

Appendix I

Enrollments in Departmental Courses in Four-Year Colleges and Universities: 2000, 2005, 2010, 2015

TABLE A.1 Enrollment (in 1000s) in mathematics courses in fall 2000, 2005, 2010, and 2015 [with SE for 2005, 2010, and 2015 totals]. Roundoff may cause marginal totals to appear incorrect.

Courses	Fall 2015 Enrollment (in 1000s)																		
	2000	2005	2005	2005	2010	2010 (including Distance Courses)	2010 Total (Non-Distance Courses)	2015 Total (including Distance Courses)	Total (Including Distance Courses)				Total (Non-Distance Courses)						
									Univ (PhD)	Univ (MA)	Coll (BA)	Univ (PhD)	Univ (MA)	Coll (BA)	Univ (PhD)	Univ (MA)	Coll (BA)	Subtotal	
Precollege Level ²	218	201 [18.8]		201 [18.8]	209 [22.0]	201 [18.8]	201 [21.5]	253 [26.5]	80 [16.0]	48 [11.2]	125 [18.1]	77 [15.6]	47 [10.5]	121 [17.7]	244 [25.7]				
Introductory (Including Pre-Calc) Level																			
6 College Algebra	211	201 [17.2]		201 [17.2]	251 [15.9]	243 [15.3]	261 [24.7]	88	57	116	84	54	112	251 [24.1]					
7 Trigonometry	33	30 [3.5]		30 [3.5]	42 [5.2]	41 [5.0]	47 [7.4]	22	14	12	21	14	11	46 [7.1]					
8 Coll Alg & Trig Combined	37	34 [6.8]		34 [6.8]	35 [7.6]	35 [7.4]	62 [15.6]	30	21	10	29	21	10	60 [15.1]					
9 Elementary Functions ¹	105	93 [8.9]		93 [8.9]	114 [8.2]	112 [8.1]	128 [11.2]	58	25	46	56	25	44	125 [10.7]					
10 Intro Math Modeling	13	8 [3.1]		8 [3.1]	9 [2.2]	9 [2.1]	12 [4.2]	7	2	3	6	2	3	12 [4.0]					
11 Math for Liberal Arts	86	123 [11.7]		123 [11.7]	147 [14.4]	141 [13.8]	171 [21.9]	57	45	68	55	44	61	159 [19.5]					
12 Finite Math	82	94 [16.1]		94 [16.1]	62 [6.7]	61 [6.6]	90 [11.1]	50	14	27	44	13	24	81 [10.2]					
13 Business Math	53	38 [5.8]		38 [5.8]	47 [7.7]	46 [7.5]	48 [8.8]	16	18	14	15	16	13	45 [7.9]					
14 Math Elem Sch Tchrs	68	72 [6.5]		72 [6.5]	85 [7.2]	80 [7.3]	73 [9.6]	16	23	34	16	23	33	72 [9.5]					
15 Other Intro Level Math	36	12 [2.5]		12 [2.5]	69 [10.5]	66 [9.9]	108 [24.2]	64	7	37	62	7	34	103 [23.5]					
Subtotal Introductory Level	723	706 [29.0]		706 [29.0]	863 [35.0]	834 [33.8]	1000 [79.6]	408 [53.8]	226 [37.6]	365 [46.2]	390 [49.6]	218 [36.3]	346 [43.1]	954 [74.4]					

¹ Elementary Functions, Precalculus, and Analytic Geometry.

² Additional details on Precollege Level courses prior to 2010 are available in the *CBMS Survey Fall 2010* report available at www.ams.org/cbms-survey

TABLE A.1, Cont. Fall term mathematics course enrollment (in 1000s) [with SE for 2005, 2010, and 2015 totals].

