Monroe Community College
STATE UNIVERSITY OF NEW YORK

Ad Astra Platinum Analytics

President's Expanded Cabinet
December 14, 2018

Inspiring every day.

Andrea C. Wade, Ph.D.
Provost and Vice President, Academic Services

Performance Improvement Fund Proposal

Partnership for Course Schedule Analytics for Increased Enrollment and Completion

Partners

SUNY New Paltz, SUNY Delhi, SUNY Maritime, Adirondack, Finger Lakes, Herkimer, Jamestown, Tompkins Cortland, Mohawk Valley, Onondaga, Erie

Category Alignment

Best Practice Student Success Programs, Organizational Strategies & Guided Pathways

Course scheduling strategies to reduce time to degree

Pathways Management: Operationalizing Pathways with a lens on Course Demand

Analytics and infrastructure needed to demonstrate impact on student success

SUNY PIF Grant to Improve Retention and Completion Through Strategic Scheduling

- Software to help determine how students can improve their paths to graduation while bringing about efficiency in use of both faculty and facility resources.
- Platinum Analytics will analyze five years of historical enrollment patterns, student academic history, and degree audit system rules to forecast the number of seats and sections a campus should be offering for upcoming terms.
- Platinum Analytics will use MCC's student and course offering data to determine how to provide a course schedule that will meet student need with a goal to improve retention & completion rates and overall student success.

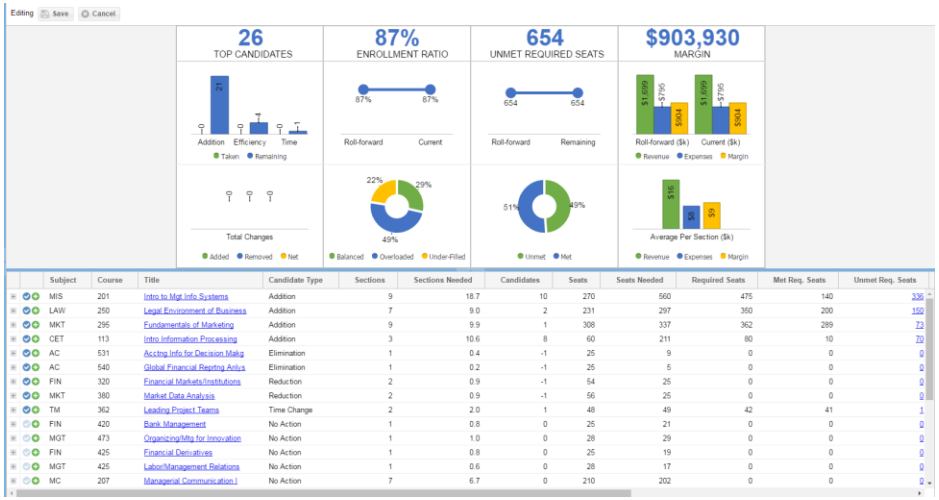
MCC Team

- Andrea Wade, Executive Sponsor
- Amy Ariola, Computing & Information Technology
- Kimberley Collins and Kelsey Bright from Academic Services
- Amanda Colosimo, Geosciences and Academic Senate
- Antonia Custodio, Downtown Campus and Astra user
- Paul Emerick, Biology
- Betsy Ripton, Registration & Records
- Blaine Grindle, Facilities
- Ashleigh Mallory, Controller's Office - Grants Accounting and Senate Planning Committee
- Kim McKinsey-Mabry, Dean of Community Engagement & Dev.
- James Murphy, Biology Department Chair
- Phil Oettinger, Learning Resources
- Oleg Vyshnyvetskyi, Computing and Information Technology
- Holly Wynn-Preische, Advisement & Transfer

What is Platinum Analytics?

A patented modeling tool that allows institutions to forecast student demand and create student friendly schedules (conflict-free) while maximizing institutional resources:

- Analyzes several types of academic data (historical sections and degree audit) to determine student demand (need for courses)
- Informs academic units' decision making to ensure schedules are aligned to assist with on-time graduation
- Provides 'snapshots' during active registration to allow academic units the opportunity to intervene as necessary



Goals and Performance Indicators

- Common project goals and focus
  - Improve student scheduling access
  - Evaluate opportunities for improved efficiencies
  - Aid in discussion and development of student pathways

- Common measurable performance indicators
  - Improve student access to required courses
  - Increased student credit hour load
  - Decreased unproductive course registrations
  - Reduce class cancellations
  - Improved course fill rates/resources optimization

