#### Learning Outcomes Data for Initial Bottleneck Courses, Spring 2006

• Statistics in these tables are based on samples of students enrolled in either Math 1301 or Eng 1302 in Spring 2006. The sample size is denoted by n. The major assessment for Math 1301 is a comprehensive, multiple-choice final exam. The major assessment for Eng 1302 is a college-level research paper.

Spring 2006	Math 1301 College Alg	Eng 1302 Frosh Comp II
% with at least one recorded grade	93.9 $(n=592)$	91.8 (n=622)
% taking/submitting "major" assessment	68.6 (n=592)	65.8 ( <i>n</i> =622)
% with at least grade 70 on major assessment	27.4 ( <i>n</i> =592)	51.8 ( <i>n</i> =622)
% below grade 50 on major assessment	14.5 ( <i>n</i> =592)	8.2 (n=622)
Major assessment average grade	62.1 (n=406)	74.5 (n=409)
% taking/submitting major assessment who passed	74.1 ( <i>n</i> =406)	93.9 (n=409)
% paid students who passed with C or better	36.9 ( <i>n</i> =751)	55.9 ( <i>n</i> =622)

Math 1301	Math 1301		Learning Objective A		Learning Objective B.1		Learning Objective B.2		ing ve B.3	Learning Objective B.4		
% mastery	% mastery		45		5	38	38			42		
(paid students)*		(n=	(n=592)		(n=592)		(n=592) $(n=5)$		(n=5) ( $n=5$		(592)	
% mastery (studen	ts	6	66		5	56		53	53		61	
taking "major" assessm	taking "major" assessment)*		(n=350)		n=350) ( $n=3$		50)	(n=3)	50)	(n=3)	(550)	
Math 1301	Learr Objectiv			rning tive C.2		rning tive D.1		rning tive D.2		rning tive E.1		rning tive E.2
% mastery (paid students)*	No a	lata		38 =592)		40 =592)	,	42 =592)	No	data		41 =592)
% mastery (students taking "major" assessment)*	No a	lata		56 =350)		59 =350)		61 =350)	No	data		30 =350)

Eng 1302	Learning Objective A	Learning Objective B	Learning Objective C	Learning Objective D	Learning Objective E
% of paid students mastering learning objective†	$52 \\ (n=622)$	$52 \\ (n=622)$	52 (n=622)	$52 \\ (n=622)$	$52 \\ (n=622)$
% submitting "major" assessment mastering learning objective†	$79 \\ (n=409)$				

\*Each question on the comprehensive final exam was mapped to one of the Math 1301 learning objectives. The number of students mastering a particular objective is estimated as follows. The total points awarded to all students for all questions corresponding to the given objective was divided by the total points available for the corresponding questions (assuming everyone initially enrolled had taken the final exam). This ratio was then multiplied by the number of paid students. Estimates in the second row are computed in a corresponding manner.

†Estimates based on the number of students who scored a cumulative grade of 70 or better on the research paper.

### Learning Outcomes Data for Initial Bottleneck Courses, Fall 2006

• Statistics in these tables are based on samples of students enrolled in either Math 1301 or Eng 1302 in Fall 2006. The sample size is denoted by n. The major assessment for Math 1301 is a comprehensive, multiple-choice final exam. The major assessment for Eng 1302 is a college-level research paper.

Fall 2006	Math 1301 College Alg	Eng 1302 Frosh Comp II
% with at least one recorded grade	94.3 (n=909)	91.9 $(n=457)$
% taking/submitting "major" assessment	73.4 ( <i>n</i> =909)	57.1 ( <i>n</i> =457)
% with at least grade 70 on major assessment	36.1 ( <i>n</i> =909)	42.5 (n=457)
% below grade 50 on major assessment	16.5 ( <i>n</i> =909)	$8.9 \\ (n=457)$
Major assessment average grade	65.8 ( <i>n</i> =667)	74.1 ( <i>n</i> =261)
% taking/submitting major assessment who passed	74.4 ( <i>n</i> =667)	88.9 ( <i>n</i> =261)
% paid students who passed with C or better	41.4 ( <i>n</i> =986)	46.2 ( <i>n</i> =654)

Math 1301		Lear Objec	•	Learn Objectiv	•	Learn Objectiv	•	Learn Objectiv	•	Learn Objectiv	5	
% mastery	% mastery		43		50 46		6 43		3 43		3	
(paid students)*		(n=	( <i>n</i> =909) 58		(n=909)		=909) ( $n=9$		09)	(n=9)		
% mastery (studen	ts	5			8	63	5	59	)	58		
taking "major" assessm	taking "major" assessment)*		(n=443)		(n=443)		(n=4)		(n=4)		43)	
		5		. J		rning tive D.1		rning tive D.2		rning tive E.1		rning tive E.2
% mastery (paid students)*	No a	lata		46 =909)		46 =909)	,	47 =909)	No	data		2 909)
% mastery (students taking "major" assessment)*	No a	lata		52 =443)		63 =443)		64 =443)	No	data		8 443)

