

ASSESSMENT DAY

College of Arts and Sciences

School of Mathematics

October 9, 2015

Academic Assessment



TYPE OF REVIEW	LEVEL	FOCUS	CONDUCTED BY	FREQUENCY
Academic Success Committee Review	Program	<ul style="list-style-type: none"> Quality of assessment practices 	PC - Academic Success Committee	Years 1 & 2
Instructional Program Review	Program / Cluster	<ul style="list-style-type: none"> Enrollment, retention, completion trends Industry certifications and job placement trends Program cost and staffing trends Advisory committees, curriculum changes 	PC - Instructional Program Review Committee	Year 3
Assessment Day	Course/ Program	<ul style="list-style-type: none"> Enrollment by department, program and course and by age, gender and race Number of graduates, average class size Course success rate by instructional method, by campus and by sub-session Job placement Student learning outcomes and institutional learning outcomes 	Program Chair, Faculty (data provided by Institutional Effectiveness and Institutional Research)	Years 1, 2, 3

Courses

[MAC1105](#) College Algebra

[MAC2233](#) Calculus for Business and Nonphysical Sciences I

[MAC2312](#) Calculus II

[MAC2313L](#) Calculus III Lab

[MAP2302L](#) Differential Equations Lab

[MAS3301](#) Abstract Algebra

[MAT0018L](#) Mathematics I (Pre-Algebra) Lab

[MAT0028L](#) Mathematics II (Elementary Algebra) Lab

[MAT1033](#) Intermediate Algebra

[MGF2107](#) Mathematics for Liberal Arts

[STA2023](#) Elementary Statistics

[MAC1114](#) College Trigonometry

[MAC2311](#) Calculus I

[MAC2312L](#) Calculus II Lab

[MAD2104](#) Discrete Mathematics

[MAP3401](#) Problem Analysis

[MAS4203](#) Number Theory

[MAT0022](#) Integrated Arithmetic and Algebra

[MAT0055L](#) Developmental Mathematics I Lab

[MAT1033A](#) Intermediate Algebra

[MHF4404](#) History of Mathematics

[STA4024](#) Statistics II

[MAC1140](#) Pre-Calculus Algebra

[MAC2311L](#) Calculus I Lab

[MAC2313](#) Calculus III

[MAP2302](#) Differential Equations

[MAS3105](#) Abstract Algebra

[MAT0018](#) Mathematics I (Pre-Algebra)

[MAT0028](#) Mathematics II (Elementary Algebra)

[MAT0056L](#) Developmental Mathematics II Lab

[MGF2106](#) Survey in Mathematics

[MTG4212](#) Modern Geometry

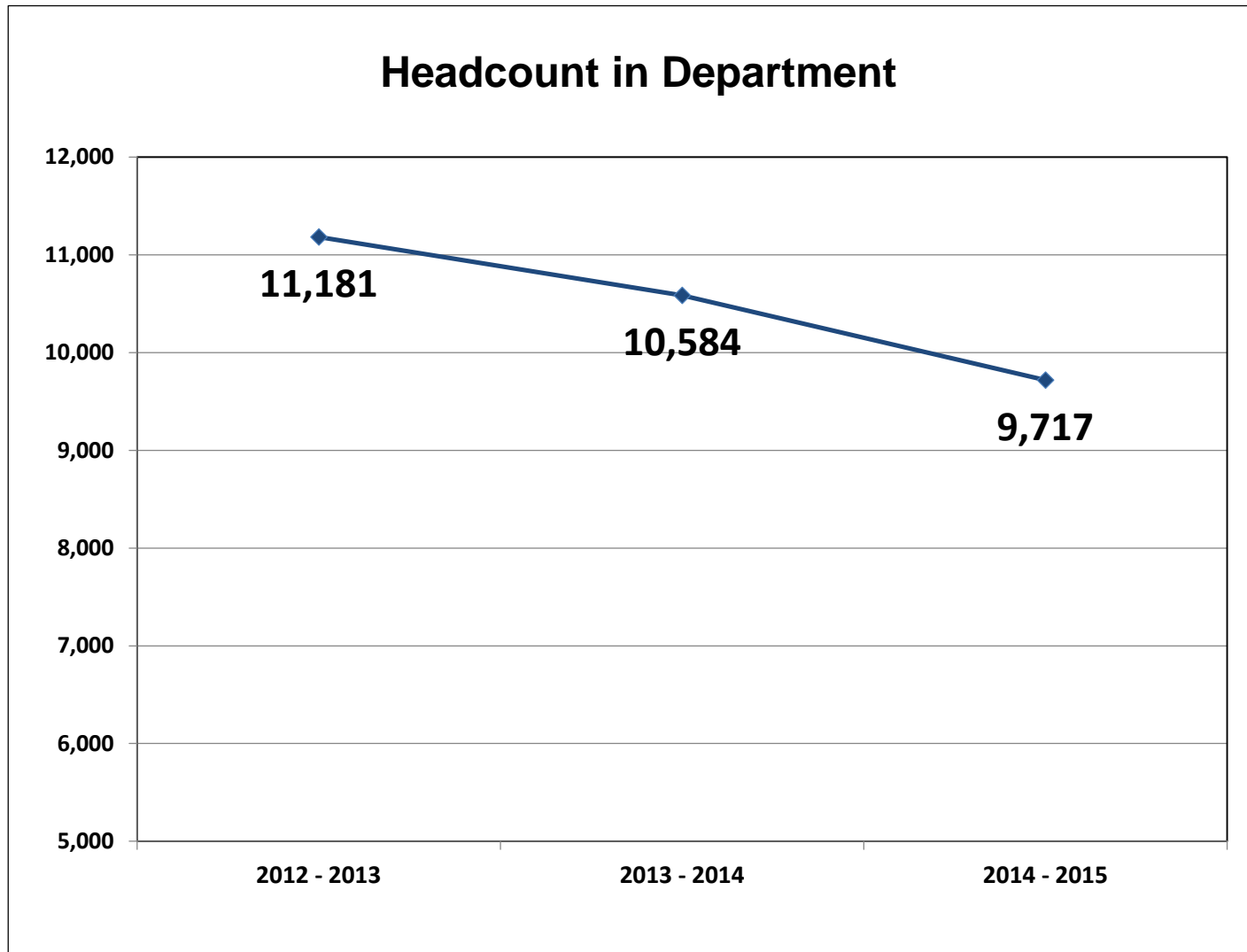
Last Assessment Day – Action Items

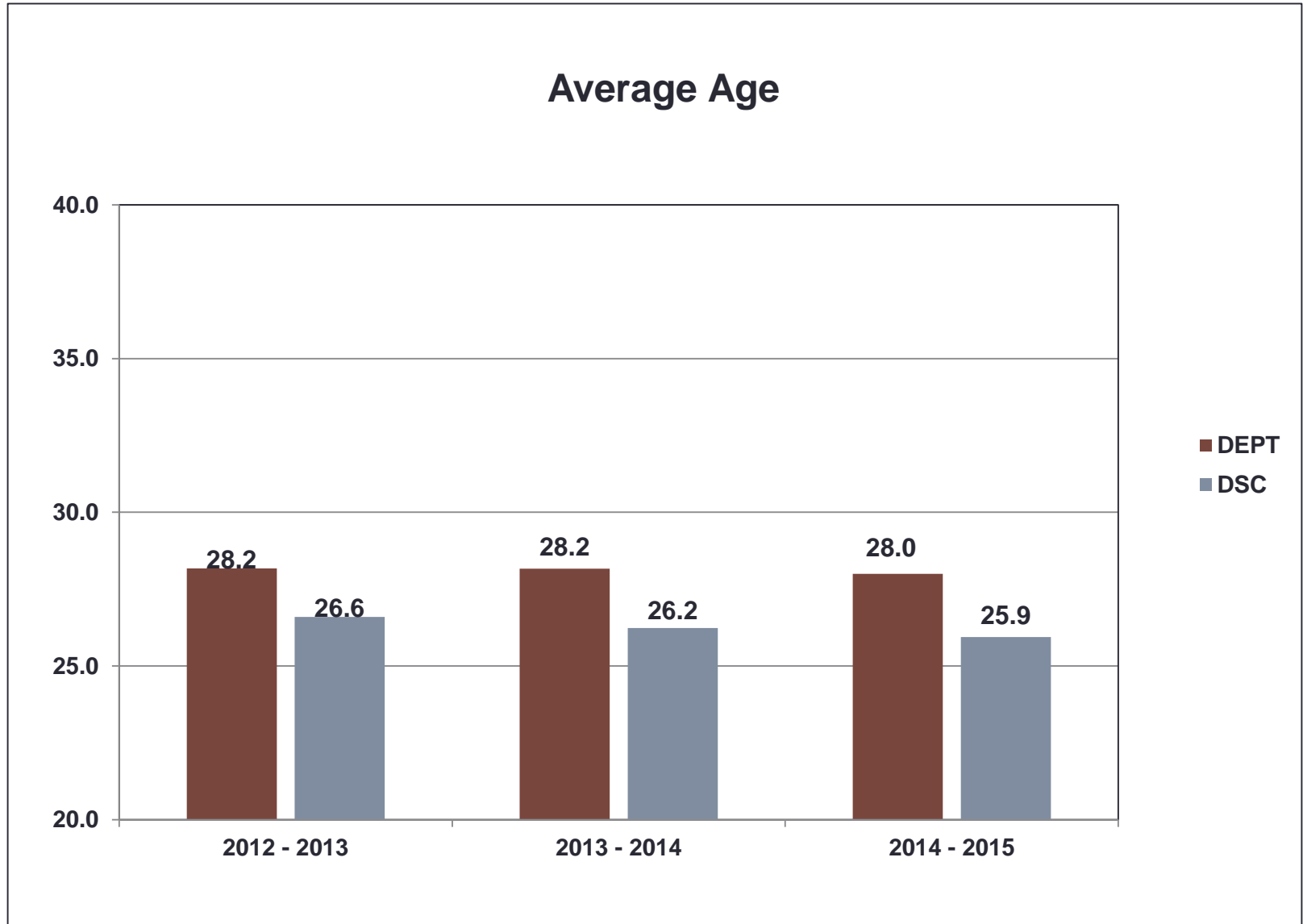
Institutional Effectiveness:

