

CNSM Data Fellows for Student Success

FOSTERING A DATA-DRIVEN CULTURE FOR STUDENT SUCCESS

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CSULB

CHALLENGE

EMPOWERING CHANGE

- Transitioning from a 'PUSH' to a 'PULL' culture
 - Data tailored to specific interventions at the college and unit level
 - Interventions can vary widely from college to college or among units
- Empowering staff, faculty, and administrators at the department-level to lead the change is critical

Taking Action: Addressing CNSM Students' Needs

For the Student		For the Program
Social <ul style="list-style-type: none">• Introduce students to growth mindset and metacognitive learning strategies• Use Learning Communities to bring students together• Instill a conscious commitment to learning	Academic <ul style="list-style-type: none">• Optimize Course Placement• Mandate programmatic advising• Provide struggling students with timely academic support	<ul style="list-style-type: none">• Maintain a shared database of student performance• Collaborate across disciplines• Redesign and coordinate pre-major courses• Support quality coordinated instruction

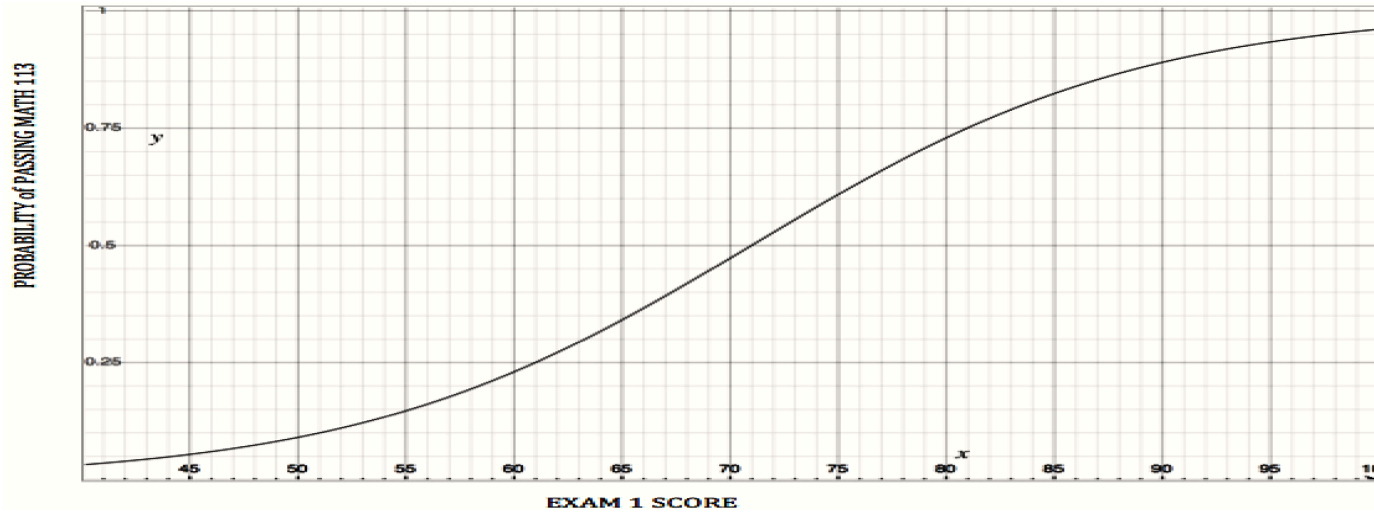
Part 1. Use data to optimize early intervention that address individual student needs, thereby improving success in science and mathematics courses.

Part 2. Promote the “actionable data” culture within CNSM so that students, faculty, advisors and administrators can focus their efforts where they will be the most effective and efficient.

Part 1:

Use data to optimize early intervention that address individual student needs, thereby improving success in science and mathematics courses.

Example: COURSE PLACEMENT



Addressing Potential DFW's using data collected in class: Informed class-specific advising

Early Warning Logistic Model

Dependent Variable: *Weighted Class Score > 70*

- ❖ Significant predictors of student success in Math113:

*ALEKS Score * WebAssign HW * Exam 1*

- ❖ 17% Misclassification Rate

Calculus I Performance

Predicting Future Success

- ❖ Significant predictors of student grade in Math122:Calculus I

*ALEKS Score * Math113 Score * SLO1*

- ❖ Accurate models in prerequisite courses can lead to “Analytics Advising”

	PRED	A	B	C	D	F	TOT
ACTUAL							
A		2	2	0	0	0	4
B		2	2	0	0	0	4
C		0	1	9	2	0	12
D		0	1	1	4	1	7
F		0	0	0	2	1	3
TOT		4	6	10	8	2	30

Part 1:

Use data to optimize early intervention that address individual student needs, thereby improving success in science and mathematics courses.

Example: CNSM PRE-MAJORS EARLY ALERT SPRING 2017

	TOTAL # ENROLLED IN THE COURSE	# EARLY ALERT	# CONTACTED	# APPOINTM ENTS	# OF PM REFERRALS
MATH 113	18	1	1	0	1
MATH 119A	46	6	6	2	3
MATH 122	40	8	8	4	8
MATH 123	49	3	3	2	3
CHEM 111A	104	33	33	13	27
CHEM 111B	128	48	48	20	35
CHEM 220A	26	11	11	6	11
BIOL 211	114	53	53	30	26
2 or more		22	22	14	15
TOTAL	525	163	163	77	114
%		31%	100%	47%	70%

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Part 2:

Promote the “actionable data” culture within CNSM so that students, faculty, advisors and administrators can focus their efforts where they will be the most effective and efficient.