Eng 1302	Learning Objective A	Learning Objective B	Learning Objective C	Learning Objective D	Learning Objective E
% of paid students mastering learning objective†	$46 \\ (n=457)$				
% submitting "major" assessment mastering learning objective†	74 (n=261)				

\*Each question on the comprehensive final exam was mapped to one or more of the Math 1301 learning objectives. The second row shows the average grade (on a scale of 100) for the subset of questions corresponding to each learning objective. These grades were then multiplied by the estimated fraction of all paid students taking the final exam (0.734) to compute the values in the first row.

†Estimates based on the number of students who scored a cumulative grade of 70 or better on the research paper.

# Learning Outcomes Data for Bottleneck Courses, Spring 2007

• Statistics in these tables are based on samples of students enrolled in either Math 1301 or Eng 1302 in Spring 2007. The sample size is denoted by n. The major assessment for Math 1301 is a comprehensive, multiple-choice final exam. The major assessment for Eng 1302 is a college-level research paper.

Spring 2007	Math 1301 College Alg	Eng 1302 Frosh Comp II	Hist 1305 U.S. Hist I
% with at least one recorded grade	92.5 (n=676)	90.9 (n=187)	No data
% taking/submitting "major" assessment	71.0 ( <i>n</i> =676)	58.8 ( <i>n</i> =187)	No data
% with at least grade 70 on major assessment	26.3 ( <i>n</i> =676)	37.9 ( <i>n</i> =187)	No data
% below grade 50 on major assessment	17.8 (n=676)	5.9 ( <i>n</i> =187)	No data
Major assessment average grade	61.0 (n=480)	77.4 ( <i>n</i> =110)	No data
% taking/submitting major assessment who passed	72.7 ( <i>n</i> =480)	93.6 (n=110)	No data
% paid students who passed with C or better	40.7 ( <i>n</i> =736)	57.8 ( <i>n</i> =799)	51.5 ( <i>n</i> =685)

### Learning Outcomes Data for Initial Bottleneck Courses, Fall 2007

• Statistics in these tables are based on samples of students enrolled in either Math 1301, Eng 1302 or Hist 1305 in Fall 2007. The sample size is denoted by n. The major assessment for Math 1301 is a comprehensive, departmental, multiple-choice final exam. The major assessment for Eng 1302 is a college-level research paper. The major assessment for Hist 1305 is an instructor-written final exam.

Fall 2007	Math 1301	Eng 1302	Hist 1305
	College Alg	Frosh Comp II	U.S. Hist I
% with at least one recorded grade	94.1	89.0	94.1
	(n=986)	( <i>n</i> =427)	(n=438)
% taking/submitting "major" assessment	72.6	57.8	75.6
	( <i>n</i> =986)	( <i>n</i> =427)	( <i>n</i> =438)
% with at least grade 70 on major assessment	36.5	48.9	50.2
	( <i>n</i> =986)	( <i>n</i> =427)	( <i>n</i> =438)
% below grade 50 on major assessment	12.6 ( <i>n</i> =986)	3.3 (n=427)	$8.9 \\ (n=438)$
Major assessment average grade	67.8	78.6	73.7
	( <i>n</i> =716)	( <i>n</i> =247)	( <i>n</i> =331)
% taking/submitting major assessment	79.7	92.3	93.4
who passed	( <i>n</i> =716)	(n=247)	(n=331)
% paid students	48.2	51.8	58.1
who passed with C or better	( <i>n</i> =1010)	( <i>n</i> =635)	( <i>n</i> =743)

Math 1301			Learning Objective A		ning ve B.1	5		5		Learr Objectiv	3	
% mastery (paid students)*		57 ( <i>n</i> =986)		48 (n=986)			$ \begin{array}{c cccc} 49 & 46 \\ = 986 & (n=9) \\ \end{array} $			(n=986)		
% mastery (studer	% mastery (students taking "major" assessment)*		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		3	67		$ \begin{array}{c}     63 \\     (n=716) \end{array} $		$60 \\ (n=716)$		
Math 1301	Learr Objecti	3		rning tive C.2		rning tive D.1		rning tive D.2		rning tive E.1		rning tive E.2
% mastery (paid students)*	5! (n=9)	-		38 =986)		43 =986)		59 =986)		58 =986)		46 :986)
% mastery (students taking "major" assessment)*	76 (n=7	-		53 =716)		59 =716)		81 =716)		30 =716)		53 = 716)

Eng 1302	Learning Objective A	Learning Objective B	Learning Objective C	Learning Objective D	Learning Objective E
% of paid students mastering learning objective†	$49 \\ (n=427)$				
% submitting "major" assessment mastering learning objective†	$85 \\ (n=247)$				

\*Each question on the comprehensive final exam was mapped to one or more of the Math 1301 learning objectives. The second row shows the average grade (on a scale of 100) for the subset of questions corresponding to each learning objective. These grades were then multiplied by the estimated fraction of all paid students taking the final exam (0.726) to compute the values in the first row. †Estimates based on the number of students who scored a cumulative grade of 70 or better on the research paper.