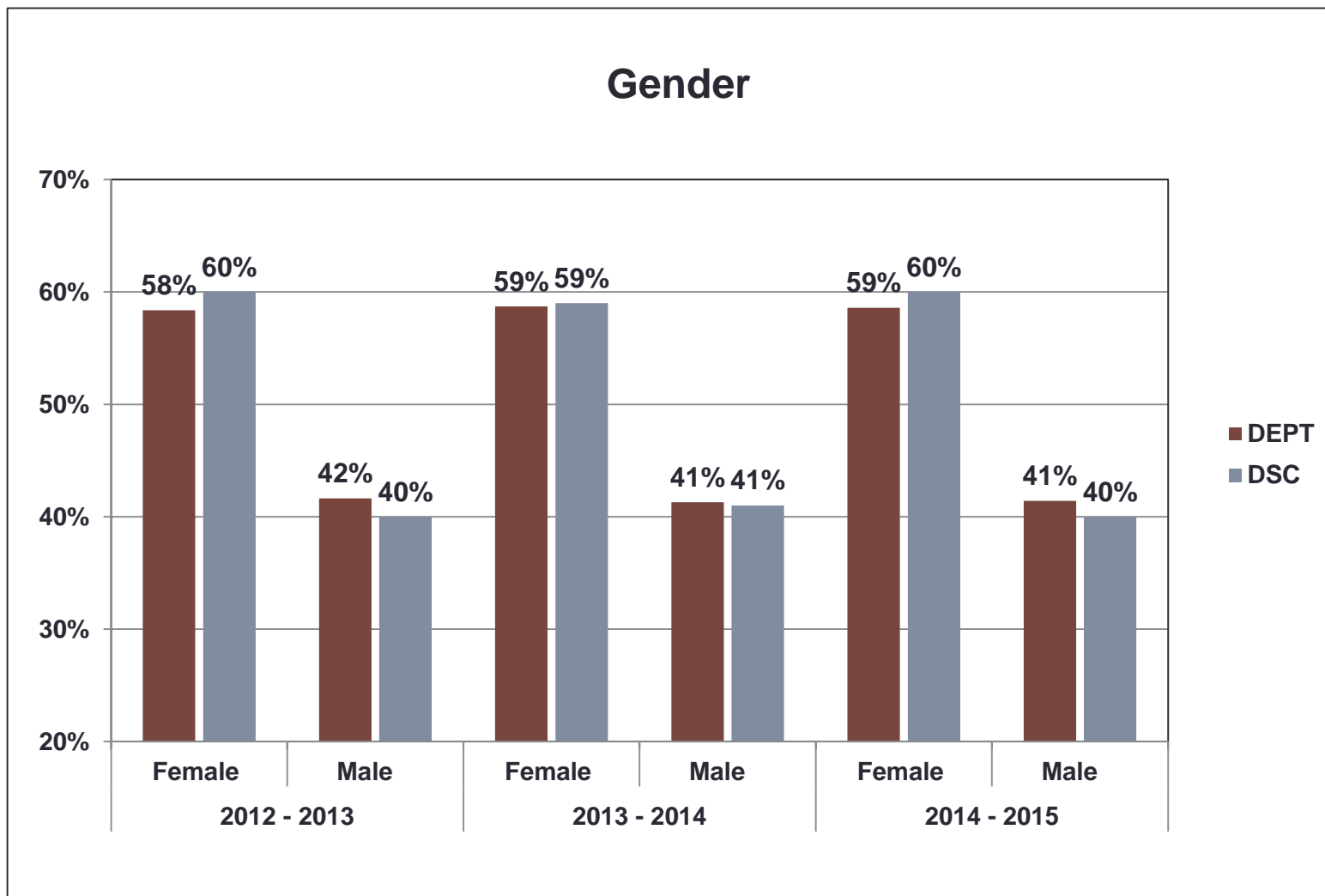
1. Generate a report to include STEM courses success rates

School of Mathematics:

1. Pilot some hybrid courses in fall 2015
2. Review course coding in the system (MAT0028 and MAT0018 should be Open Lab)
3. Offer more summer and fall short term courses
4. Attend professional development opportunities on how to keep students in the classroom
5. Provide more virtual office hours availability
6. Implement mandatory, faculty-led SI
7. Develop a library of video clips of difficult topics
8. Assessment:
 - a. Modify discussion question in MAC1105
 - b. Use of new assessment measures, for example “Projects” instead of “Discussion boards”
 - c. Add MAT1033 and MGF2106 course learning outcome assessment to next Assessment Day







Source: IR Program Assessment Data

Excludes individuals whose gender is not reported.

Enrollment by Race/Ethnicity

Mathematics	2012 - 2013		2013 - 2014		2014 - 2015		DSC
	#	%	#	%	#	%	
American Indian / Alaska Native	52	0.5%	56	1%	43	0.4%	0.4%
Asian	232	2%	239	2%	228	2%	2%
Black or African American	1,623	15%	1,560	15%	1,391	15%	14%
Hispanic	1,419	13%	1,414	14%	1,369	14%	15%
Native Hawaiian / Pacific Islander	15	0.1%	21	0.2%	29	0.3%	0.2%
Two or More Races	160	1%	188	2%	204	2%	1%
White	7,581	68%	6,985	67%	6,321	66%	67%

Average Class Size by Course

Course	2012-2013		2013-2014		2014-2015	
	Sections	Avg. Size	Sections	Avg. Size	Sections	Avg. Size
MAT0018	88	21	72	20	45	16
MAT0022			1	3	3	2
MAT0028	133	24	124	24	84	19
MAT0055L					16	25
MAT0056L					8	8
MAT1033	158	24	144	26	88	24
MAT1033A					16	25
MAC1105	137	28	127	28	106	28
MAC1114	26	25	26	25	23	28
MAC1140	29	25	26	27	23	29
STA2023	70	26	73	25	61	29
MGF2106	21	26	18	26	70	30
MGF2107	14	28	13	31	15	33
MAC2233	5	18	5	13	5	17
MAC2311	10	24	10	26	10	25
MAC2312	6	19	5	22	5	22
MAC2313	3	16	3	16	3	20
MAD2104	1	20	1	11		
MAP2302	3	14	2	12	3	11
MAS3105	1	11	1	6	1	6
MAS3301	1	2	1	4	1	5
MAS4203	1	4	1	8	1	6
MHF4404	1	6			1	10
MTG4212	1	3	1	5		
STA4024			1	10	1	5
Total	709	25	655	25	589	25

Blank cells or missing years indicate no enrollment.

To prevent data from skewing, the following instructional methods are excluded: Labs associated with lectures, Private/Performance, OJT, Clinicals, Co-op, DIS, Field trips and Internships.

Average Class Size – Multiple Methods Only

Course	Instructional Method	2012-2013		2013-2014		2014-2015	
		Sections	Avg. Size	Sections	Avg. Size	Sections	Avg. Size
MAC1105	Lecture	100	29	92	29	73	29
	Online	37	26	35	25	33	26
MAC1114	Lecture	19	24	18	24	16	27
	Online	7	30	8	26	7	32
MAC1140	Lecture	22	24	19	27	15	30
	Online	7	29	7	27	8	29
MAC2233	Lecture	2	11	2	11	2	16
	Online	3	23	3	15	3	17
MAT1033	Lecture	112	26	104	26	59	25
	Online	46	21	40	25	29	23
MGF2106	Lecture			1	33	27	30
	Online	21	26	17	26	43	29
MGF2107	Lecture			1	25	5	30
	Online	14	28	12	32	10	35
STA2023	Lecture	50	25	51	26	38	29
	Online	20	29	22	24	23	30

College Total

Instructional Method	2012-2013	2013-2014	2014-2015
	Avg. Size	Avg. Size	Avg. Size
Hybrid	22	22	22
Lecture	23	23	22
Online	27	28	29
College Total	23.7	23.9	24.6

To prevent data from skewing, the following instructional methods are excluded: labs associated with lectures, Private/Performance, OJT, clinicals, co-op, DIS, field trips and internships.

Course Success Rate (1 of 2)

Course	2012-2013		2013-2014		2014-2015	
	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
MAT0018	1,877	70%	1,432	62%	718	64%
MAT0022			3	67%	6	67%
MAT0028	3,170	55%	2,928	57%	1,590	56%
MAT0055L					398	46%
MAT0056L					61	95%
Total	5,047	61%	4,363	58%	2,773	58%
MAT1033	3,819	53%	3,674	52%	2,136	56%
MAT1033A					398	47%
MAC1105	3,865	57%	3,566	59%	2,957	60%
MAC1114	659	56%	641	61%	651	61%
MAC1140	727	65%	707	63%	676	69%
Total	9,070	56%	8,588	57%	6,818	59%
STA2023	1,845	73%	1,839	71%	1,786	75%
MGF2106	536	64%	473	60%	2,086	65%
MGF2107	398	76%	406	69%	497	72%
MAC2233	89	71%	66	80%	84	73%
MAC2311	242	51%	258	52%	252	63%
MAC2312	111	64%	108	56%	110	65%
MAC2313	49	55%	49	61%	60	58%
MAD2104	20	75%	11	91%		
MAP2302	41	78%	24	88%	34	68%
Total	3,331	70%	3,234	67%	4,909	69%
Science		78%		77%		78%
Engineering		86%		81%		81%
Technology		76%		79%		77%
DSC		78%		77%		78%

Course Success Rate (2 of 2)

Course	2012-2013		2013-2014		2014-2015	
	Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
MAS3105	11	91%	6	83%	6	67%
MAS3301	2	100%	4	100%	5	80%
Total	13	92%	10	90%	11	73%
MAS4203	4	100%	8	63%	6	67%
MHF4404	6	100%			10	80%
MTG4212	3	100%	5	80%		
STA4024			10	90%	5	100%
Total	13	100%	23	78%	21	81%
Total	8,608	63%	8,181	63%	9,225	66%
Science		78%		77%		78%
Engineering		86%		81%		81%
Technology		76%		79%		77%
DSC		78%		77%		78%

Course Success Rate by Campus – Multiple Campuses Only (1 of 2)

