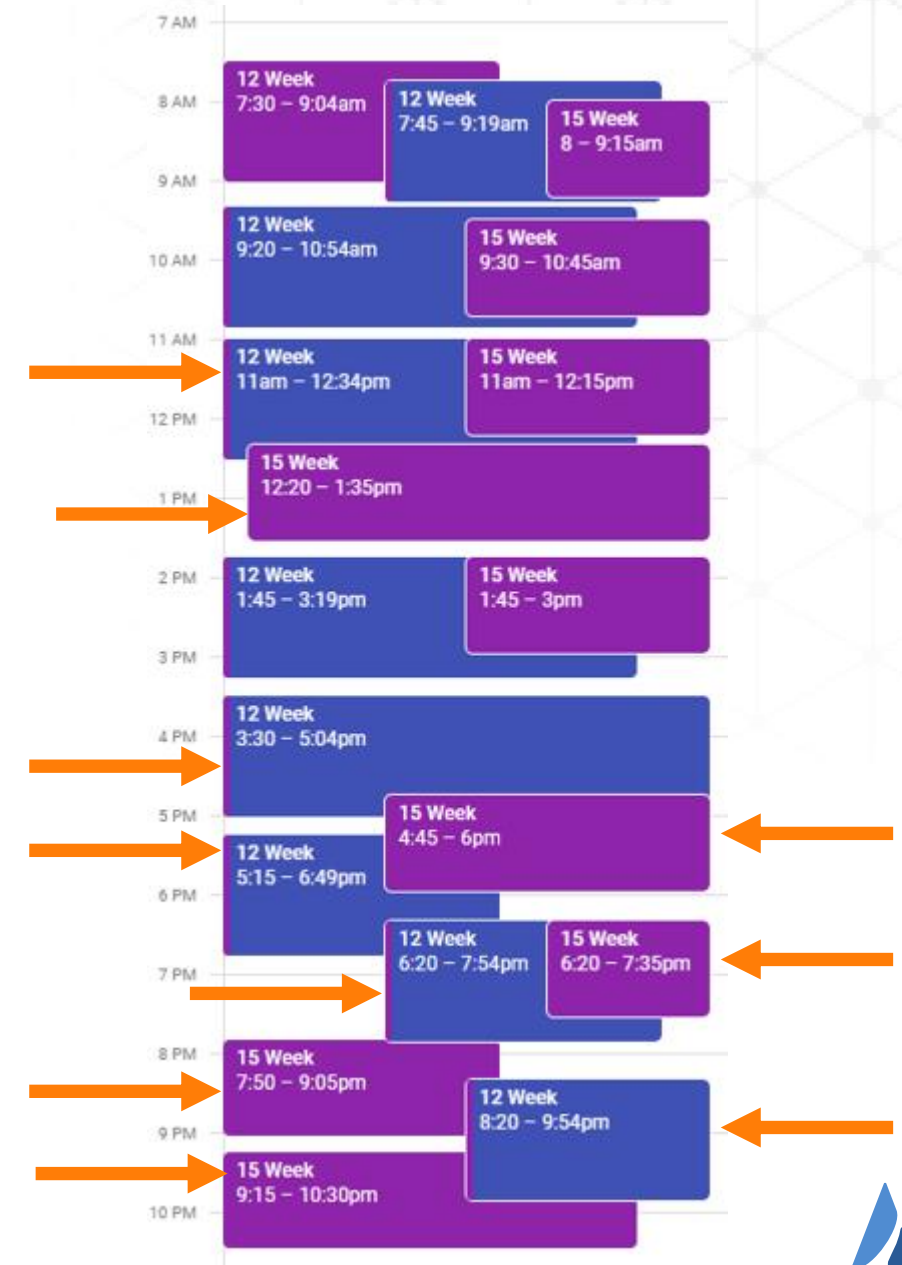
Problem Type 1: The Overlap



Problem Type 2: The Partial Block



Problem Type 3: The Partial Week



Splitting Online Enrollment

Split enrollments for online asynchronous classes are wasteful.

