Deep Dive Session #2: Developing and Managing the Class Schedule
Presenters

• Michelle White, SEM Core Team
• Sherrie Guerrero, SEM Core Team
Session Agenda

• Overview of Strategic Enrollment Management
• Understanding FTES
• Developing and the Schedule.
  • Using data to make informed decisions
  • Processes Involved in building the schedule
  • Navigating the difficult issues in the process
• Managing the Schedule
What makes Strategic Enrollment Management *Strategic*?
Strategic Enrollment Management

• What is the importance of SEM from your perspective?
• What changes do you see coming that will impact our approach to SEM?
• What do you hope to learn today?
Core Purpose of SEM

✓ Optimize Enrollment
✓ Promote Student Success
✓ Ensure Fiscal Viability
✓ Quality and Relevant Programs
✓ Equitable Access and Outcomes
✓ Data-rich Environment
✓ Communications and Marketing
✓ Collaboration
SEM
Student Success Continuum

Bontranger (2018)
SEM Tools & Resources

• Assessments & Evaluations
• Data Resources & Tools
• Exemplars & Models
• Promising Practices
• Professional Development & Services

https://visionresourcecenter.cccco.edu/ask/topic/sem
SEM-ASK Resources & Tools

1. Resource Guides
2. SEM Institutional Self-Assessment
3. FTES Calculator
4. Promising Practices
5. SEM Program
6. Regional Workshops

https://visionresourcecenter.cccco.edu/ask/topic/sem
Enrollment and FTES

• Establish enrollment goals
• Budget allocations
• Planning purposes
  – Strategic planning
  – Education master planning
  – Staffing
  – Facilities planning
Productivity Measures

• Enrollment: the number of duplicated headcount
• Headcount: the number of unduplicated headcount
• FTES: full-time equivalent students
• WSCH: total weekly student contact hours
Efficiency Measures

- FTES/FTEF Ratio
- Yield (FTES/Sections)
- Load (WSCH/FTEF)
- Fill Rates (section enrollment capacity/enrollment)
# Enrollment and FTES Data Dashboard

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<tr>
<th></th>
<th></th>
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<tr>
<td>Enrollment</td>
<td>120,431</td>
<td>122,684</td>
<td>125,964</td>
<td>124,625</td>
<td>123,448</td>
<td>3,017</td>
<td>3%</td>
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<tr>
<td>FTES/FTEF</td>
<td>16</td>
<td>16</td>
<td>15</td>
<td>14</td>
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<td>-2</td>
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<tr>
<td>Load (WSCH/FTEF)</td>
<td>575</td>
<td>574</td>
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<td>559</td>
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<td>-3%</td>
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</table>
FTES Forecasting Techniques

• Purpose
  – Enrollment management
  – Establishing growth targets
  – Budget planning and development

• Techniques
  – Yield Projection Model
Yield Projection Model

• Methodology
  – Begin with the FTES file from the previous like term
  – Aggregate yields by specified variables
    • College, Accounting Method, Subject, Course Number
  – Calculate number of sections per course
    • 30 sections of English 101
Yield Projection Model

• Methodology (continued)
  – Calculate FTES for the total number of sections
    • 108 FTES for 30 sections
  – Calculate yield by dividing total FTES by the number of sections
    • $\frac{108}{30} = 3.6$ FTES per section
Yield Projection Model

• Methodology (continued)
  – Now get file with current sections offered
  – Aggregate the number of sections offered
    • Current term is offering 25 sections of English 101
  – Match prior term’s yields to current term
    • Unique ID (English101)
  – Multiply number of current sections by previous term’s yield
    • 25 sections * 3.6 yield = 90.0 FTES
Yield Projection Model

• Adjustments
  – Change in the number of sections

  \[ \text{Current Term Sections} - \Delta \text{Sections} \]

  – Change in yields
    • Apply an overall growth/attrition factor based on current trends
Yield Projection Model

• Limitations
  – Can only be calculated when the schedule is ready
  – New courses are given a marginal mean
  – May not account for external factors that impact enrollment
The Class Schedule

• SEM is not just about the class schedule, however...
  – the schedule is a critical component of SEM
  – Operationalizes our strategic approach to enrollment management
  – Operationalizes our Guided Pathways work
• It is one of the most complex things we do!
• Developing and Managing the Schedule Resource Guide
Impact of the Class Schedule

• A well balanced schedule considers:
  – needs of students,
  – the appropriate pedagogy,
  – required resources.