Course	Campus	2012-2013		2013-2014		2014-2015	
		Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
MAC1105	Daytona	1,430	51%	1,355	57%	1,030	55%
	Deland	620	71%	590	68%	412	70%
	Deltona	220	58%	205	56%	196	64%
	Flagler/Palm Cst	380	38%	288	38%	292	42%
	New Smyrna Beach	243	72%	236	78%	161	81%
MAC1114	Daytona	299	52%	288	61%	288	56%
	Deland	98	58%	111	59%	111	62%
	Flagler/Palm Cst	54	30%	36	39%	25	36%
MAC1140	Daytona	368	58%	342	55%	288	64%
	Deland	115	61%	142	58%	136	71%
	Flagler/Palm Cst	42	76%	37	68%	23	65%
MAT0018	Daytona	994	67%	807	58%	379	61%
	Deland	217	78%	144	68%	56	66%
	Deltona	276	69%	228	60%	117	58%
	Flagler/Palm Cst	252	76%	175	69%	105	74%
	New Smyrna Beach	138	72%	78	72%	61	70%
MAT0028	Daytona	1,642	49%	1,517	52%	843	54%
	Deland	450	64%	382	65%	172	61%
	Deltona	382	56%	394	56%	223	47%
	Flagler/Palm Cst	461	60%	414	64%	235	59%
	New Smyrna Beach	235	72%	221	65%	117	78%
MAT0055L	Daytona					211	47%
	Deland					70	36%
	Deltona					42	57%
	Flagler/Palm Cst					43	42%
	New Smyrna Beach					32	59%

Excludes fully online courses

Indicates a 70% success rate or higher

Source: IR Program Assessment Data

Course Success Rate by Campus – Multiple Campuses Only (2 of 2)

Course	Campus	2012-2013		2013-2014		2014-2015	
		Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
MAT0056L	Daytona					40	93%
	Deland					7	100%
	Deltona					11	100%
	Flagler/Palm Cst					3	100%
MAT1033	Daytona	1,470	47%	1,392	48%	764	55%
	Deland	564	62%	504	65%	312	65%
	Deltona	263	55%	250	52%	109	63%
	Flagler/Palm Cst	358	53%	344	42%	206	34%
	New Smyrna Beach	209	71%	197	75%	82	71%
MAT1033A	Daytona					211	47%
	Deland					70	36%
	Deltona					42	57%
	Flagler/Palm Cst					43	42%
	New Smyrna Beach					32	59%
MGF2106	Daytona			33	76%	583	64%
	Deland					79	81%
	Flagler/Palm Cst					96	66%
	New Smyrna Beach					64	73%
MGF2107	Daytona			25	88%	133	68%
	Flagler/Palm Cst					18	78%
STA2023	Daytona	646	76%	675	72%	517	73%
	Deland	282	89%	317	83%	267	85%
	Deltona	69	75%	74	69%	71	86%
	Flagler/Palm Cst	113	73%	87	79%	91	79%
	New Smyrna Beach	146	82%	153	81%	148	93%

Excludes fully online courses

 Indicates a 70% success rate or higher

Source: IR Program Assessment Data

Course Success Rate By Instructional Method – Multiple Methods Only

Course	IM	2012-2013		2013-2014		2014-2015	
		Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
MAC1105	Lecture	2,893	56%	2,674	59%	2,091	59%
	Online	972	60%	892	57%	866	61%
MAC1114	Lecture	451	51%	435	59%	424	56%
	Online	208	67%	206	67%	227	70%
MAC1140	Lecture	525	60%	521	57%	447	66%
	Online	202	79%	186	81%	229	75%
MAC2233	Lecture	21	67%	22	77%	32	75%
	Online	68	72%	44	82%	52	71%
MAT1033	Lecture	2,864	53%	2,687	53%	1,473	56%
	Online	955	53%	987	51%	663	57%
MGF2106	Lecture			33	76%	822	67%
	Online	536	64%	440	59%	1,264	64%
MGF2107	Lecture			25	88%	151	69%
	Online	398	76%	381	67%	346	74%
STA2023	Lecture	1,256	79%	1,306	76%	1,094	80%
	Online	589	61%	533	60%	692	68%
DSC	Hybrid		82%		81%		83%
	Lecture		77%		77%		78%
	Online		76%		75%		76%

Course Success Rates- Multiple Sessions or Sub-sessions Only (1 of 3)

Course	Session	Subsession	2012-2013		2013-2014		2014-2015		
			Attempted	% Successful	Attempted	% Successful	Attempted	% Successful	
MAC1105	FA	A term	60	67%	54	87%	50	82%	
		Full term	1,738	55%	1,643	57%	1,318	56%	
		Session Total	1,798	55%	1,697	58%	1,368	57%	
	SP	A term	89	74%	83	69%	55	82%	
		B term	40	83%	17	82%	37	54%	
		Full term	1,423	54%	1,293	55%	1,106	59%	
		Session Total	1,552	56%	1,393	56%	1,198	60%	
	SU	Full term	515	66%	476	69%	391	70%	
	MAC1114	FA	Full term	265	52%	242	55%	262	53%
		SP	Full term	265	53%	289	62%	271	65%
SU		Full term	129	70%	110	74%	118	70%	
MAC1140	FA	Full term	293	54%	305	61%	291	62%	
	SP	Full term	303	70%	316	64%	273	72%	
	SU	Full term	131	80%	86	72%	112	83%	
MAC2233	FA	Full term	31	74%	20	80%	25	76%	
	SP	Full term	32	72%	26	92%	40	73%	
	SU	Full term	26	65%	20	65%	19	68%	
MAC2311	FA	Full term	110	45%	113	51%	119	62%	
	SP	Full term	82	61%	94	55%	91	63%	
	SU	Full term	50	48%	51	49%	42	64%	
MAC2312	FA	Full term	37	54%	40	65%	38	58%	
	SP	Full term	39	79%	40	50%	53	62%	
	SU	Full term	35	57%	28	50%	19	89%	
MAC2313	FA	Full term	21	62%	23	52%	20	50%	
	SP	Full term	15	40%	13	69%	20	70%	
	SU	Full term	13	62%	13	69%	20	55%	
MAP2302	FA	Full term	17	76%	15	80%	16	56%	
	SP	Full term	14	71%	9	100%	18	78%	
	SU	Full term	10	90%					

Years are reporting years, SU-SP. Indicates a 70% success rate or higher

Blank cells or missing years indicate no enrollment.

Source: IR Program Assessment Data

Course Success Rates- Multiple Sessions or Sub-sessions Only (2 of 3)

Course	Session	Subsession	2012-2013		2013-2014		2014-2015	
			Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
MAT0018	FA	A term	499	75%	349	68%	160	72%
		B term	158	59%	158	54%	61	49%
		Full term	265	68%	220	58%	145	53%
		Session Total	922	70%	727	62%	366	61%
	SP	A term	359	70%	288	61%	126	69%
		B term	118	59%	57	51%	31	68%
		Full term	226	64%	177	58%	96	64%
		Session Total	703	66%	522	59%	253	67%
	SU	Full term	252	77%	183	67%	99	69%
	MAT0022	FA	Full term					2
SP		Full term			3	67%	3	67%
SU		Full term					1	100%
MAT0028	FA	A term	492	59%	508	64%	229	55%
		B term	568	56%	455	54%	240	50%
		Full term	445	58%	512	55%	334	51%
		Session Total	1,505	58%	1,475	58%	803	52%
	SP	A term	414	50%	330	58%	151	58%
		B term	402	47%	318	57%	159	67%
		Full term	431	52%	393	45%	232	58%
		Session Total	1,247	49%	1,041	53%	542	61%
	SU	Full term	418	65%	412	64%	245	60%
	MAT0055L	FA	Full term					276
SP		Full term					122	48%
MAT0056L	FA	Full term					28	93%
	SP	Full term					33	97%
MAT1033	FA	A term	31	77%	35	71%		
		B term	132	54%	95	64%	50	58%
		Full term	1,685	53%	1,570	50%	1,037	57%
		Session Total	1,848	53%	1,700	51%	1,087	57%
	SP	A term	47	68%	32	66%	15	80%
		B term	86	55%	105	49%	13	69%
		Full term	1,398	50%	1,407	51%	694	53%
		Session Total	1,531	50%	1,544	51%	722	54%
	SU	Full term	440	63%	430	63%	327	59%
	MAT1033A	FA	Full term					276
SP		Full term					122	48%

Course Success Rates- Multiple Sessions or Sub-sessions Only (3 of 3)

Course	Session	Subsession	2012-2013		2013-2014		2014-2015	
			Attempted	% Successful	Attempted	% Successful	Attempted	% Successful
MGF2106	FA	B term					19	74%
		Full term	207	67%	164	57%	1,014	59%
		Session Total	207	67%	164	57%	1,033	59%
	SP	B term					32	63%
		Full term	200	60%	193	62%	914	72%
		Session Total	200	60%	193	62%	946	71%
SU	Full term	129	67%	116	61%	107	67%	
MGF2107	FA	Full term	146	70%	154	65%	224	67%
	SP	Full term	154	79%	167	71%	200	75%
	SU	Full term	98	80%	85	72%	73	82%
STA2023	FA	B term	52	73%	47	79%	37	92%
		Full term	642	70%	674	67%	628	76%
		Session Total	694	70%	721	68%	665	77%
	SP	A term	17	94%	13	69%	22	86%
		B term	60	72%	73	77%	100	87%
		Full term	715	72%	677	73%	711	73%
		Session Total	792	73%	763	73%	833	75%
	SU	Full term	359	81%	355	74%	288	73%