- Assuming enrollments of the contractual max. of 31 students / online section, we could have reduced many sections from the schedule **without impacting any students**.
- From these 5 courses, we could have reduced the number of sections by **2, 2, 1, 8, and 8**.
 - This would have amounted to a reduction of **21 sections** total. This is the equivalent of more than 4 full time faculty members at contractual load or **\$53,550** in adjunct pay.
- By making online sections more efficient, we can choose to save money or reassign people to teach classes that are full and in high demand, adding more paying students to our bottom line.

SOC 103 - Sociology Family

Spring 2024, Online Asynchronous

53% 

82 / 155 - 5 sections



POL 101 - American Govt

Spring 2024, Online Asynchronous

47% 

58 / 124 - 4 sections



SOC 113 - Social Problems

Spring 2024, Online Asynchronous

49% 

46 / 93 - 3 sections



WRT 201 - English Composition II

Spring 2024, Online Asynchronous

80% 

478 / 597 - 26 sections



COM 100 - Speech Communicatn

Spring 2024, Online Asynchronous

74% 

324 / 440 - 20 sections



Analysis Summary and Key Takeaways

Summary

- Low to moderate seat fills in courses.
- Improvements must be made to Degree Velocity®
 - Average # of credits per year, productive credits, time-to-degree, and credits-to-degree metrics.
- High off-grid utilization.
- High off-grid waste.
- High online waste.



Takeaways

- Utilize **historical + predictive** student pathway data when creating sections for future terms.
- **Monitor course fill rates** to maximize efficiency and open new sections based on demand.
- Utilize a **standardized on-grid meeting pattern** and adhere to it as much as possible.
- **Empower Chairs and Deans** to utilize registration monitoring data.
- Be conservative with scheduling online sections.





A Framework for Change



A Framework for Change

Kotter's 8-Step Change Model



1. Held multiple **meetings with key staff** pointing out the issues.
2. Established multiple key groups to **discuss the data** points and issues.
3. **Built a vision** for an organized, efficient, and better scheduling process.
4. Began speaking with multiple stakeholder groups including All College Forum, Faculty Senate, Chairs and Coordinators, Deans, and more.
5. Started to hold meetings with key groups to provide **feedback**. Empowered Deans, Chairs, and Scheduling Staff to optimize the schedule.
6. Rolled out a new organized, efficient, and better process Fall 2024 and trained staff.
7. Formed a Scheduling Task Force to inform **continuous improvement** of the schedule.
8. **Moving to a yearlong model** with a standardized process including dates, philosophies, and coordination.





Digging In To Move the Needle



Fall 2024 Schedule Creation

We utilized historical + student pathway data to determine the number of sections to offer by location (Paramus, Meadowlands, Online, and Hybrid). This was used to create a draft of the master schedule.