Pitfalls of Current Practices in Scheduling

- Rolling class schedules forward based on past demand combined with anecdotal information or faculty preferences to drive the schedule development.
- Ad Astra found that these practices can lead to
  - Additional challenges for students who need specific schedules to complete their programs
  - Increased institutional costs of running programs

Make use of Evidence-based Decision Making

- Platinum Analytics should allow MCC to make adjustments to a roll-forward schedule that can positively impact students' ability to graduate on time and allow for better use of College resources.
- Ad Astra found that these practices can
  - Positively impact students' ability to graduate on time, and ensure more efficient use of available resources.
  - Result in earlier and improved planning by academic departments and administrators.
  - Help free under-utilized space that can be used for higher-demand courses.
  - Address space bottlenecks, but also allows current students the opportunity to graduate sooner while making room for growing enrollment.

Forecasting Analysis Types

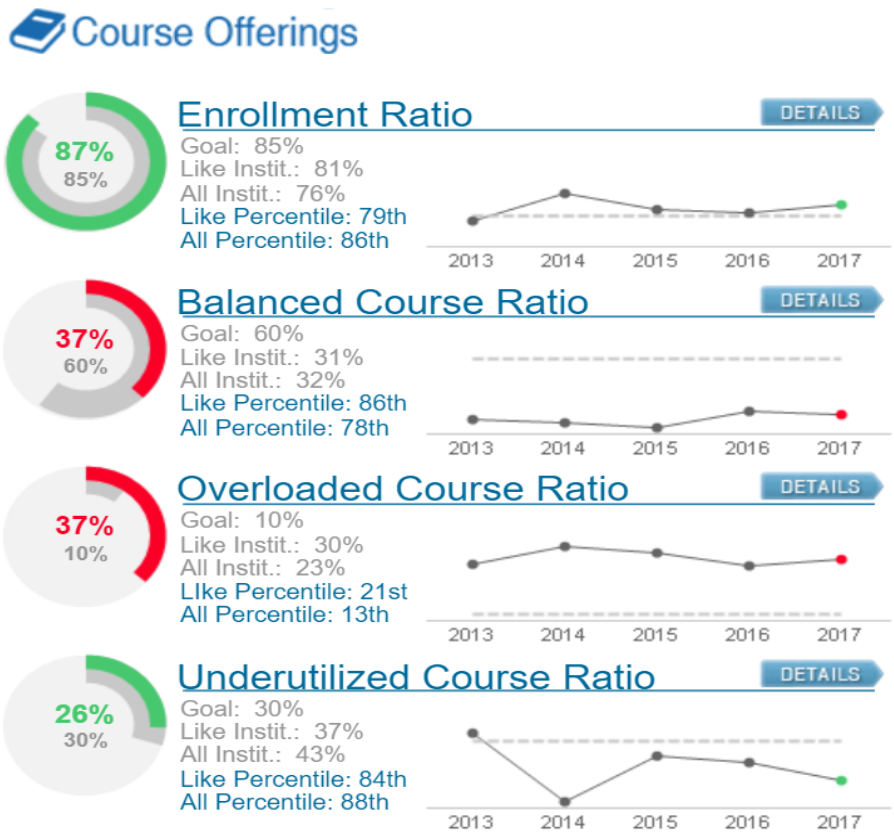
- ***Historical Baseline***
  - Number of students enrolled in a course in the last like term (Fall 2017)
- ***Historical Trend***
  - Mathematical trend of demand based on the enrollment over the last five years
- ***Program Analysis***
  - Uses the degree audit data to review courses students need for upcoming terms
  - All options are considered equally
  - Considers eligibility for each course based on registration restrictions and prerequisites
- ***Predictive Program Analysis***
  - Uses the degree audit data to review courses students need for upcoming terms
  - Options are updated based on choice preference, term preference, and term progression
  - Considers eligibility for each course based on registration restrictions and prerequisites
- ***Planner/Pathways Analysis***
  - Uses program pathway sequences to review “next up” courses for students to assign demand and measure progression to degree

Higher Education Scheduling Index Dashboards

Course Offerings Metrics – SUNY Fredonia Example

Course offering metrics measure and benchmark:

- Course bottlenecks preventing progression to degree
- Empty offered seats that could be reallocated
- Course demand projections to highlight highest impact potential changes