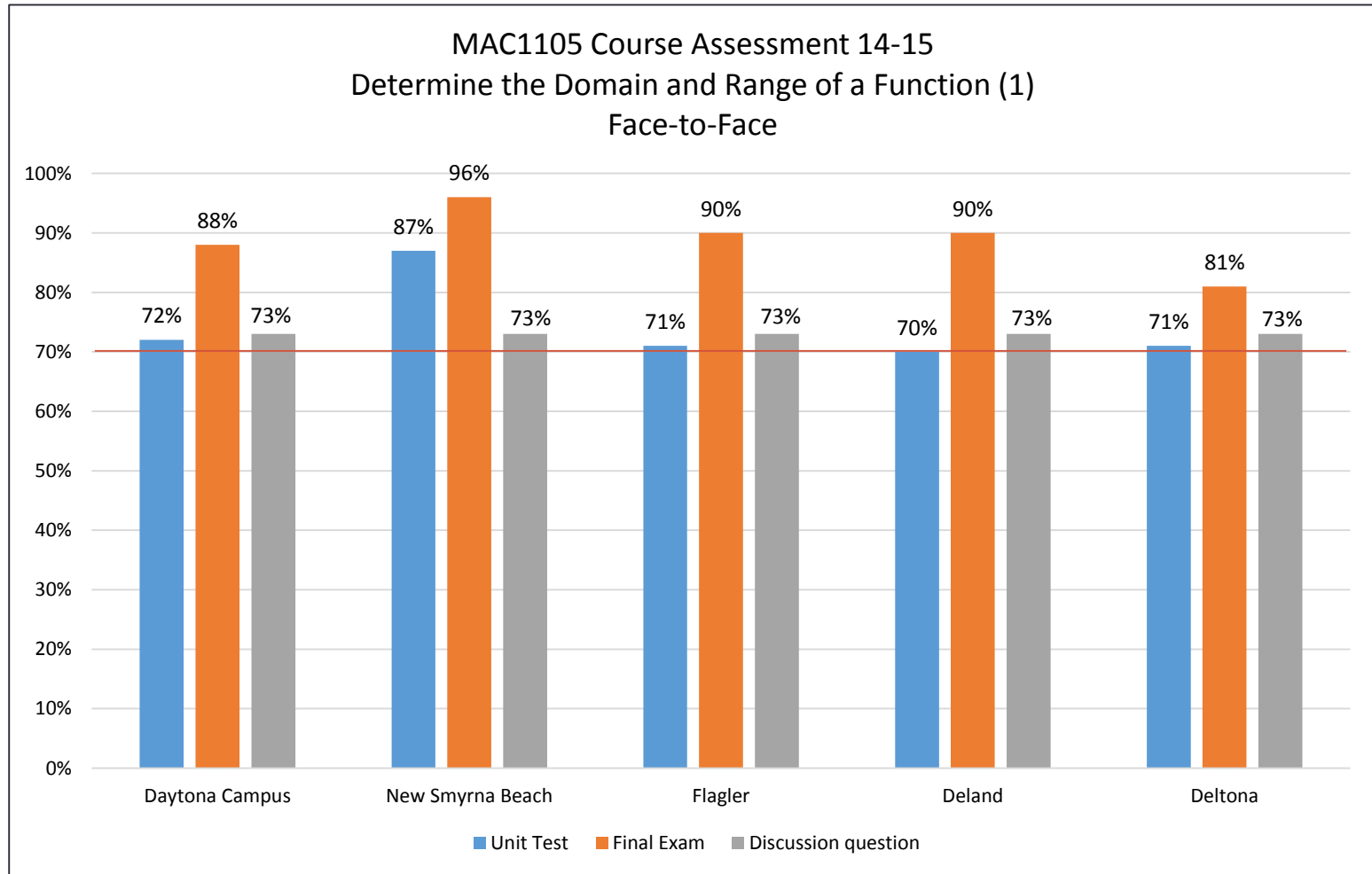
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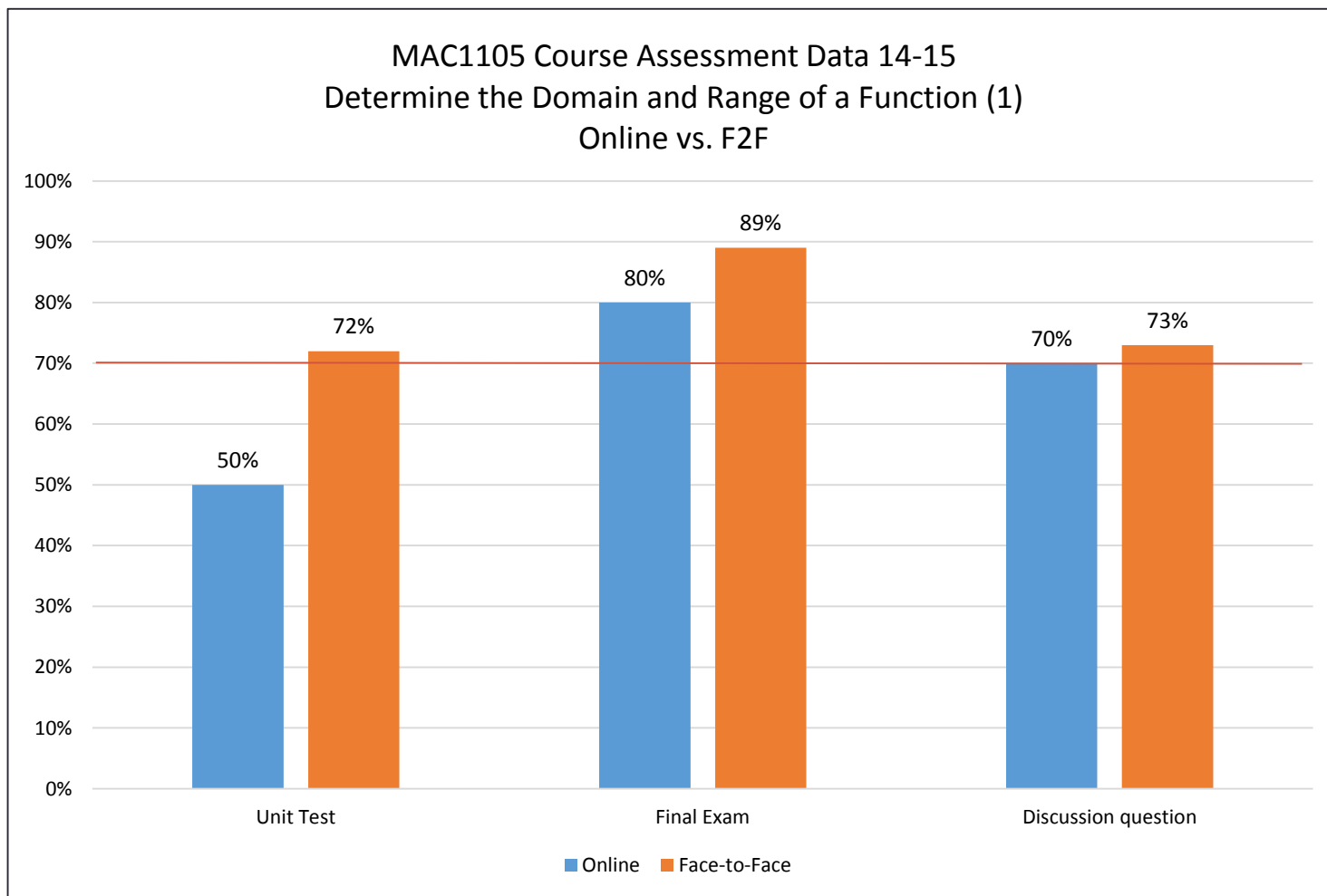
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Source: IR Program Assessment Data