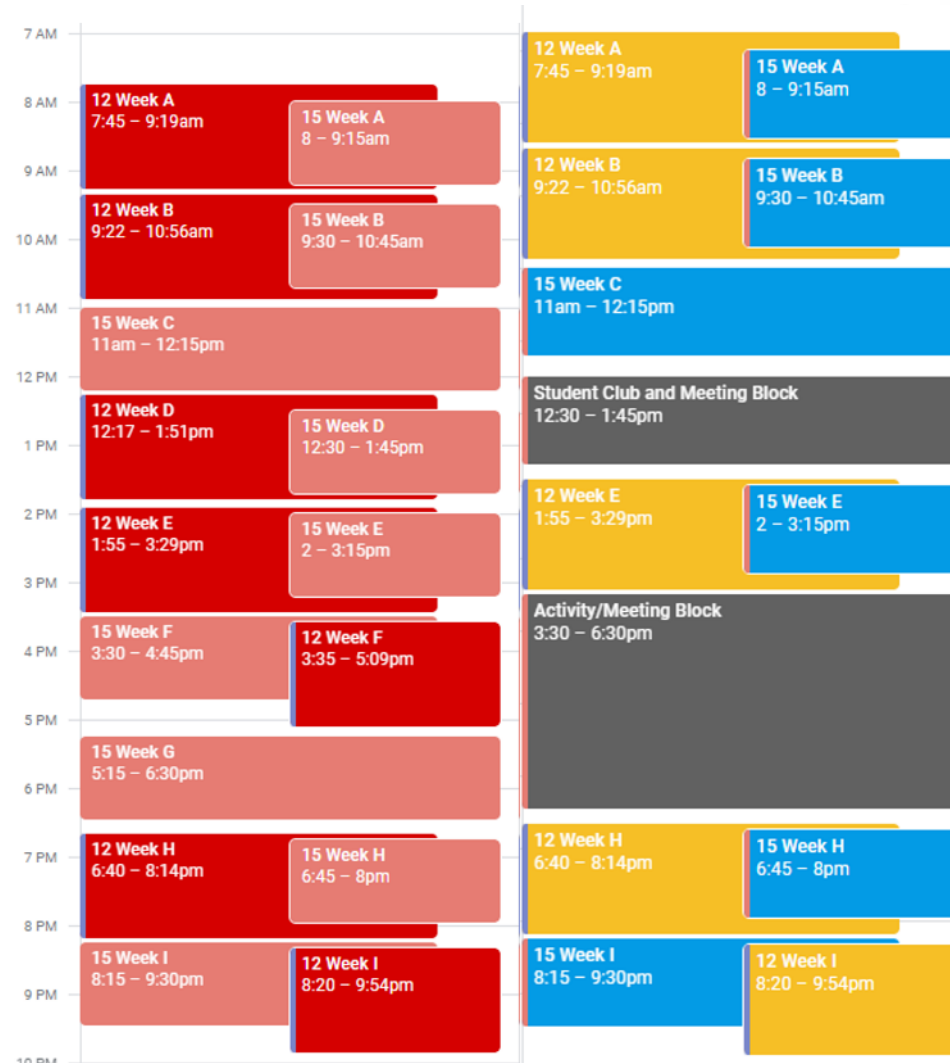
Blue = No action taken		Red = Course sections reduced	Black = Will be increased as classes fill								
Course	Course Title	Analysis Term	Candidate Type	Analysis Term Sections	Analysis Term Seats	Analysis Term Sections Needed	Analysis Term Seats Needed	Comparison Term Sections	Comparison Term Enrollment	Comparison Term Seats	Comparison Term Enroll Ratio
ACC 107	Federal Taxation	2024FA - Fall 2024 (roll forward)	NoAction	1	31	1	10	1	18	31	58.06%
ACC 110	Financial Accounting	2024FA - Fall 2024 (roll forward)	Addition	6	210	9	315	6	179	210	85.24%
ACC 210	Managerial Accounting	2024FA - Fall 2024 (roll forward)	Addition	4	140	6	183	4	93	140	66.43%
ACC 292	Co-Op/Accounting	2024FA - Fall 2024 (roll forward)	Reduction	2	30	1	1	2	0	30	0.00%

- Ad Astra’s platform made recommendations based on...**
 - Historical Data:** Previous Fall Course Enrollment Numbers
 - Predictive Data:** Number of Students in the Pathway that are Anticipated to Take the Course in the Fall 2024
- The Scheduling Staff in the Registrar’s Office built the Fall 2024 Master Schedule based on this data.**



Fall 2024 Schedule Creation

Course sections with overlaps were fixed by changing start times of classes and implementing a schedule grid that did not overlap.



Activity periods that had been overwritten in past years were built back into the new grid.



Fall 2024 Schedule Creation

Section coding was then updated to provide a more organized sorting of the courses in the catalog for when students and staff are viewing.

- This was shared and a legend is posted on the website.

Course Section Coding Legend

- Face-to-face sections are organized by start time. Earlier start times have lower section numbers.
- Prefixes are utilized to identify important course characteristics like location or modality in the first slot and then other important descriptor characteristics in the second.

