Maximizing Instructional Effectiveness–Measurement

Broadly interested in the interplay between data and decisions that benefit our students.

- Assessing student learning/alternative course evaluations/instructional effectiveness and student voice
- Encouraging educational research and evidence-based decision making through data and analytics
- Privacy concerns
- Campus-wide assessment work
- Fostering awareness and making sense of grade distributions/gaps
Supporting faculty awareness of course dynamics and student diversity to inspire action
Learning & Teaching Support

Instructional R & D

Cultural Change
Faculty - Departments - Institution

Educational Learning Analytics
Large Intro Course Gaps

First Generation Students
INTRO COURSE GAPS – Economics (ECN1A)
First Gen

Grade Point

DFW Rate

GPA Gap

FLAT
INTRO COURSE GAPS – Psychology (PSC1) First Gen

DECREASE In GAP
INTRO COURSE GAPS – Chemistry (CHE2A)
First Gen

Grade Point

DFW Rate

GPA Gap

INCREASE In GAP
### Selected Incoming Science & Eng Majors Course Gaps

<table>
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<tr>
<th>Subject</th>
<th>Course #</th>
<th>Course title</th>
<th># Instructors</th>
<th>Taught by</th>
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Know Your Students

Planning for Student Success
Know Your Students – Second quarter chem

Basic Course Information

- Class Size: 255
- Male:Female: 71:183
- Transfer Student: <10
- First Generation: 129, 50.8%
- Low Income: 70, 27.6%
- Under Represented Minority: 96, 37.6%
- Native Speaker: 112, 44.1%
- Bilingual: 80, 31.5%
- ESL: 62, 24.4%
- International: <10
- Repeater (DFW): 0
- Concurrent (at least 1 course): 0

Cohort Distribution (latest term)

Of the 255 students in the class, there are 2 students without latest completed term information. Out of these students, 0 are admitted in 201603.

Groups are determined by UCD definition of class level:
Freshman 0.0–44.99
Sophomore 45.0–89.99
Junior 90.0–134.99
Senior 135 units and above

![Cohort Distribution Graph]

- Groped
- Stacked
- Transfer_Admn
- Freshman_Admn

Units Taken at UCD

160.0
150.0
140.0
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0

[0.44.99] (44.99,89.99] (89.99,134.99] (134.99,142]
Students in Academic difficulty

62 Students in Academic difficulty
Know Your Students – Second quarter chem Spring

Top concurrent courses

- MAT016B
- MAT017C
- ANS002
- MAT021C
- BIS002A
- PHY009A
- BIS005
- MAT021B
- MAT017B
- ANT002
- ENL003
- PSC001
- FR002
- SAS098
- MAT016A
- NUT010
- STA013
- MAT017A
- UWP001

0.0 10.0 20.0 30.0 40.0 50.0 60.0 70.0 76.0

Time and Grades

24 Students have not Passed pre-req CHE 2A
Know Your Students – Second quarter PS/Eng Calculus Spring

Basic Course Information

- **98** Class Size
- **55:43** Male:Female
- **<10** Transfer Student
- **42, 42.9%** First Generation
- **32, 32.7%** Low Income
- **30, 30.9%** Under Represented Minority
- **30, 30.6%** Native Speaker
- **32, 32.7%** Bilingual
- **36, 36.7%** ESL
- **<10** International
- **65** Repeater (DFW)
- **0** Concurrent (at least 1 course)

Cohort Distribution (latest term)

Of the 98 students in the class, there are 0 students without latest completed term information. Out of these students, 0 are admitted in 201603.

Groups are determined by UCD definition of class level:
- Freshman 0.0–44.99
- Sophomore 45.0–89.99
- Junior 90.0–134.99
- Senior 135 units and above

[Bar chart showing units taken at UCD with groups labeled: [0.44.99], (44.99,89.99), (89.99,134.99), (134.99,136).]
Know Your Students – Second quarter PS/Eng Calculus Spring

Major Distribution (latest term)

Student Status Distribution (latest term)

42 Students in Academic difficulty
26 Students have not Passed pre-req MAT 21A

80/98 Students taking intro Chem concurrently
Where We’re Heading
Multidimensional Instructional Development for Achievement & Success

ONE COMPONENT

Know Your Students

PRE-COURSE
- Disaggregated student data
- Course historical gap analyses
- Student preparation/prior courses
- Current course enrollments
- Climate data (if available)

DURING COURSE
- LMS engagement
- Tutoring use - internal, external
- Network traffic analyzer
- Class attendance disaggregated
- Engagement - class audio
- Podcast audio analysis
- Assessment IRT, Bloom levels
- Formative classroom feedback
- Real time gap analysis

POST-COURSE
- Disaggregated student data
- Course gap analyses
- Engagement summary
- Class evaluations based on student groups
- Survey results summaries
- Pre/post summaries

10-Week Course
- Time on task survey
- Pre/Post content
- Student motivation
- Student expectations
- Student mindset

Know Your Self - Student facing information based on surveys and specific data elements, peer comments on successful course strategies