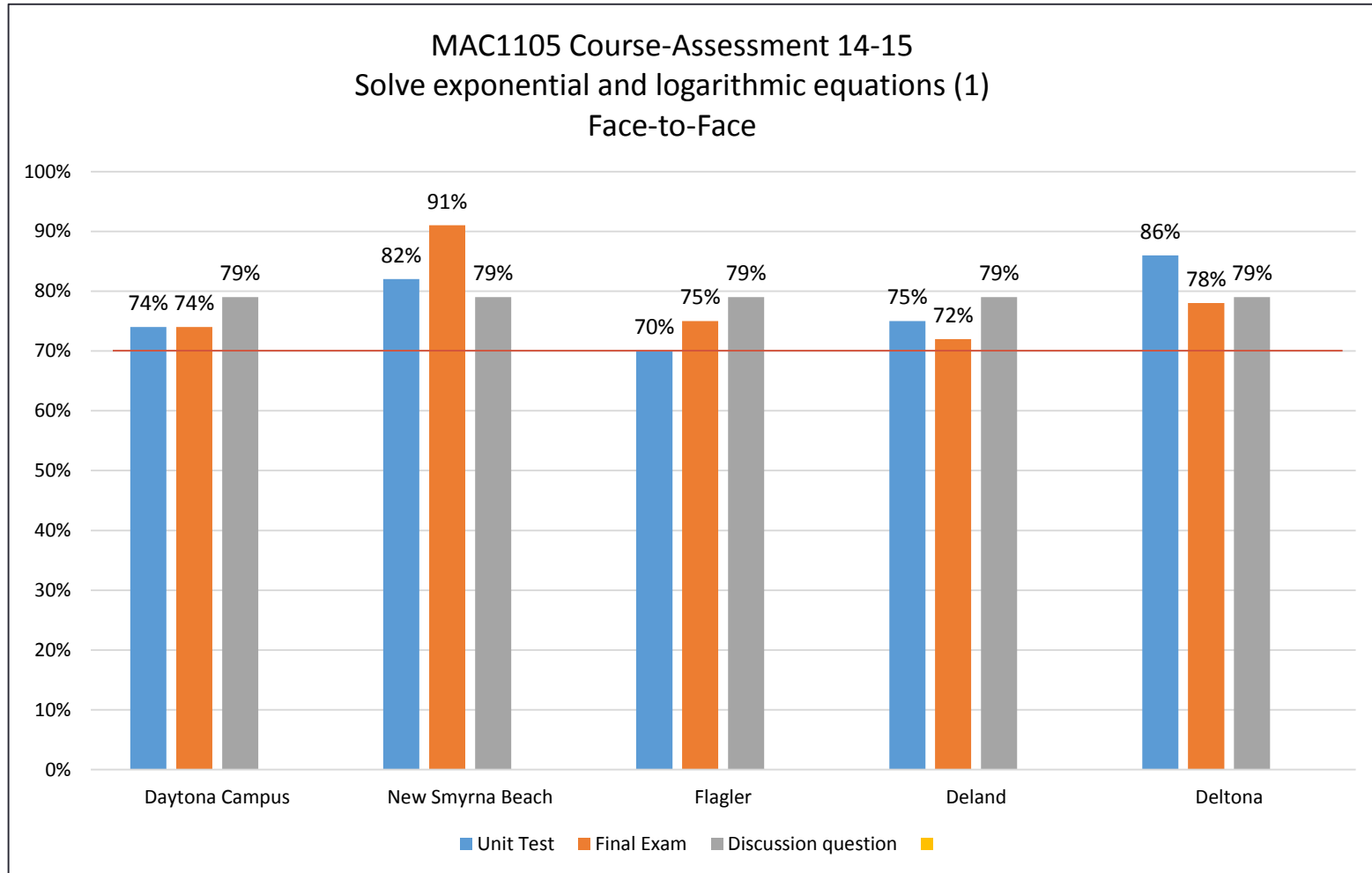
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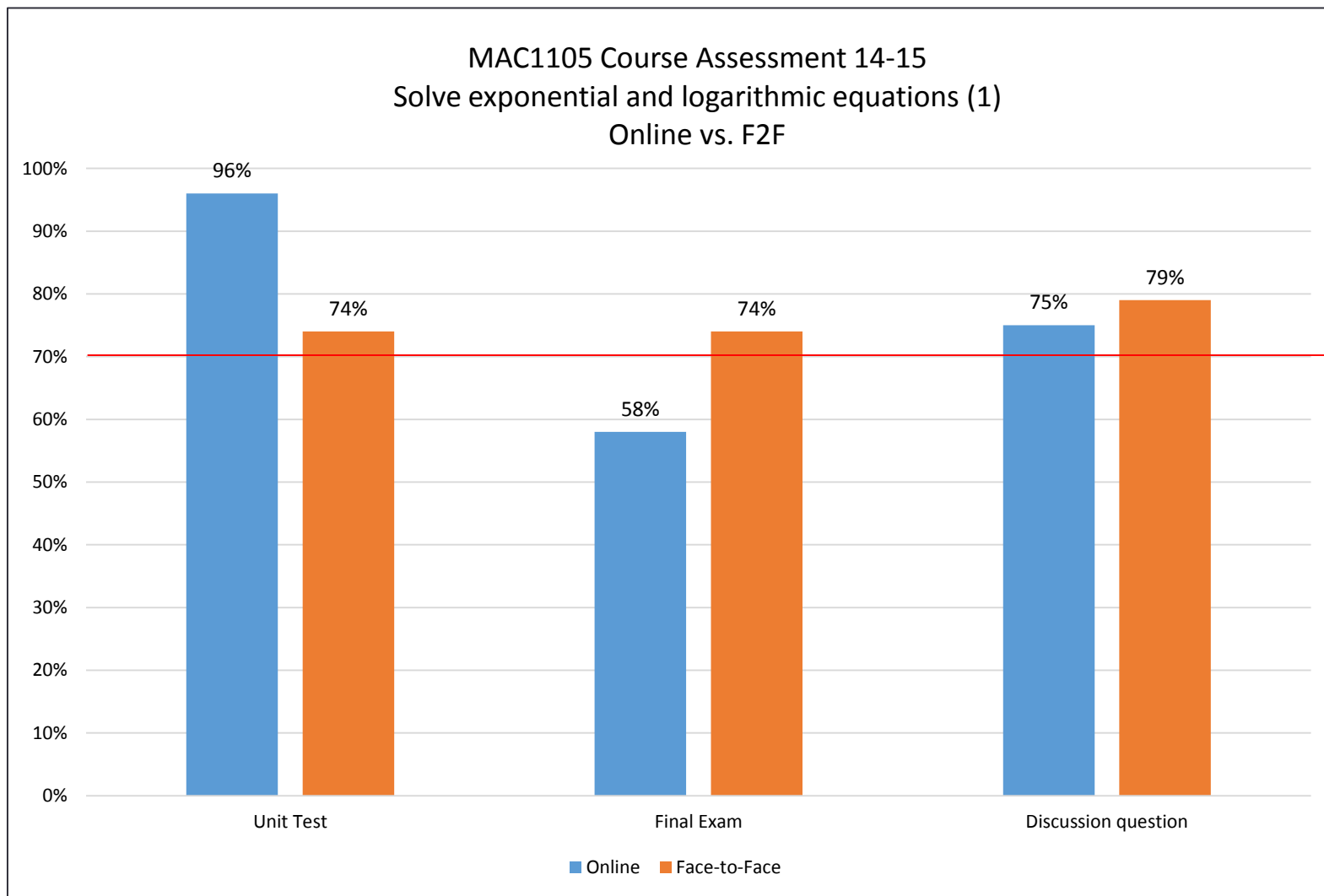
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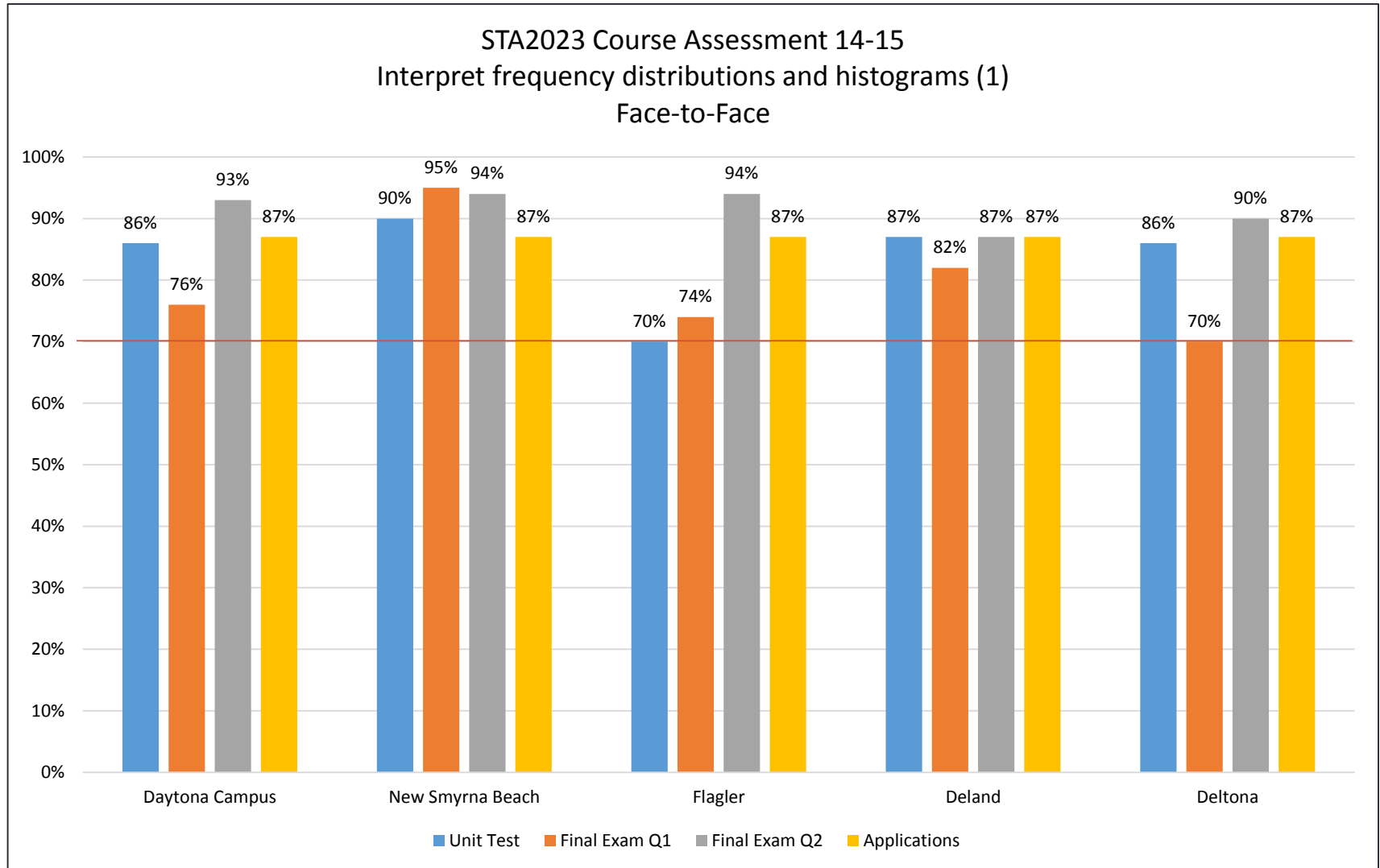
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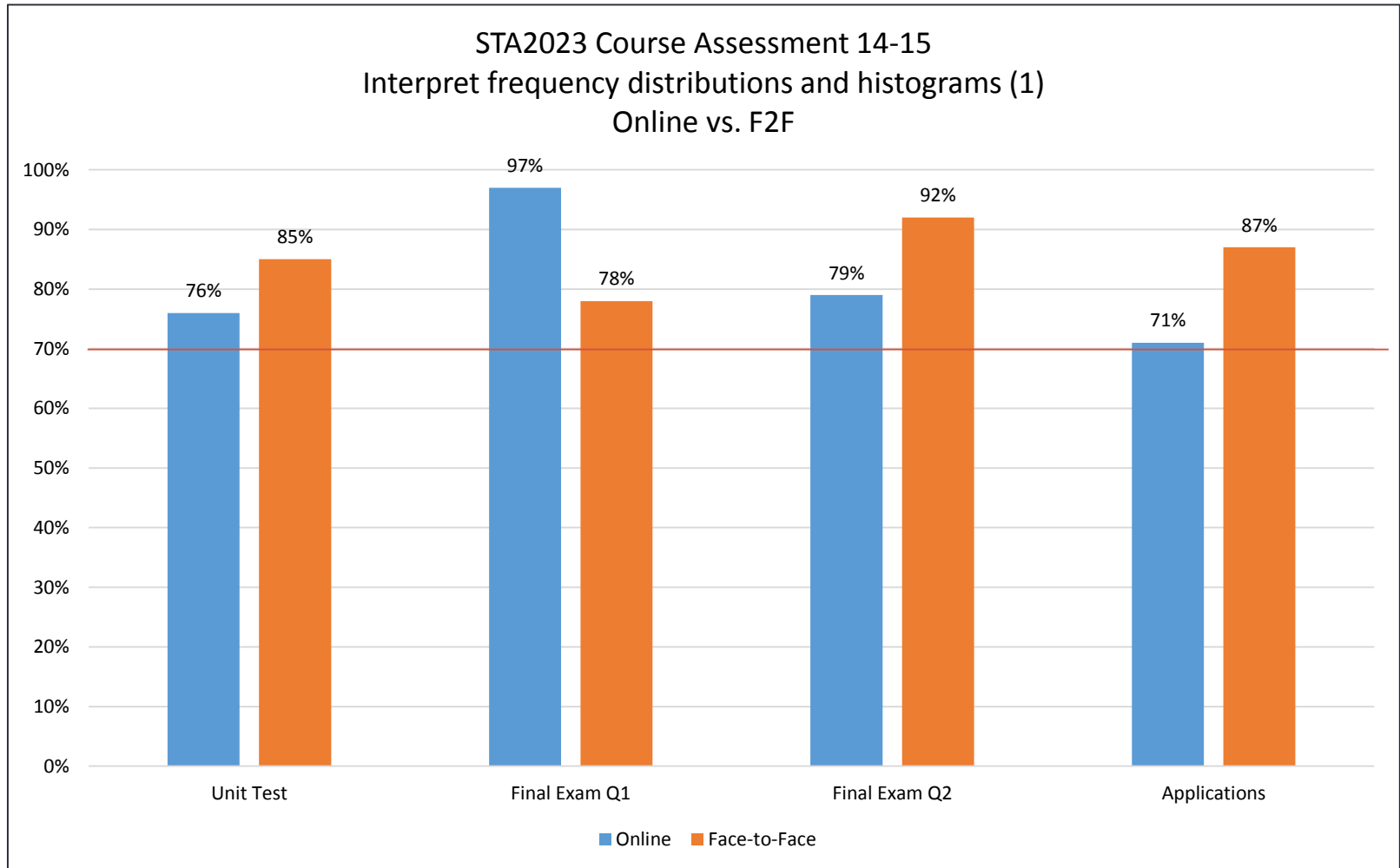