For Fall and Summer 2024 course section coding legends/course section number and prefix meaning, go to bergen.edu/registration

001-099 – Classes in the first session of the term (Fall 1, Spring 1, Summer 1, Winter)

100-199 – Classes in the second session of the term (Fall 2, Spring 2, Summer 2)

200-299 – Classes in Flex 1 and Summer U (Fall Flex 1, Spring Flex 1)

300-399 – Classes in Flex 2 (Fall Flex 2, Spring Flex 2)

Face to face sections of the above will be organized by start time. Earlier start times will have lower section numbers.

Prefixes – should be utilized to identify important course characteristics like location or modality in the first slot and then other less important descriptor characteristics in the second.

B	Blended / Hybrid	H	Honors
C	Ciarco	P	Paired
L	Lyndhurst	E	Evening
W	Web Based / Online Asynchronous	S	Saturday/Sunday Weekend
WC	Web Based / COL		



Fall 2024 Schedule Section Coding

New Section Coding		
Course	Meeting Schedules	Location
ENG-101-002	09/04/2024-12/18/2024 In Person Lecture Monday, Wednesday 08:00AM - 09:15AM, Pitkin Education Center, Room S-346	Paramus
ENG-101-003	09/04/2024-12/21/2024 In Person Lecture Tuesday 08:00AM - 09:15AM, Pitkin Education Center, Room S-352 (more)...	Paramus
ENG-101-005	09/04/2024-12/18/2024 In Person Lecture Monday, Wednesday 08:00AM - 09:15AM, Pitkin Education Center, Room S-356	Paramus
ENG-101-013	09/04/2024-12/21/2024 In Person Lecture Tuesday 09:30AM - 10:45AM, Pitkin Education Center, Room L-148 (more)...	Paramus
ENG-101-015	09/04/2024-12/21/2024 In Person Lecture Monday 09:30AM - 10:45AM, Pitkin Education Center, Room S-356 (more)...	Paramus
ENG-101-017	09/04/2024-12/21/2024 In Person Lecture Monday 09:30AM - 10:45AM, Pitkin Education Center, Room B-325 (more)...	Paramus
ENG-101-018	09/04/2024-12/20/2024 In Person Lecture Wednesday, Friday 09:30AM - 10:45AM, Pitkin Education Center, Room B-321	Paramus
ENG-101-019	09/06/2024-12/20/2024 In Person Lecture Tuesday, Friday 09:30AM - 10:45AM, Pitkin Education Center, Room L-346	Paramus
ENG-101-020	09/06/2024-12/20/2024 In Person Lecture Friday 11:00AM - 01:40PM, Pitkin Education Center, Room S-346	Paramus
ENG-101-032	09/04/2024-12/18/2024 In Person Lecture Monday, Wednesday 11:00AM - 12:15PM, Pitkin Education Center, Room C-303	Paramus
ENG-101-033	09/04/2024-12/21/2024 In Person Lecture Monday 11:00AM - 12:15PM, Pitkin Education Center, Room S-305 (more)...	Paramus