• Expected Outcome: A class schedule that facilitates student completion and optimizes FTES generation
Scheduling Roles

• How do colleges/and your college normally develop a schedule?
• Is it roll-over or zero-based?
• What is the role of faculty in the process?
• How are student needs factored into the schedule-development process?
• Are schedules developed in silos (e.g. departments) or holistically? Who looks at the big picture?
• Has your college integrated discussion of pathways into the schedule-development process?
Broad Topic Areas in Scheduling

- Setting District and College Fiscal Targets
- Building the Schedule
- Estimating the Cost of the Schedule
- Managing the Schedule once Enrollment Begins
- Planning for Future Schedules
Setting Fiscal and District Targets

• Historically districts are funded on FTES (enrollments)
• Districts set FTES targets annually, then determines resources to reach targets
• Typically a function of base allocation plus growth allowed by the state
• Other factors affect targets
Setting Fiscal and District Targets

• Changes to the funding model
  – FTES
  – Equity/Student Need
  – Completion

• Several completion metrics in funding model

How does the new funding model change how colleges might think about the schedule?
Building the Schedule

- Reviewing Student Need & Success Data
- Establishing Productivity Targets
- Determining Curricular Offerings
- Determining Schedule Patterns, Locations, Modalities
- Using Classrooms Facilities Efficiently and Effectively
Scheduling Data

• What data? How is it used?
  – Enrollment
  – Efficiency/Productivity
  – Student Demand
  – Student Success/Completion
Data to Guide Decisions

Using Data to Inform the Schedule

**TASK:**

1) Identify and discuss data currently used in schedule development and their purposes.

2) Identify other types of data/information that will be useful as your college transitions to guided pathways?
### Developing and Managing the Schedule

What data do you use in schedule planning, development, or evaluation?

<table>
<thead>
<tr>
<th>Data Metric</th>
<th>Source</th>
<th>What does it tell us? How do we use it?</th>
<th>When is it used?</th>
<th>Who uses it?</th>
<th>Who else might benefit from understanding it?</th>
<th>What other data might be helpful?</th>
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</thead>
<tbody>
<tr>
<td>Ex: Fill Rates</td>
<td>• Research / Instructional Reports</td>
<td>• Classes scheduled to meet demand.</td>
<td>During registration</td>
<td>• VPI</td>
<td>Faculty</td>
<td>• Number of enrollments</td>
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<tr>
<td></td>
<td></td>
<td>• Used to assess schedule performance.</td>
<td></td>
<td>• Deans</td>
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<td>• Course capacity</td>
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## Data to Guide Decisions

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<tr>
<th>Course I.D.</th>
<th>Sections</th>
<th>Enrollment</th>
<th>Total Seats (Room Capacity)</th>
<th>Weekly Contact Hours</th>
<th>Actual FTES</th>
<th>Potential FTES*</th>
<th>WSCH</th>
<th>Total FTEF</th>
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<td>3</td>
<td>91</td>
<td>96</td>
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<td>0.60</td>
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<td>55</td>
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# Data to Guide Decisions

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<th>Course I.D.</th>
<th>Actual FTES</th>
<th>Target FTES</th>
<th>Fill Rate</th>
<th>FTES/Section</th>
<th>FTES/FTEF</th>
<th>WSCH/FTEF (Load)</th>
<th>Target FTES/Section</th>
<th>Target WSCH/FTEF (Load)</th>
<th>Target FTES/FTEF</th>
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<td>ACCTG 201</td>
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# Data to Guide Decisions

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<thead>
<tr>
<th>Class</th>
<th>Comp</th>
<th>TrmYr</th>
<th>Stdnts w/out Seats</th>
<th>Avg Nbr Sections They Tried to Reg Into</th>
<th>Total Seats</th>
<th>Students w/out Seats as Pct of Total Seats</th>
<th>Total Sections</th>
<th>Avg Seat Cap</th>
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<td>210</td>
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<tr>
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<td>6%</td>
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<td>29%</td>
<td>5</td>
<td>30.0</td>
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</table>
Scheduling and Space Utilization Measures

- Number and distribution of course sections
- Enrollments by discipline and course length
- Sections by course classification
- Fill rates by course and modality
- Room and seat utilization
- Occupancy rate
- Distribution of learning spaces by type and size
- Alignment of course enrollments to classroom capacity
### Scheduling Data Dashboard

<table>
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<tr>
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<td>Enrollment</td>
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<td>122,684</td>
<td>125,964</td>
<td>124,625</td>
<td>123,448</td>
<td>3,017</td>
<td>3%</td>
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<tr>
<td>Capacity</td>
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<td>150,456</td>
<td>153,222</td>
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<td>Fill Rate</td>
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<td>82%</td>
<td>81%</td>
<td>79%</td>
<td>-4%</td>
<td>-5%</td>
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# Course Schedule Heatmap

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<tr>
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<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<td>61</td>
<td>67</td>
<td>74</td>
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<tr>
<td>9am</td>
<td>153</td>
<td>260</td>
<td>228</td>
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<td>142</td>
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<td>10am</td>
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<td>12pm</td>
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<td>94</td>
<td>93</td>
<td>82</td>
<td>69</td>
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Establishing Productivity Targets

• What are your actual class schedule costs for the past three years? Is that information disaggregated by full-time, overload, and part-time categories? Do you know whether or not the budget for the class schedule was adhered to, was over spent, or resulted in savings? How might you adjust next year’s budget to accommodate this information?