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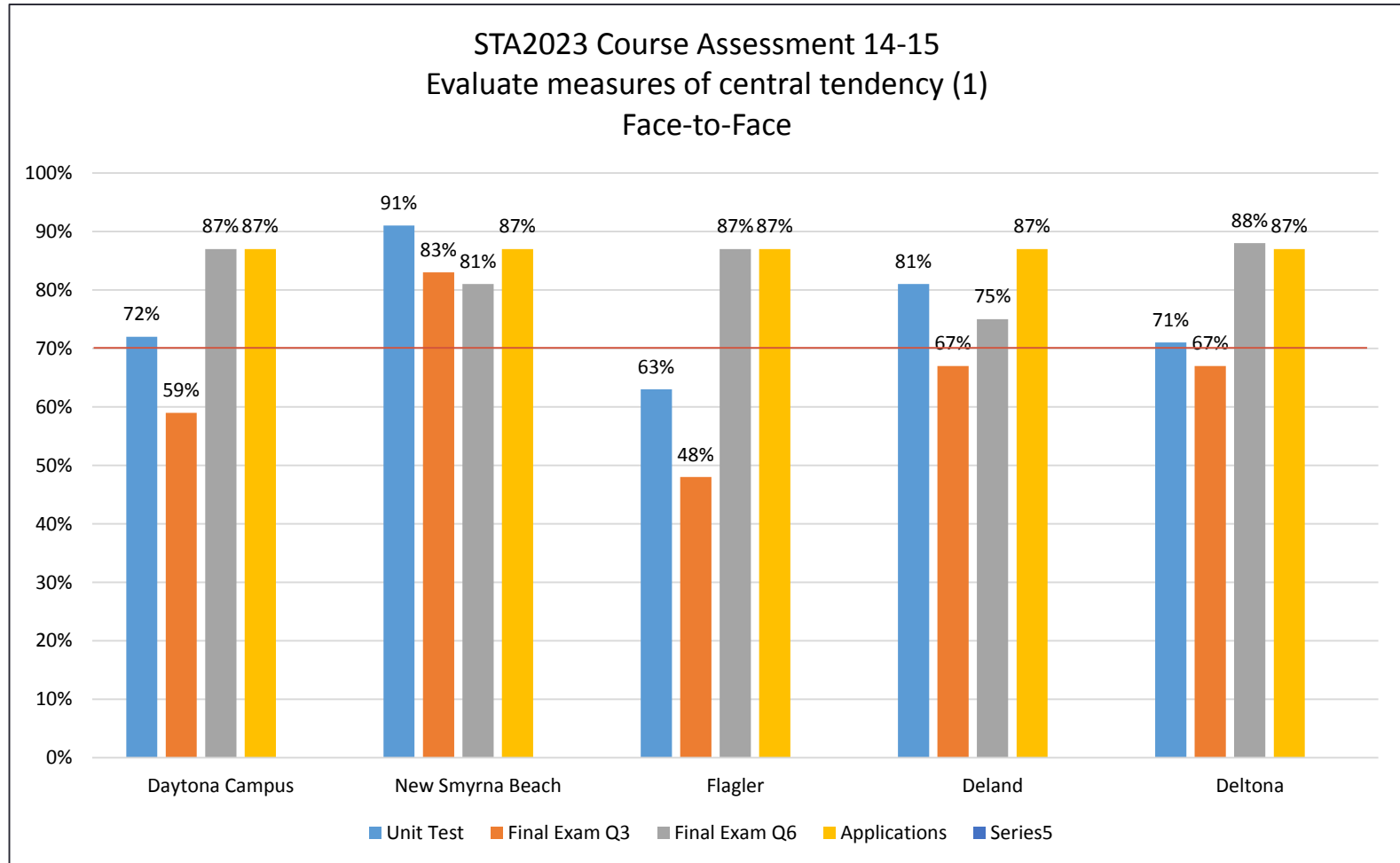
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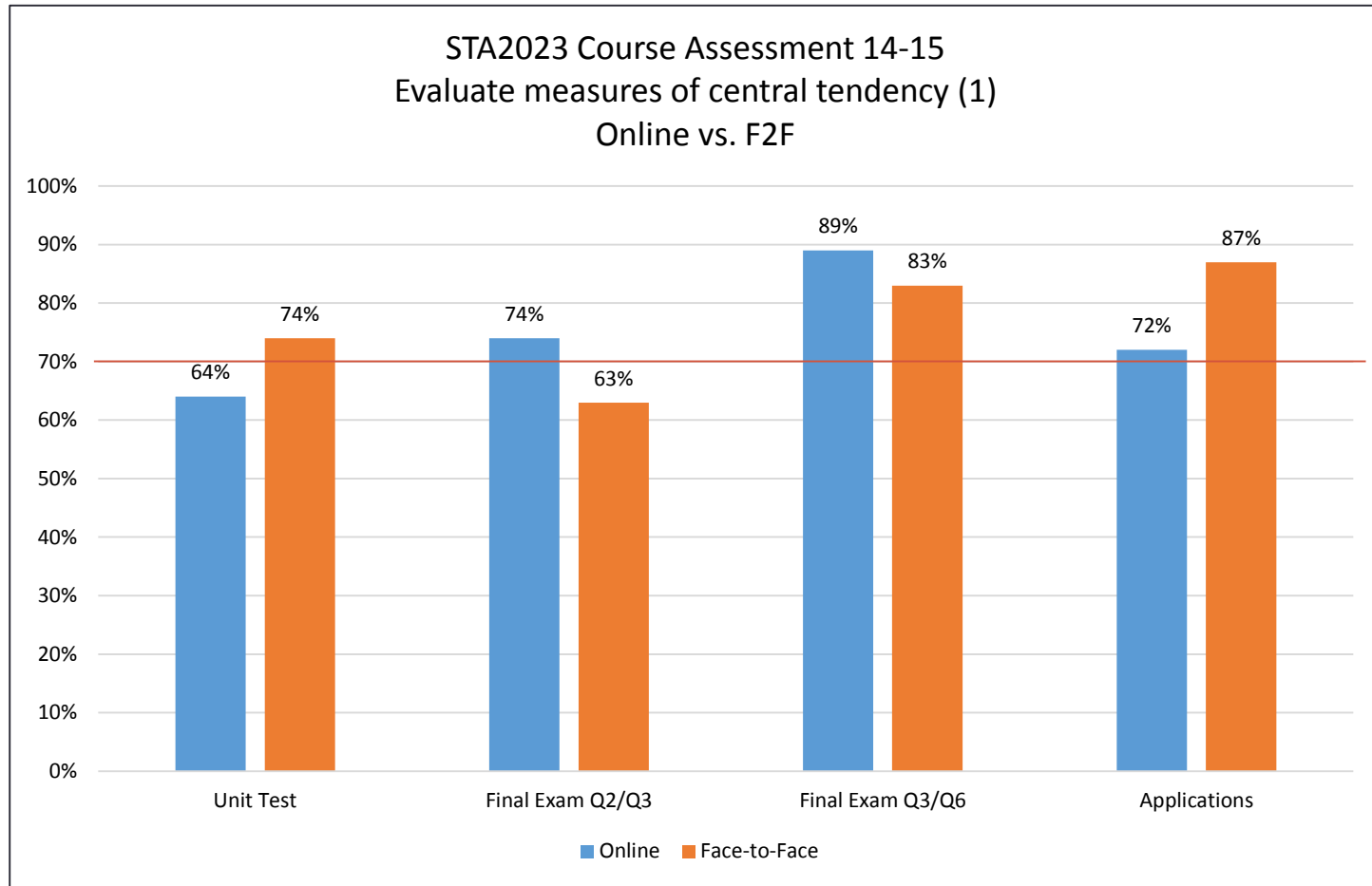
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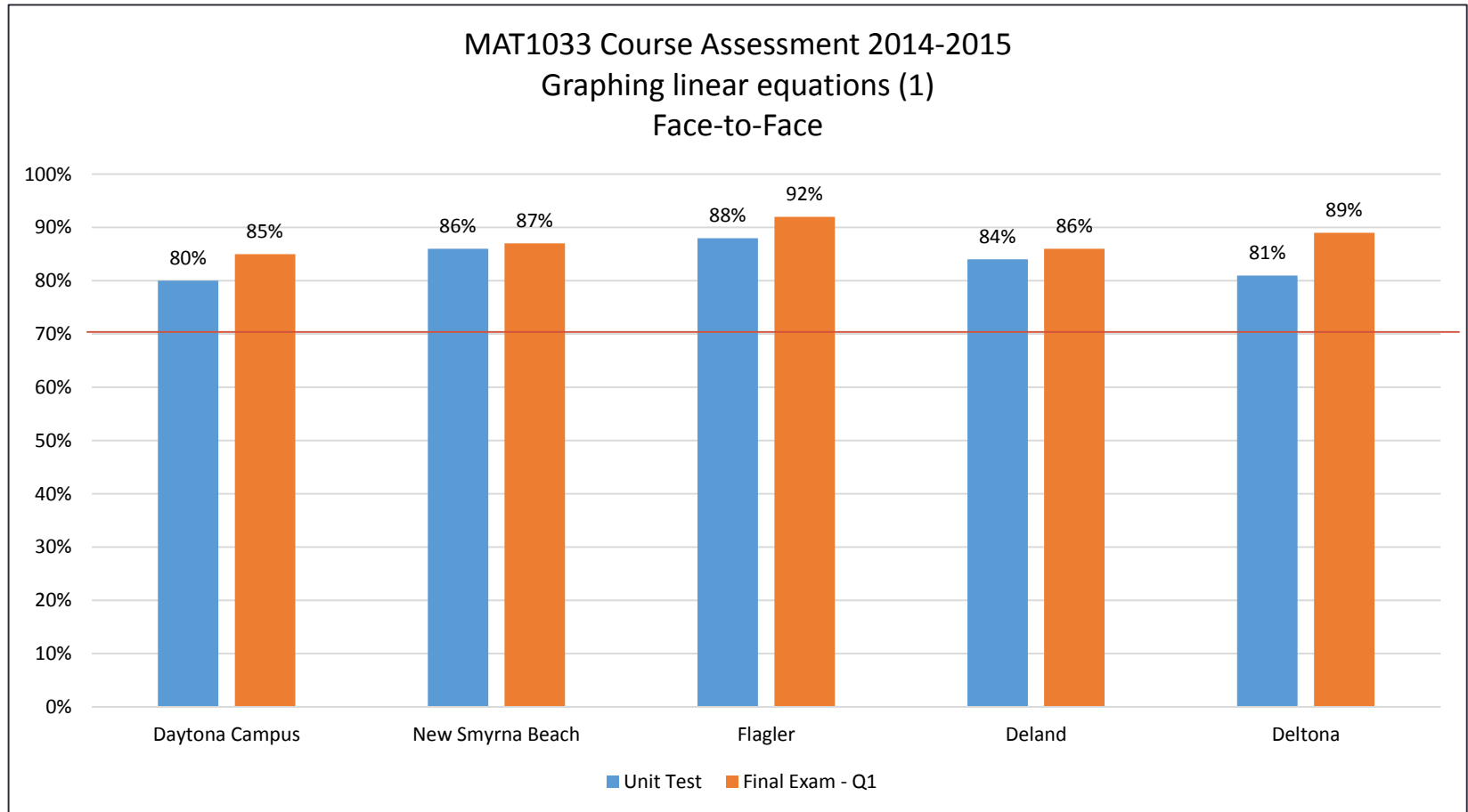
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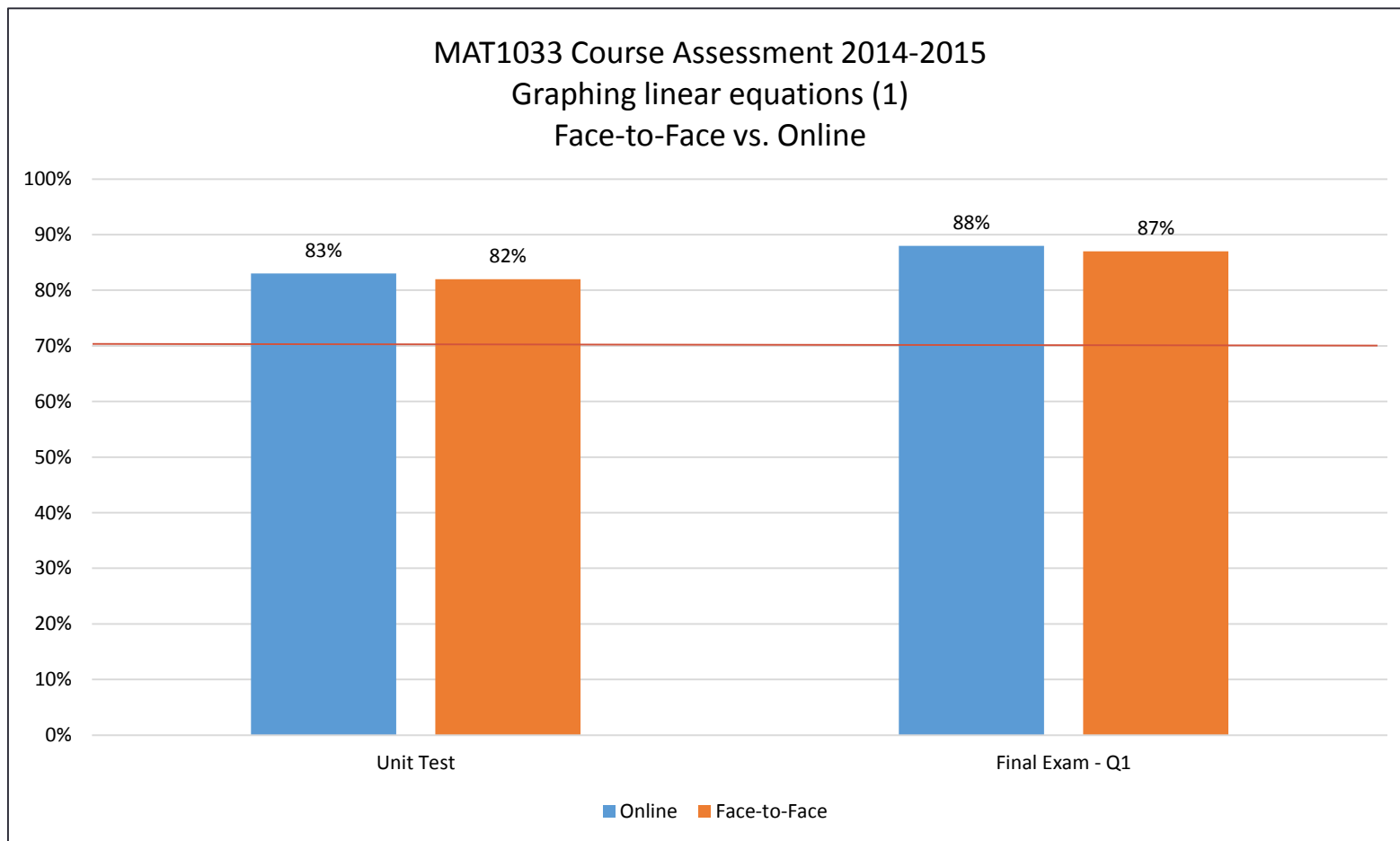