Courses	Fall 2015 Enrollment (in 1000s)											
	Mathematics Departments											
	Total (Including Distance Courses)					Total (Non-Distance Courses)						
	2000	2005	2010 Total (including Distance)	2010 Total (Non-Distance)	2015 Total	Univ (PhD)	Univ (MA)	Coll (BA)	Univ (PhD)	Univ (MA)	Coll (BA)	Subtotal
Calculus Level												
16 Mainstream Calc I	192	201 [9.6]	235 [14.2]	234 [14.1]	261 [23.9]	140	58	63	134	58	63	255 [22.9]
17 Mainstream Calc II	87	85 [4.9]	129 [13.7]	128 [13.7]	129 [11.7]	79	21	29	76	21	29	125 [10.7]
18 Mainstream Calc III, IV	73	74 [4.0]	104 [6.2]	103 [6.2]	117 [10.6]	78	19	20	77	19	20	115 [10.9]
19 Non-Mainstream Calc I	105	108 [8.6]	99 [6.4]	99 [6.3]	94 [10.9]	59	18	18	57	17	17	91 [10.5]
20 Non-Mainstream Calc II	10	11 [2.0]										
20.5 Non-Mainstream Calc II, III, etc.			22 [3.3]	22 [3.3]	16 [4.3]	6	8	1	6	8	1	16 [4.3]
21a Diff Eq & Lin Alg (comb)	na	9 [2.2]	15 [2.6]	15 [2.6]	23 [3.4]	13	7	3	13	7	3	23 [3.4]
21b Differential Equations	34	36 [2.8]	56 [5.3]	56 [5.3]	61 [5.6]	41	9	10	41	9	10	60 [5.6]
22 Discrete Math	20	17 [1.9]	25 [3.7]	25 [3.7]	25 [3.0]	10	6	10	9	6	10	25 [3.0]
23 Linear/Matrix Algebra	41	37 [2.6]	46 [4.0]	45 [4.0]	55 [4.8]	34	8	12	34	8	12	54 [4.8]
21 Freshman seminar					5 [0.7]	3	0	2	3	0	2	5 [0.7]
24 Other Calculus Level	7	9 [2.7]	17 [3.1]	17 [3.1]	21 [6.0]	11	3	6	11	3	6	20 [6.0]
Subtotal Calculus Level	570	586 [23.6]	748 [35.2]	743 [34.8]	807 [62.3]	474	157	176	460	156	174	790 [60.7]

TABLE A.1, Cont. Fall term mathematics course enrollment (in 1000s) [with SE for 2005, 2010, and 2015 totals].

					Fall 2015 Enrollment (in 1000s)		
					Math Departments		
Courses	2000	2005	2010	2015	Univ (PhD)	Univ (MA)	Coll (BA)
Advanced Level							
25 Intro to Proofs	10	12 [1.3]	15 [1.2]	18 [1.4]	9	4	5
26-1 Modern Algebra I			13 [1]	13 [1.7]	5	2	6
26-2 Modern Algebra II			1 [0.1]	1 [0.2]	0	0	0
26 Modern Algebra I & II	11	11 [1.1]	14 -	14 [1.7]	6	2	6
27 Number Theory	4	3 [0.5]	4 [0.5]	4 [0.5]	2	1	1
28 Combinatorics	3	3 [0.5]	3 [0.5]	3 [0.8]	2	0	1
29 Actuarial Mathematics	1	2 [0.5]	2 [0.3]	6 [1.1]	5	1	0
30 Logic/Foundations	2	1 [0.4]	1 [0.2]	1 [0.4]	0	0	1
31 Discrete Structures	5	3 [0.7]	4 [0.9]	4 [0.8]	1	1	1
32 History of Mathematics	2	6 [1.0]	7 [1.4]	5 [0.9]	2	1	2
33 Geometry	6	8 [1.0]	10 [1]	8 [1.1]	4	1	4
34 Math for HS Teachers	7	8 [2.2]	8 [1]	8 [1.4]	2	3	2
35-1 Advanced Calculus I, Real Analysis I			16 [1.6]	15 [1.4]	7	3	5
35-2 Advanced Calculus II, Real Analysis II			2 [0.8]	1 [0.3]	1	0	0
35 Advanced Calculus I & II, Real Analysis I & II	10	15 [1.2]	18 -	17 [1.6]	8	3	5
36 Advanced Math for Engineering and Physical Sciences	5	6 [1.1]	11 [5.3]	6 [1.3]	4	1	1
37 Advanced Linear Algebra	3	4 [0.7]	4 [0.5]	7 [0.9]	6	1	0
38 Vector Analysis	2	2 [0.8]	3 [0.5]	4 [1.3]	4	0	0
39 Advanced Differential Equations	2	1 [0.2]	3 [0.6]	3 [0.6]	3	0	0
40 Partial Differential Equations	2	3 [0.5]	4 [0.5]	4 [1.0]	3	1	1
41 Numerical Analysis I & II	5	5 [0.5]	7 [1.1]	8 [0.8]	5	2	1