TRANSFER ADMISSIONS REQUIREMENTS

MAJOR SPECIFIC DECLARATION REQUIREMENTS

MANY PATHWAYS



LONG SEQUENCES OF COURSES



IN
↓



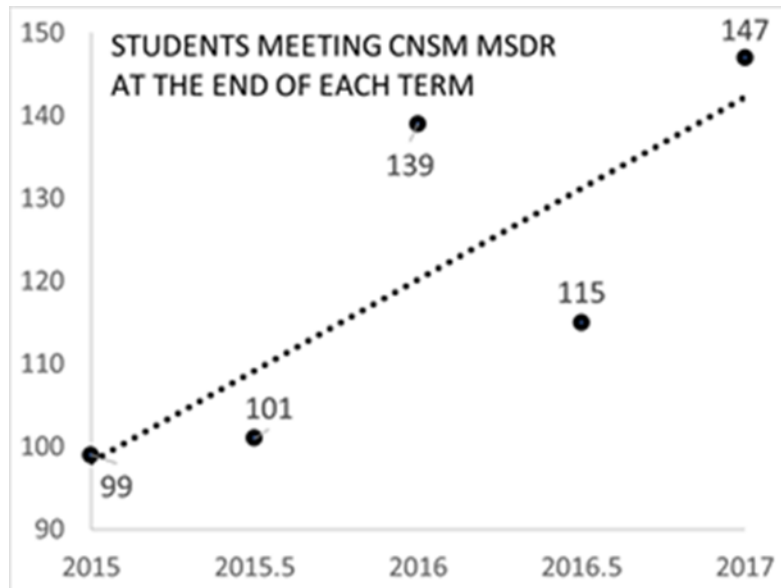
OUT
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Example of CNSM actionable data for advisors

of students declaring major each semester



Possible addition to TABLEAU

- retention/graduation rates measured “since declaration”
- # of students declaring particular major after 1, 2, 3, 4, 5, 6 semesters based on FTF cohorts (with all FTF variables)

Example of CNSM actionable data for advisors

Completion of MSDR milestones vs. time (extractable from EAB)

CNSM PRE-MAJORS as of 4/17						
course completion as of report date	F'14 FTF COMPL	F'14 FTF NON-COMPL	F'15 FTF	F'15 FTF NON-COMPL	F'16 FTF	F16 FTF NON-COMPL
MATH 113	15	0	63	0	182	14
MATH 119A OR 122	17	2	78	6	193	12
CHEM 111A	16	0	78	3	99	3

Example of CNSM Actionable data for advisors

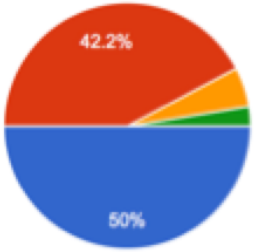
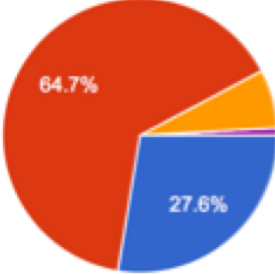
Completion of MSDR milestones – out of sequence

F'16 CPT pass but not in S'17 CHEM 111A
F'16 CHEM 111A PASS BUT NOT IN CHEM 111B
MATH 113 NOT PASSED
CPT NOT PASSED
F'16 MATH 113 BUT NOT IN S'17 CALC
F'16 MATH 122 PASS BUT NOT IN 123 IN S'17

Sharing Data With Students

UNDERGRADUATES

- STAT 108 Student Survey - Graduation Initiative *Dialog*

Q1: How many years do you think it will take you to graduate with a bachelors form CSULB?				Q2: How long do you think it takes the average CSULB student to graduate with a <u>bachelors</u> degree?				Class Standing	n	Mean (Q1)	Mean (Q2)
	4	58	50%		4	32	27.6%	Freshman	50	4.30	4.60
	5	49	42.2%		5	75	64.7%	Sophomore	39	4.67	4.87
	6	6	5.2%		6	8	6.9%	Junior	17	4.76	5.00
	7	3	2.6%		7	0	0%	Senior	7	5.14	5.14
	8 or more	0	0%		8 or more	1	0.9%	Super Senior	3	6.67	6.00

Sharing Data With Students

GRADUATE STUDENTS

- Semester Project
- Institutional Research Data
- 10,500 cases; 60 variables
- Internship Created

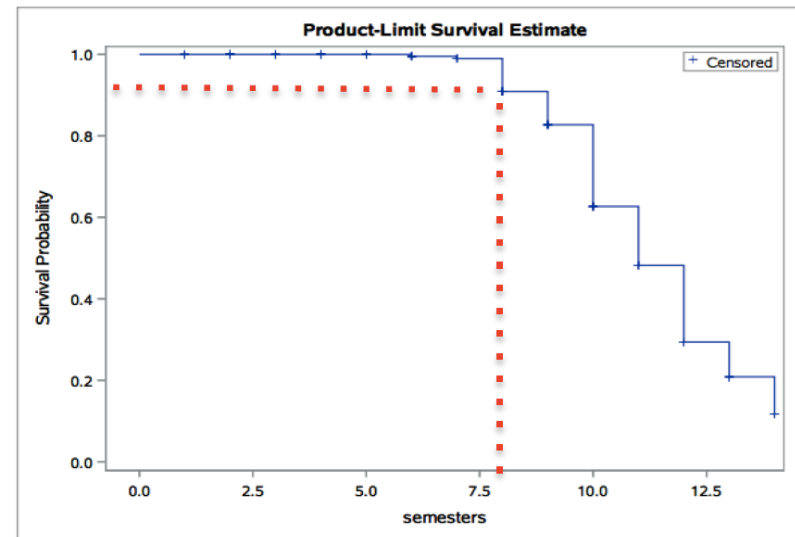


Figure 3 – GRAPH OF SURVIVAL FUNCTIONS

1. Use data to optimize early intervention that address individual student needs, thereby improving success in science and mathematics courses.

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