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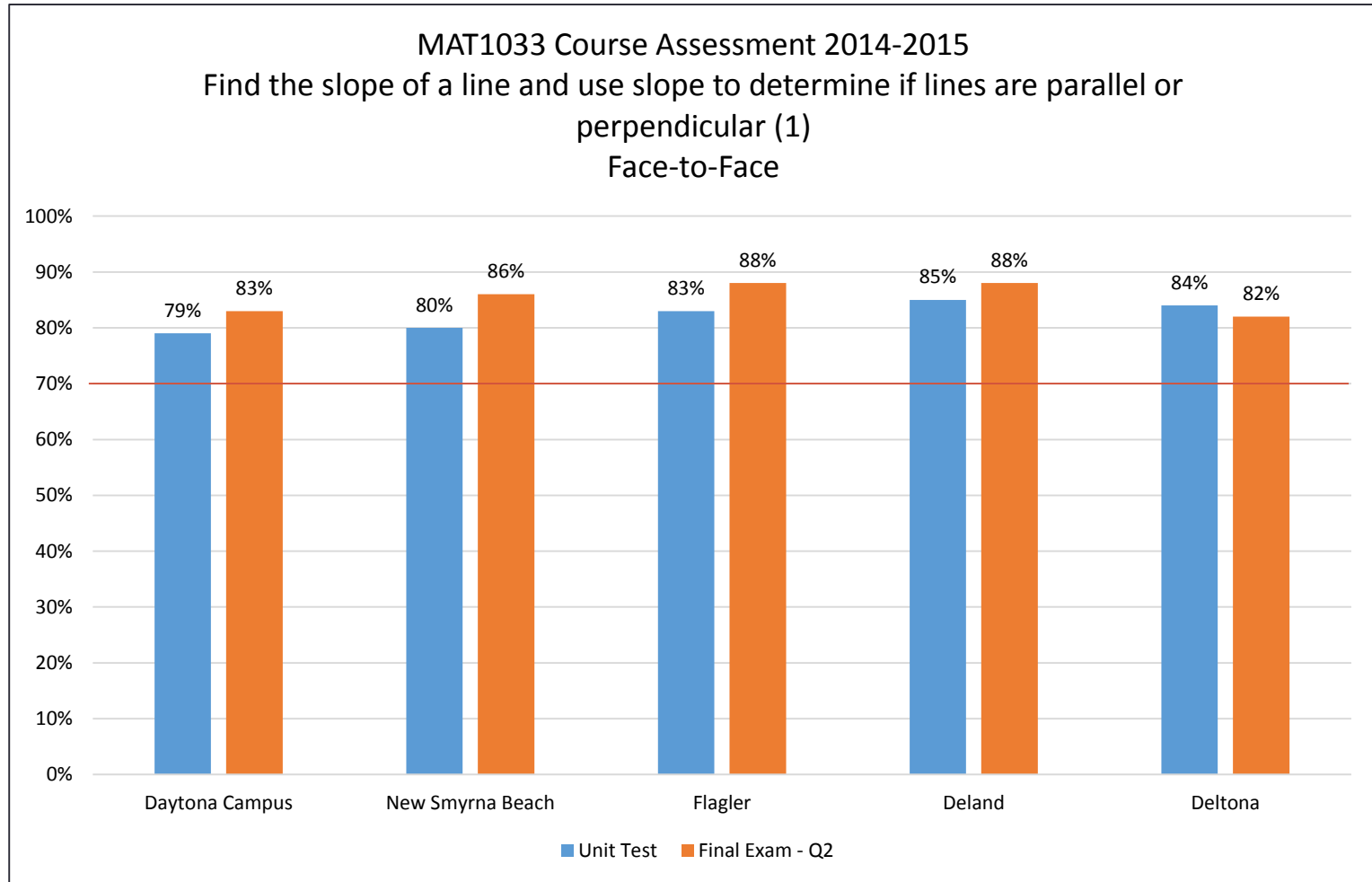
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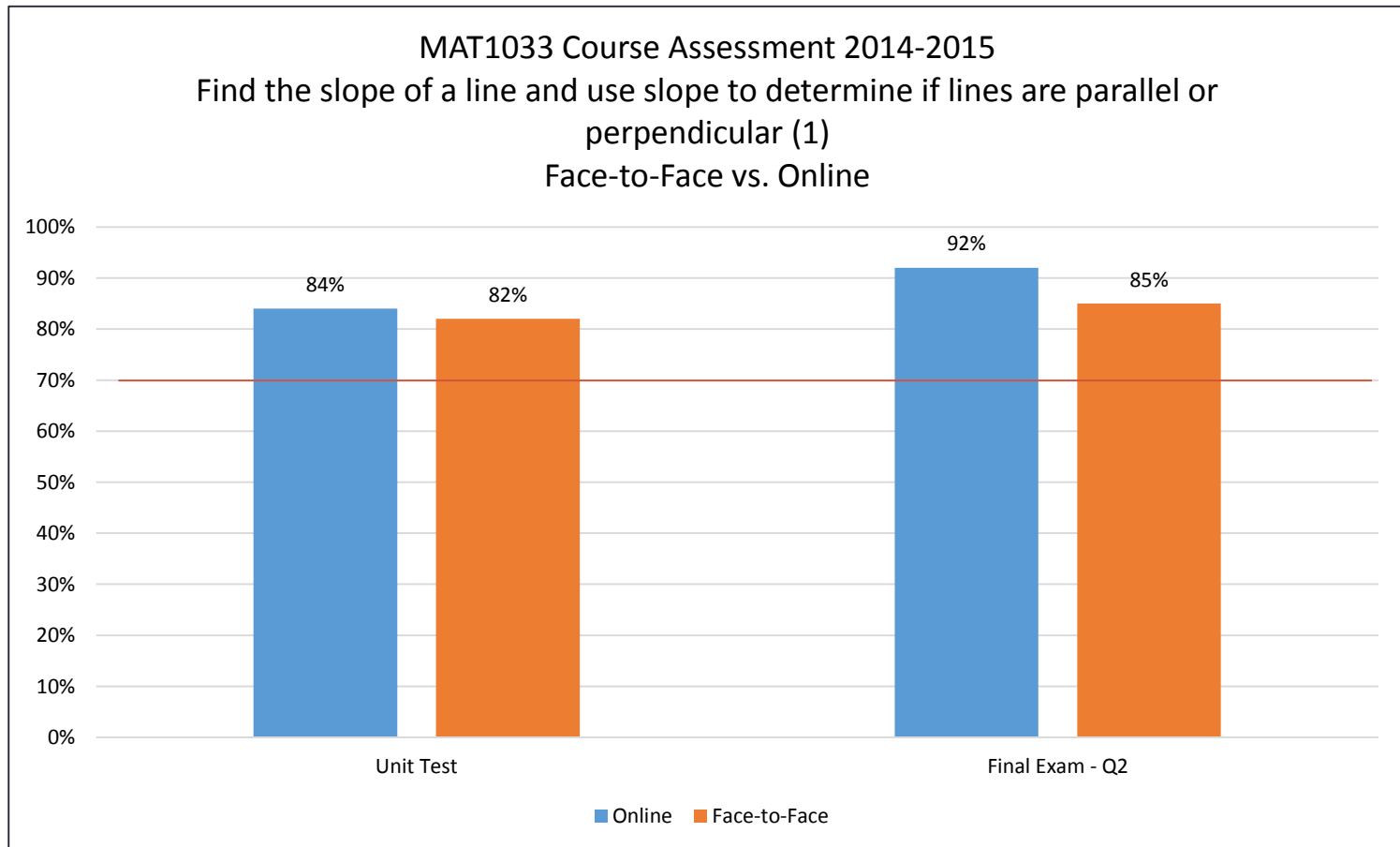
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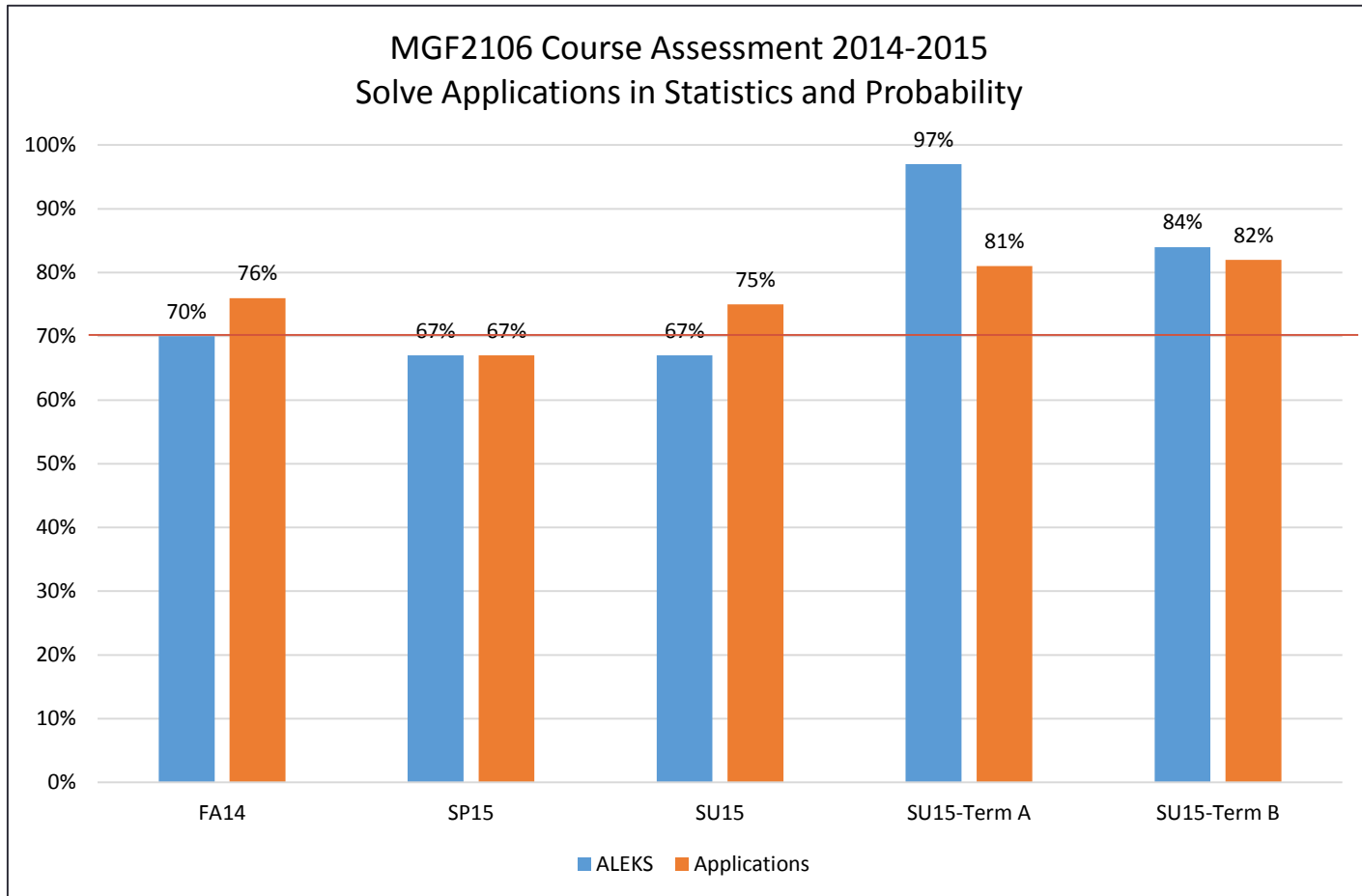
Course Assessment Data