ENG-101-035	09/04/2024-12/21/2024 In Person Lecture Tuesday 11:00AM - 12:15PM, Pitkin Education Center, Room B-107 (more)...	Paramus
ENG-101-037	09/04/2024-12/21/2024 In Person Lecture Tuesday 11:00AM - 12:15PM, Pitkin Education Center, Room C-315 (more)...	Paramus
ENG-101-040	09/04/2024-12/21/2024 In Person Lecture Monday 11:00AM - 12:15PM, Pitkin Education Center, Room L-142 (more)...	Paramus
ENG-101-041	09/04/2024-12/21/2024 In Person Lecture Tuesday 11:00AM - 12:15PM, Pitkin Education Center, Room B-216 (more)...	Paramus
ENG-101-050	09/04/2024-12/18/2024 In Person Lecture Monday, Wednesday 12:30PM - 01:45PM, Pitkin Education Center, Room S-346	Paramus
ENG-101-053	09/04/2024-12/21/2024 In Person Lecture Wednesday 12:30PM - 01:45PM, Pitkin Education Center, Room S-352 (more)...	Paramus
ENG-101-054	09/05/2024-12/19/2024 In Person Lecture Tuesday, Thursday 12:30PM - 01:45PM, Pitkin Education Center, Room L-347	Paramus
ENG-101-057	09/04/2024-12/18/2024 In Person Lecture Monday, Wednesday 12:30PM - 01:45PM, Pitkin Education Center, Room S-344	Paramus
ENG-101-068	09/04/2024-12/21/2024 In Person Lecture Monday 02:00PM - 03:15PM, Pitkin Education Center, Room L-141 (more)...	Paramus
ENG-101-069	09/04/2024-12/21/2024 In Person Lecture Tuesday 02:00PM - 03:15PM, The Technology Building, Room TEC-205 (more)...	Paramus
ENG-101-070	09/04/2024-12/21/2024 In Person Lecture Tuesday 02:00PM - 03:15PM, Pitkin Education Center, Room S-266 (more)...	Paramus
ENG-101-072	09/04/2024-12/21/2024 In Person Lecture Monday 02:00PM - 03:15PM, The Technology Building, Room TEC-205 (more)...	Paramus
ENG-101-085	09/05/2024-12/19/2024 In Person Lecture Tuesday, Thursday 03:30PM - 04:45PM, Pitkin Education Center, Room B-203	Paramus
ENG-101-088	09/05/2024-12/19/2024 In Person Lecture Tuesday, Thursday 03:30PM - 04:45PM, Pitkin Education Center, Room S-250	Paramus
ENG-101-090	09/04/2024-12/18/2024 In Person Lecture Monday, Wednesday 05:15PM - 06:30PM, Pitkin Education Center, Room TBA	Paramus
ENG-101-120	09/25/2024-12/21/2024 In Person Lecture Monday 12:17PM - 01:51PM, The Technology Building, Room TEC-202 (more)...	Paramus
ENG-101-140	09/25/2024-12/21/2024 In Person Lecture Tuesday 01:55PM - 03:29PM, Pitkin Education Center, Room B-107 (more)...	Paramus
ENG-101-145	09/25/2024-12/21/2024 In Person Lecture Tuesday 01:55PM - 03:29PM, Pitkin Education Center, Room C-305 (more)...	Paramus
ENG-101-236	09/04/2024-10/26/2024 In Person Lecture Monday 11:00AM - 01:40PM, Pitkin Education Center, Room L-141 (more)...	Paramus