• What types of leave are negotiated for faculty in your collective bargaining agreement? Do you have plans for covering them? How will that be done?

• How does your college address the FON? What processes are used to balance faculty retirements with the hiring of new faculty? How are these processes connected to program review processes?

• What processes are in place for assuring that part-time faculty load assignments do not exceed established limits? Who is involved in those processes? Who should be involved?
Determining Curricular Offerings

• Three broad categories:
  – Transfer
  – Career Technical
  – Basic Skills

• Balance

• Sequence

• Student Completion

• Date/Time/Method of Instruction
Determining Schedule Times, Locations, and Modalities

• Does your schedule development timeline take into consideration factors such as the need to review and incorporate discussions about sequencing, pathways, course mix, and student need/demand data at the college level, division level, department level, and discipline level?

• Is schedule development done in silos (e.g., within separate divisions, departments, disciplines)? If so, what are the advantages and disadvantages of this? How might Guided Pathways influence the way schedules are built?

• What type of schedule building process does your college use? Is it effective? Why or why not?

• Does your college follow a process that analyzes the proposed schedule and makes adjustments based on conformity with block scheduling modules? Why is this step important to students and for optimizing room utilization?

• Does the college schedule process ensure that early morning, later afternoon, evening, and Friday block scheduling modules have section offers for students to select? Why is this scheduling goal important?
Effective Use of Classroom Space

• Does the college have a campus-wide room inventory?

• What reports are available about space utilization and allocation? How do classroom allocations get made? Who is involved in those conversations?

• Is there an established process to address room usage in case of a scheduling conflict?

• Does your college periodically review classroom utilization to ensure that classroom underutilization is not a problem and to ensure that all (or nearly all) potential FTES is realized?
It Comes Down to Balance and Completion

- **Q2**: High Demand, Low Capacity
- **Q1**: High Demand, High Capacity
- **Q3**: Low Demand, Low Capacity
- **Q4**: Low Demand, High Capacity
Building a Student-Centered Schedule

The “Perfect” Schedule

1) Identify and discuss the elements of a perfect schedule from a student’s perspective

2) Considering your own college’s schedule how well does it align with the perfect schedule you discussed in item 1?

3) How will the process of building a class schedule evolve with Guided Pathways?
Difficult Issues

• What are some of the challenges you encounter when attempting to develop a schedule?
• How do you navigate scheduling when the collective bargaining agreement, academic senate work, and district needs are at odds?
• How do you resolve these issues?
Managing the Schedule

• What are the stipulations in the faculty collective bargaining agreement about course cancellations or minimum class size?

• What conversations occur about canceling or adding classes at the beginning of each term?

• What research has been done to evaluate the impact of class cancellations on student enrollment and completion?

• How can you plan for additional capacity that may be needed in case there is an opportunity to add classes?

• How have you identified which capstone or low-enrolled classes need to be accommodated? How are they sequenced over time?
Estimating the Cost of the Schedule

• What are your actual class schedule costs for the past three years? Is that information disaggregated by full-time, overload, and part-time categories? Do you know whether or not the budget for the class schedule was adhered to, was over spent, or resulted in savings? How might you adjust next year’s budget to accommodate this information?

• What types of leave are negotiated for faculty in your collective bargaining agreement? Do you have plans for covering them? How will that be done?

• How does your college address the FON? What processes are used to balance faculty retirements with the hiring of new faculty? How are these processes connected to program review processes?

• What processes are in place for assuring that part-time faculty load assignments do not exceed established limits? Who is involved in those processes? Who should be involved?
Planning for Future Schedules

• What are the college’s program viability processes? How are they tied to curriculum and program review processes? Are you following those processes?

• Have you developed a growth plan that identifies which areas can grow and which cannot? Have deans and faculty been involved in those conversations?

• What is your plan for reductions that may need to be made? Which programs will not be offered, and have deans and faculty been involved in those conversations?

• At which sites will you offer instruction? Is there adequate support for students and faculty?

• How do you assure there are adequate support services to accommodate increased course offerings?

• Is evaluation of the schedule a part of comprehensive program review?
Questions?

Thank you for your time!!