Overview

• What Program Velocity is and how it is calculated

• How Program Velocity is distinct from existing measures of student success

• How we work with academic programs to identify institutional constraints to velocity

• Impact of velocity on programs and advisors

• Challenges
Calculating Student Velocity

# credits a student is enrolled in that count towards credential requirements

Total # of credits required for degree program

When a student is enrolled in 15 credits that count...
Velocity will be 12.5% in a 4-yr program or 25% in a 2-yr program
How Do We Determine Whether Credits Count to Credential?

- Background algorithm pulls enrollment data and fits courses into STAR Audit

- Determines credits that count to credential
  - Gen Ed, major, general electives

- Recalculates “allowed” general electives each semester to reach total credits required for degree
  - Double dips; waivers/exceptions; finishing requirements in >/< fewer than recommended credits

Program Velocity Definition

\[
\sum \frac{\text{Student Velocity in Program for semester}}{\# \text{ of students in program for semester}} = \text{Program Velocity}
\]

*Currently excludes p/t students and double majors
How is Program Velocity Different from Other Measures of Student Success?

- Includes declared majors, transfers, & traditional first-time/full-time students

- “Real time” indicator of progress based on current majors

- Based on course enrollment

*Alerts programs to programmatic constraints & bottlenecks*

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**UHM Program Velocity**

**All Academic Programs**

- **Quadrant I**: An academic program in this quadrant is doing better than the program average, however, its program velocity is still below the desired velocity.

- **Quadrant II**: An academic program in this quadrant is doing better than the program average, and its program velocity is below the desired velocity.

- **Quadrant III**: An academic program in this quadrant is doing better than the program average, however, its program velocity is still above the desired velocity.

- **Quadrant IV**: An academic program in this quadrant is doing better than the program average, and its program velocity is above the desired velocity.
Full-time students only, classified as primary majors
Vertical axis and bubble color are for differentiation purposes only

Note: Each program lists number of students enrolled in Spring '14 (n). The number "n" excludes part-time students, double majors, and secondary majors.
### Approach to Working with Programs

- Meetings and interviews with department chairs
  - Place program into general category according to operational characteristics

- Analyze data specific to the department
  - Program in STAR
  - Velocity
  - Course constraints
  - Advising patterns
  - Identify students taking courses that do not count & why

- Provide actionable recommendations
Diving Into the Data – CC Program Example

19% of students taking courses that don’t count to credential

Dissecting the 75% of “Other/Unknown” Courses that Do Not Count

<table>
<thead>
<tr>
<th>Course Planning Category for Program A Majors</th>
<th># of “Other”Courses in Category</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS/Arts &amp; Humanities Option</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>AS/Natural Sciences Option</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>AS/Social Sciences Option</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>English Requirement Option</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Math Requirement Option</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total number of courses that could satisfy a program requirement, if that requirement had not been satisfied previously</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Courses not listed as options to satisfy course requirements/Unknown</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
Diving Into the Data – Program Y (BS)

Students are enrolled in 529 credits that do not count to their program.
Course Offering Conflicts

In Fall 2014, 23 of 34 Program Y course offerings have time conflicts. Could spread out meeting times and/or meeting days to avoid conflicts (e.g., MWF meetings, afternoon courses).

<table>
<thead>
<tr>
<th>Days</th>
<th>Times</th>
<th>Courses that Conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR</td>
<td>10:30-11:45</td>
<td>PROG 304 (Core), 314 (Concentration Core), 319 (Major Elective), and 425 (Major Elective)</td>
</tr>
<tr>
<td>TR</td>
<td>12:00-1:15</td>
<td>PROG 313 (Core) and 403 (Major Elective)</td>
</tr>
<tr>
<td>TR</td>
<td>1:30-2:45</td>
<td>PROG 301 (Core) and 431 (Concentration Core)</td>
</tr>
<tr>
<td>WF</td>
<td>9:00-10:15</td>
<td>PROG 101 (Intro), 302 (Concentration Core), 334 (Major Elective), and 350 (Major Elective)</td>
</tr>
<tr>
<td>WF</td>
<td>10:30-11:45</td>
<td>PROG 302 (Concentration I Core), 321 (Concentration I Elective), and 431 (Concentration I Core)</td>
</tr>
<tr>
<td>WF</td>
<td>12:00-1:15</td>
<td>PROG 306 (Core), 321 (Concentration II Elective), 420 (Concentration II Elective)</td>
</tr>
<tr>
<td>WF</td>
<td>1:30-1:45</td>
<td>PROG 100 (Internship), 303 (Core), 369I (Concentration II Elective)</td>
</tr>
<tr>
<td>MW</td>
<td>10:30-11:45</td>
<td>PROG 324 (Concentration II Elective) Students enrolled in this course would have difficulty enrolling in PROG 302, 321, or 431</td>
</tr>
<tr>
<td>M</td>
<td>9:00-11:30</td>
<td>PROG 333 (Concentration II Core) Students enrolled in this course could not take PROG 324</td>
</tr>
</tbody>
</table>

Core Course Seat & Semester Constraints

Red Flag Course

- PROG 4xx
  - Is required for both concentrations
  - Only offered in Fall
  - Capped at 40 seats
  - Is at 105% full in Fall 2014
  - Consistently over 100% full in past 3 semesters
Impact of Velocity on Programs and Advisors

Program Level
- Course Offerings
- Focus Offerings
- Seat Constraints
- Sequencing
- Program Policies/Procedures

Advisors
- Knowledge
- Exceptions
- STAR Concentrations
- Identifying students who need assistance

Student Success

Challenges

- Algorithm, testing, & report automation
- Exceptions and placement of students into concentrations**
- Part-time students & double majors
- Minors and Certificates