15 Week
Sorted by
Start Time

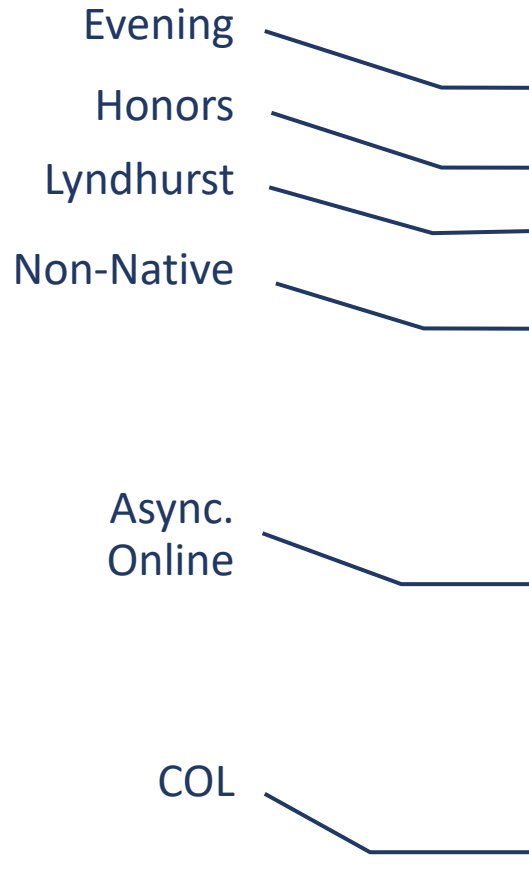
12 Week
Sorted by
Start Time

Flex 1
Sorted by
Start Time



Fall 2024 Schedule Section Coding

New Section Coding

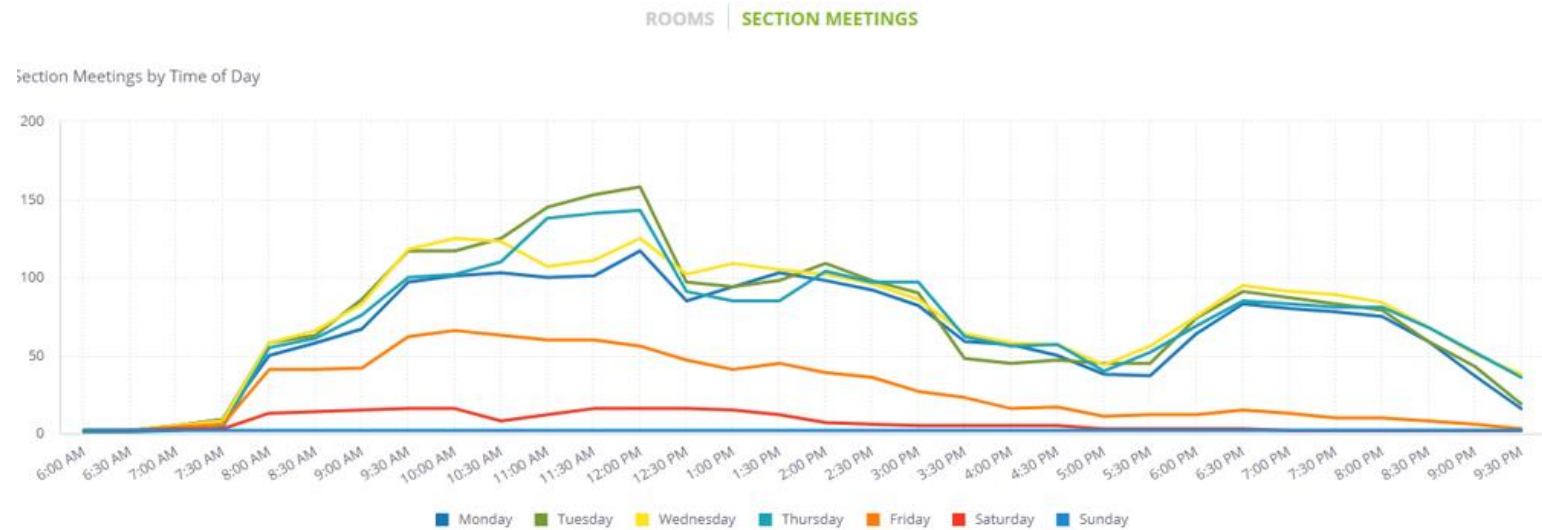
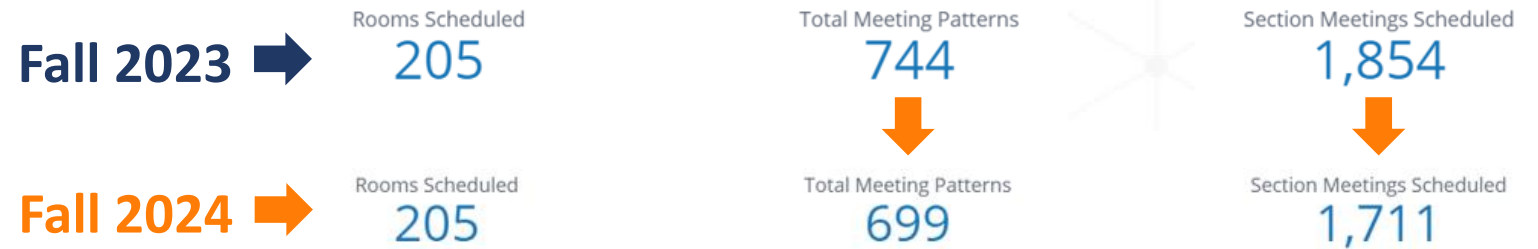