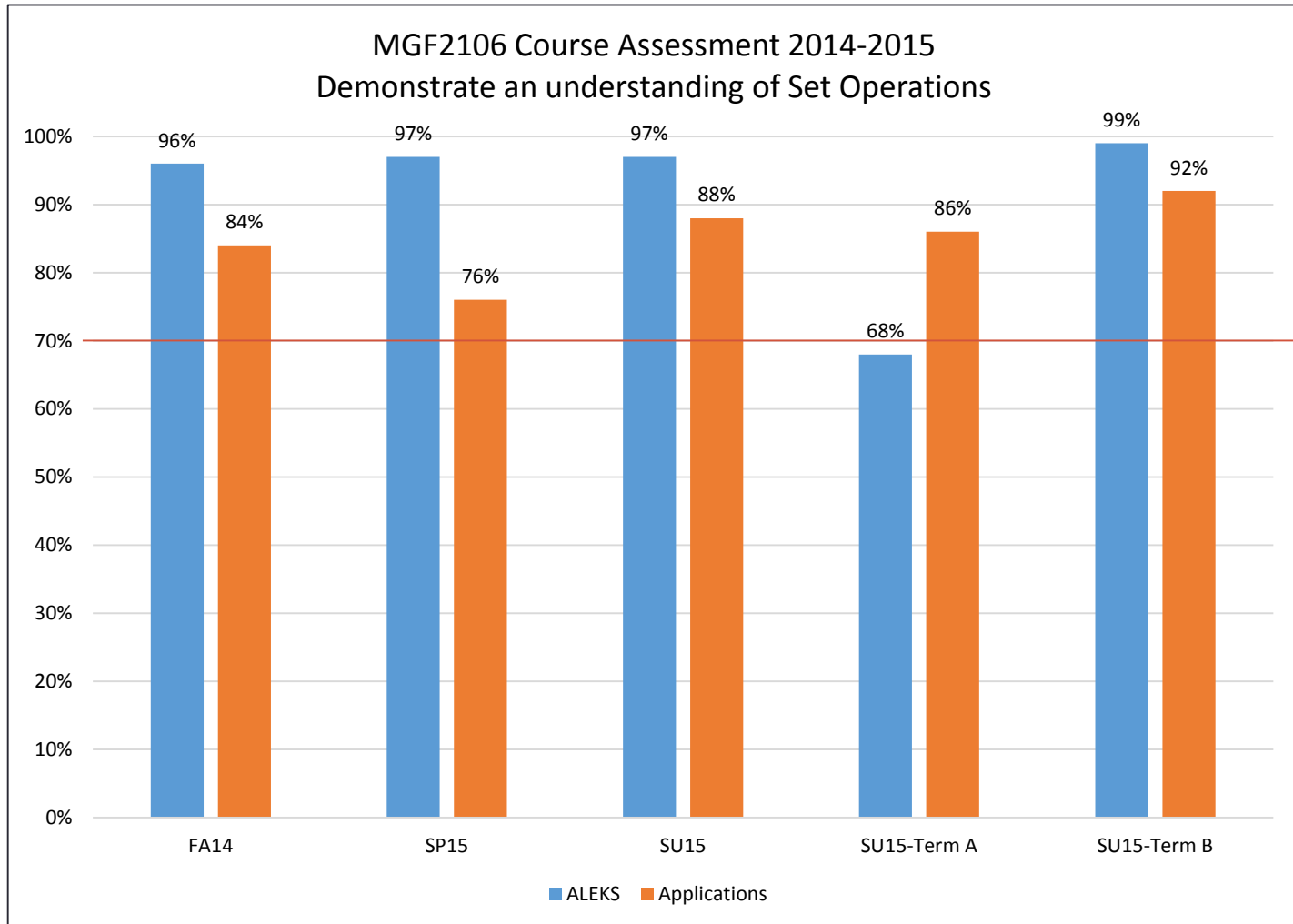
Course Assessment Data



Course Assessment Data



Course Assessment Data



Assessment Data

[MAC1105](#)

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