# Learning Outcomes Data for Initial Bottleneck Courses, Spring 2008

• Statistics in these tables are based on samples of students enrolled in either Math 1301, Eng 1302 or Hist 1305 in Spring 2008. The sample size is denoted by n. The major assessment for Math 1301 is a comprehensive, departmental, multiple-choice final exam. The major assessment for Eng 1302 is a college-level research paper. The major assessment for Hist 1305 is an instructor-written final exam.

Spring 2008	Math 1301	Eng 1302	Hist 1305
	College Alg	Frosh Comp II	U.S. Hist I
% with at least one recorded grade	91.8	91.5	91.3
	(n=693)	(n=541)	(n=285)
% taking/submitting "major" assessment	68.8	70.1	73.4
	( <i>n</i> =693)	( <i>n</i> =541)	( <i>n</i> =285)
% with at least grade 70 on major assessment	30.2	57.3	34.5
	( <i>n</i> =693)	(n=541)	( <i>n</i> =285)
% below grade 50 on major assessment	13.8	6.3	9.1
	( <i>n</i> =693)	(n=541)	( <i>n</i> =285)
Major assessment average grade	64.2	78.4	66.3
	(n=477)	( <i>n</i> =379)	(n=185)
% taking/submitting major assessment	79.9	92.6	91.9
who passed	( <i>n</i> =477)	(n=379)	(n=185)
% paid students	41.1	54.1	48.7
who passed with C or better	( <i>n</i> =718)	( <i>n</i> =787)	( <i>n</i> =651)

# Learning Outcomes Data for Initial Bottleneck Courses, Fall 2008

• Statistics in these tables are based on samples of students enrolled in either Math 1301, Eng 1302 or Hist 1305 in Fall 2008. The sample size is denoted by n. The major assessment for Math 1301 is a comprehensive, departmental, multiple-choice final exam. The major assessment for Eng 1302 is a college-level research paper. The major assessment for Hist 1305 is an instructor-written final exam.

Fall 2008	Math 1301	Eng 1302	Hist 1305
	College Alg	Frosh Comp II	U.S. Hist I
% with at least one recorded grade	94.1 (n=857)	93.5 $(n=440)$	95.1 (n=737)
% taking/submitting "major" assessment	69.2	70.2	76.4
	( <i>n</i> =857)	( <i>n</i> =440)	( <i>n</i> =737)
% with at least grade 70 on major assessment	34.4	58.1	43.8
	(n=857)	( <i>n</i> =440)	( <i>n</i> =737)
% below grade 50 on major assessment	12.9	5.4	8.9
	( <i>n</i> =857)	(n=440)	( <i>n</i> =737)
Major assessment average grade	64.9 ( <i>n</i> =593)	78.0 ( <i>n</i> =337)	$69.2 \\ (n=563)$
% taking/submitting major assessment	78.8	91.9	88.3
who passed	( <i>n</i> =593)	(n=337)	( <i>n</i> =563)
% paid students	48.9	52.7	56.9
who passed with C or better	( <i>n</i> =919)	( <i>n</i> =440)	( <i>n</i> =737)

Math 1301		Learning Objective A		Learning Objective B.1		Learning Objective B.2		Learning Objective B.3		Learning Objective B.4		
% mastery		42		44		46		46		37		
(paid students)*		(n=	(n=919) (n=9		(19)	(n=919)		(n=919)		(n=919)		
% mastery (studen	% mastery (students		61 63		3	67		66		53		
taking "major" assessment)*		(n=593) $(n=$		(n=5)	(93)	(n=593)		(n=593)		(n=593)		
Math 1301	Learr Objectiv	5		rning tive C.2		rning tive D.1		rning tive D.2		rning tive E.1		rning tive E.2
% mastery	44		41		43		4	41		35	4	13
(paid students)*	(n=919)		(n=919)		(n=919)		(n=919)		(n=919)		(n=	:919)
% mastery (students	63		59		(	52	ļ	59	ļ	50	6	52
taking "major" assessment)*	(n=593)		(n=593)		(n=	=593)	(n=	=593)	(n=	=593)	(n=	:593)