Course	Meeting Schedules	Location
ENG-101-E097	09/04/2024-12/18/2024 In Person Lecture Wednesday 06:20PM - 09:05PM, Pitkin Education Center, Room B-320	Paramus
ENG-101-E098	09/05/2024-12/19/2024 In Person Lecture Thursday 06:20PM - 09:05PM, Pitkin Education Center, Room C-308	Paramus
ENG-101-E183	09/28/2024-12/21/2024 In Person Lecture Saturday 11:00AM - 02:20PM, Pitkin Education Center, Room L-160	Paramus
ENG-101-HB011	09/04/2024-12/21/2024 In Person Lecture Monday 09:30AM - 10:45AM, Pitkin Education Center, Room S-344 (more)...	Paramus
ENG-101-HE099	09/10/2024-12/17/2024 In Person Lecture Tuesday 06:20PM - 09:05PM, Pitkin Education Center, Room TBA	Paramus
ENG-101-L110	09/26/2024-12/19/2024 In Person Lecture Tuesday, Thursday 09:22AM - 10:56AM, Lyndhurst, Room LYN-421	Meadowlands
ENG-101-L141	09/26/2024-12/19/2024 In Person Lecture Tuesday, Thursday 01:55PM - 03:29PM, Lyndhurst, Room LYN-409	Meadowlands
ENG-101-N030	09/04/2024-12/21/2024 In Person Lecture Monday 11:00AM - 12:15PM, Pitkin Education Center, Room L-150 (more)...	Paramus
ENG-101-N065	09/04/2024-12/21/2024 In Person Lecture Tuesday 02:00PM - 03:15PM, Pitkin Education Center, Room S-344 (more)...	Paramus
ENG-101-N066	09/04/2024-12/18/2024 In Person Lecture Monday, Wednesday 02:00PM - 03:15PM, Pitkin Education Center, Room L-346	Paramus
ENG-101-N084	09/04/2024-12/18/2024 In Person Lecture Monday, Wednesday 03:30PM - 04:45PM, Pitkin Education Center, Room TBA	Paramus
ENG-101-W092	09/04/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W093	09/04/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W094	09/04/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W095	09/04/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W096	09/04/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W097	09/04/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W098	09/04/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W099	09/04/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W196	09/25/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W197	09/25/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W198	09/25/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W199	09/25/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W301	10/26/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-W302	10/26/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Online Asynchronous
ENG-101-WC222	10/26/2024-12/21/2024 Asynchronous Lecture Days to be Announced, Times to be Announced, Room to be Announced	Center for Online Learning



Fall 2024 Schedule Creation and Plan

- The draft of the 2024 Fall Master Schedule was then shared with the Deans and Chairs for review and input.
- Adjustments were suggested by Chairs to Deans and forwarded to the Scheduling Office and Associate Registrar for input.
- Schedule opened for viewing and registration for Fall 2024 on April 1st.



Fall 2024 Schedule Analysis

- **Data Driven Schedule:** For the first time, data was used to create the course schedule.
- **Monitoring:** Trained staff in Student and Academic Affairs are monitoring real time course enrollment trends and data and making decisions.
- **Standard Course Grid:** A standardized course grid has been implemented to reduce overlap and waste.
- **Over 100 Fewer Sections:** Many of the sections that were deleted were online sections where, in the past, we had split enrollments.

With nearly 5,000 total students already enrolled for Fall 2024, full-time continuing student **credit loads are up 14%!**

With Ad Astra's support, we were able to implement all our takeaways from earlier:

- ✓ Utilize predictive **historical and student pathway data** when creating course sections for future terms.
- ✓ **Monitor course fill rates** to maximize efficiency and open new sections based on demand.
- ✓ Utilize and adhere to it **standardized on-grid meeting pattern** as much as possible.
- ✓ **Empower Chairs and Deans** to utilize monitoring data.
- ✓ Be conservative with scheduling online sections.