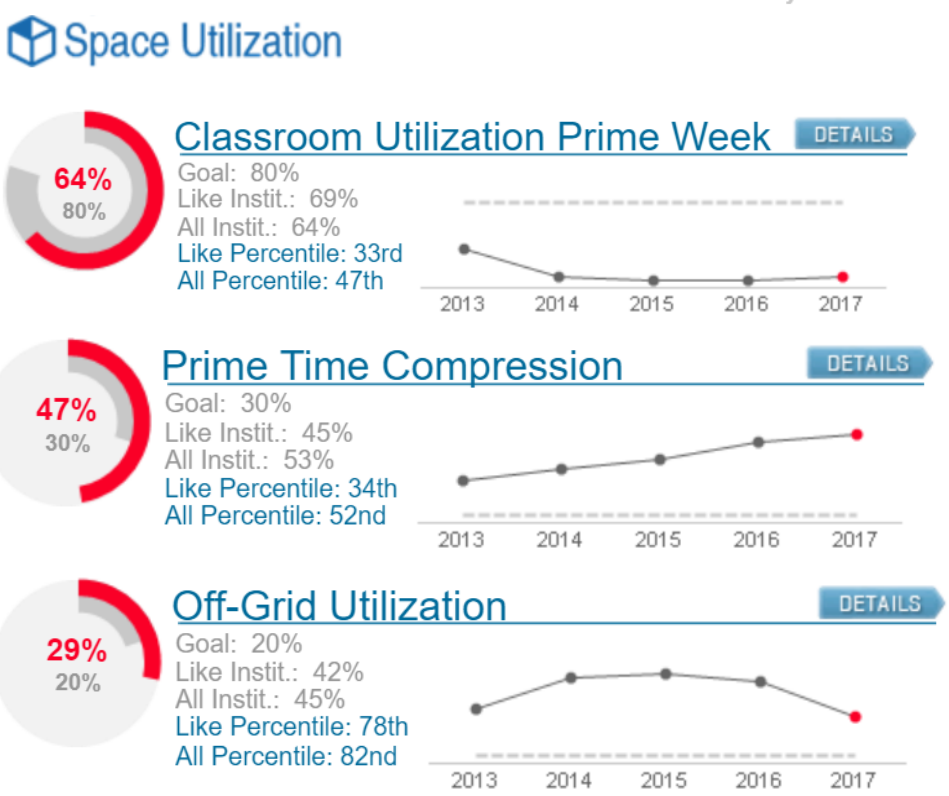


Higher Education Scheduling Index Dashboards

Space Capacity Metrics – SUNY Fredonia Example

Capacity metrics measure and benchmark:

- Utilization of rooms and potential space bottlenecks
- Alignment or disconnects in room sizes to section size
- Compression of sections in primetime
- Measurement of sections that are scheduled off the dominant scheduling grid



The Process

- Fall 2018:
  - Ad Astra will analyze five years of historical course demand and enrollment data, including historical demand trends, time availability, and section-to-section scheduling conflicts—MCC data is currently being loaded to the Astra cloud for analysis
- Spring 2019:
  - The analysis will guide the first review of Fall 2019 schedule for the academic departments
  - Select a small number of possible scheduling options based on the data review for Fall 2019
- Fall 2019 Registration
  - Monitor the enrollment snapshot report that highlight weekly enrollment changes by course, looking for high or low registration velocity

SUNY ROI & Value Realized

SUNY Fredonia

- $283,000 in institutional savings in year 1
- 1.9% Increase in credit hour load after reducing over 90 sections in the first year
- Data Recommendations allowed hiring of faculty in high demand programs
- Created a Campus Dialogue & an Accountability Structure
- Course cap, Course coding and Course cancellation methodology refined

Schenectady County Community College

- $366,000 in instructional savings in year 1
- Optimized course schedule to reallocate resources from 96 eliminated sections to key high demand areas
- Added $16,512 tuition rev to spring by adding sections
- Increased average credit hour load by 25% from 8.49 to 10.65 for spring term
- Reduced course offerings to align with a 10% reduction in Fall 2016 enrollment

Alfred State College

- Realigned meeting patterns that contributed to waste across campus

SUNY Oneonta

- Added 22 high demand sections to the School of Economics and Business
- Removed low fill sections saving $24,000 in instructional cost
- Review of course cap methodology

Dutchess Community College

- Creating policing around meeting patterns to reduce room waste and student roadblocks for access
- Examined the impact of closing an extension site to students access to needed courses
- Increased spring credit hour loads by 13.3%, from 8.34 to 9.45
- $23,574 additional tuition revenue from added sections alone
- $43,000 in instructional cost savings in the [illegible] term

Questions?