Eng 1302	Learning Objective A	Learning Objective B	Learning Objective C	Learning Objective D	Learning Objective E
% of paid students mastering learning objective†	58 (n=440)				
% submitting "major" assessment mastering learning objective†	83 ( <i>n</i> =337)	83 ( <i>n</i> =337)	$83 \\ (n=337)$	83 ( <i>n</i> =337)	$83 \\ (n=337)$

Hist 1305	Learning Objective A	Learning Objective B	Learning Objective C	Learning Objective D	Learning Objective E	Learning Objective F
% mastery (paid students)‡	53 ( <i>n</i> =737)	41 (n=737)	$ \begin{array}{c} 41 \\ (n=737) \end{array} $	44 (n=737)	$ \begin{array}{c} 40 \\ (n=737) \end{array} $	$51 \\ (n=737)$
% mastery (students taking "major" assessment)‡	$70 \\ (n=499)$	54 (n=499)	54 (n=499)	58 (n=499)	$52 \\ (n=499)$	$ \begin{array}{c} 67 \\ (n=499) \end{array} $

\*Each question on the comprehensive final exam was mapped to one or more of the Math 1301 learning objectives. The second row shows the average grade (on a scale of 100) for the subset of questions corresponding to each learning objective. These grades were then multiplied by the estimated fraction of all paid students taking the final exam (0.726) to compute the values in the first row. †Estimates based on the number of students who scored a cumulative grade of 70 or better on the research paper.

 $\ddagger$ Various questions on the comprehensive final exam were mapped to one or more of the Hist 1305 learning objectives. The second row shows the average grade (on a scale of 100) for the subset of questions corresponding to each learning objective. These grades were then multiplied by the estimated fraction of all paid students taking the final exam (0.764) to compute the values in the first row.

# Learning Outcomes Data for Initial Bottleneck Courses, Spring 2009

• Statistics in these tables are based on samples of students enrolled in either Math 1301, Eng 1302 or Hist 1305 in Spring 2009. The sample size is denoted by n. The major assessment for Math 1301 is a comprehensive, departmental, multiple-choice final exam. The major assessment for Eng 1302 is a college-level research paper. The major assessment for Hist 1305 is an instructor-written final exam.

Spring 2009	Math 1301	Eng 1302	Hist 1305
	College Alg	Frosh Comp II	U.S. Hist I
% with at least one recorded grade	94.7	not	93.7
	(n=674)	submitted	(n=662)
% taking/submitting "major" assessment	77.0	not	69.9
	( <i>n</i> =674)	submitted	( <i>n</i> =662)
% with at least grade 70 on major assessment	33.7	not	33.4
	(n=674)	submitted	(n=662)
% below grade 50 on major assessment	13.8	not	13.1
	(n=674)	submitted	( <i>n</i> =662)
Major assessment average grade	64.8	not	65.4
	(n=519)	submitted	(n=463)
% taking/submitting major assessment	82.3	not	81.0
who passed	( <i>n</i> =519)	submitted	(n=463)
% paid students	44.6	57.4	46.7
who passed with C or better	( <i>n</i> =698)	( <i>n</i> =765)	( <i>n</i> =662)

TABLE OF ENG 1302 LEARNING OBJECTIVES A. Develop a unified, organized, coherent argument

B. Critically analyze and evaluate five to ten sources

C. Integrate ideas from sources through effective summary, paraphrase, and quotation

D. Document ideas in MLA style, accurately acknowledging sources and avoiding plagiarism

E. Use language appropriate for academic writing at the college level

TABLE OF MATH 1301 LEARNING OBJECTIVES A. Model problems using elementary mathematical tools such as functions, relations, and equations

B. Manipulate and examine these models effectively

1. Determine key properties of functions and relations from various representations

2. Evaluate function notation properly

3. Convert functions and relations between various representations

- 4. Solve equations, inequalities, and linear systems
- C. Reason appropriately from models to draw conclusions
  1. Categorize functions and relations into various families by the type of expression or other key properties
  2. Recognize important common properties of function and relation families
- D. Interpret results intelligently in the problem context
   1. Apply key properties of functions and relations to answer practical questions
   2. Interpret function potential property

2. Interpret function notation properly

- E. Use mathematics as a language to communicate ideas efficiently
  - 1. Use function notation properly
  - 2. Use set notation properly

TABLE OF HIST 1305 LEARNING OBJECTIVESA. The motives for European colonization of the Americas

B. The social, political, and economic development of colonial societies

C. The origins, development, and politics of slavery

D. The social, political, and economic development of antebellum America

E. United States' involvement in territorial expansion, diplomacy, and war

F. The Civil War and Reconstruction