Future Plans



Future Term Scheduling Plans

- **“Scheduling Task Force”** has been formed to discuss continuous improvement of our schedule grid times and processes.
- Dozens of Chairs are training this Summer on Ad Astra’s Registration Monitoring to track course enrollments and make real time, data driven, decisions about course additions.
- A goal has been set of **moving to “yearlong” scheduling**. The benefits include:
 - Reduced stress on staff and reduction of registration crunch periods.
 - Greater schedule reliability for students as courses they need will be offered well in advance.
 - Improved planning and advising for students to finish effectively and efficiently.
- **“15 to Graduate”** marketing campaign is rolling out shortly to support students' completion goals and Degree Velocity®.
- Additional work is planned with developmental education to reduce the average number of credits-to-degree and time-to-degree.



Questions, Answers, and Discussion



Continue the Conversation

- Dr. A.J. Trump – atrump@bergen.edu
- Dr. Andrew Tomko – atomko@bergen.edu

Let's discuss a plan for your institution.

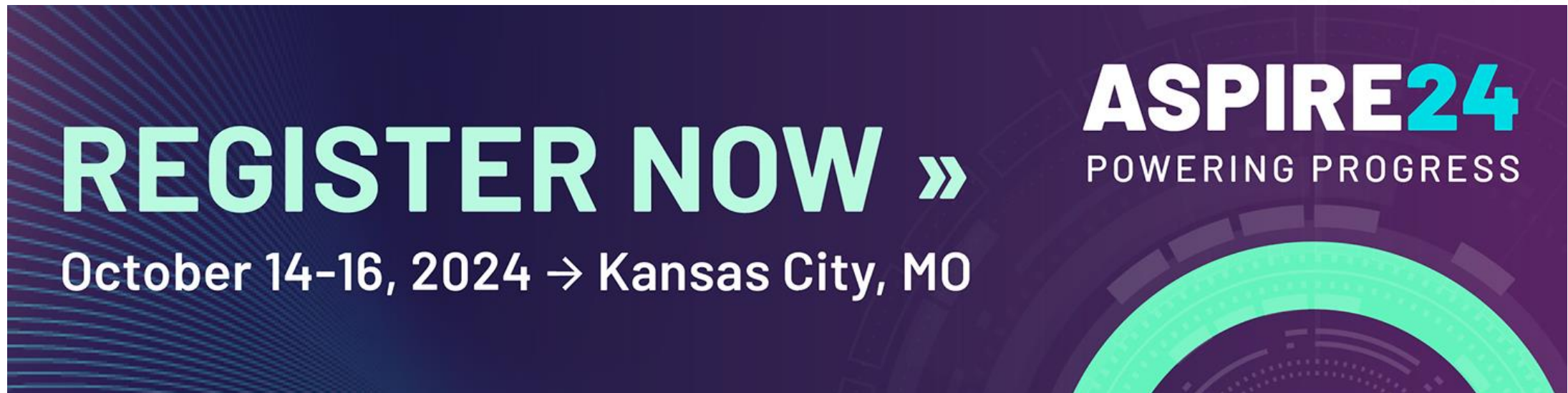
- Emily Peck – Regional Vice President (Northeast)
 - epeck@aais.com
- Nick Cookinham – Client Success Lead (Northeast)
 - ncookinham@aais.com
- **Contact:** aais.com/contact
- **Client Community:** spacestation.aais.com



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A dark purple banner with a green and white geometric pattern. The text 'REGISTER NOW' is in large, bold, light green letters, followed by a double arrow symbol. Below it, the dates and location 'October 14-16, 2024 → Kansas City, MO' are written in white. On the right side, the 'ASPIRE24' logo is displayed in white and light blue, with 'POWERING PROGRESS' underneath in white. A green and white circular graphic is partially visible at the bottom right.

REGISTER NOW »

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