Note: 0 means less than 500 enrollments.

TABLE A.1, Cont. Fall term mathematics course enrollment (in 1000s) [with SE for 2005, 2010, and 2015 totals].

Courses	2000	2005	2010	2015	Fall 2015 Enrollment (in 1000s)		
					Mathematics Departments		
					Univ (PhD)	Univ (MA)	Coll (BA)
(Advanced Level Cont.)							
42 Applied Math (Modeling)	2	2 [0.3]	3 [0.5]	4 [0.7]	2	1	1
43 Complex Variables	3	3 [0.5]	3 [0.3]	3 [0.5]	2	0	1
44 Topology	2	1 [0.3]	2 [0.2]	2 [0.3]	1	0	0
45 Math of Finance	na	1 [0.4]	2 [0.4]	4 [1.1]	2	0	1
46 Codes & Cryptology	na	0 [0.2]	0 [0.1]	1 [0.3]	1	0	0
47 Biomathematics	na	1 [0.2]	1 [0.2]	1 [0.2]	0	0	0
48 Senior Sem / Ind Study in Math	3	3 [0.5]	5 [0.5]	6 [0.6]	1	1	3
49 Other Adv Level Courses	10	5 [0.7]	14 [3.8]	11 [2.6]	6	2	3
Operations Research							
58 Intro Oper Research	1	1 [0.2]					
59 Int to Linear Programming	1	1 [0.4]					
60 Other Oper Research	0	0 [0.2]					
61 Operations Research (all courses)			2 [0.4]	3 [1.2]	1	1	2
Subtotal Advanced Level	102	112 [6.2]	150 [6.6]	154 [12.2]	81	30	43
Mathematics Total	1614	606 [45.3]	1971 [72.5]	2213 [139.7]	1043	461	709

TABLE A.2. Enrollment (in 1000s) in statistics courses in fall 2000, 2005, 2010, and 2015 [with SE for 2005 and 2015 totals]. (SEs for 2010 Mathematics and Statistics department totals in CBMS2010, Table A.2 P. 189.) Roundoff may cause marginal totals to appear incorrect.

Statistics Courses	2000				2005				Total 2010		Total 2015		Fall 2015 Enrollment (in 1000s)																	
											Mathematics Departments										Statistics Departments									
											Total (Including Dist. Courses)					Total (Non-Dist. Courses)					Total (Inc. Dist. Courses)					Total (Non-Dist. Courses)				
	2000	2005	Total 2010	Total 2015	Univ (PhD) (MA)	Coll (BA)	Subtotal	Univ (PhD) (MA)	Coll (BA)	Subtotal	Univ (PhD) (MA)	Coll (BA)	Subtotal	Univ (PhD) (MA)	Univ (MA)	Coll (BA)	Subtotal	Univ (PhD) (MA)	Univ (MA)	Coll (BA)	Subtotal	Univ (PhD) (MA)	Univ (MA)	Coll (BA)	Subtotal	Univ (PhD) (MA)	Univ (MA)	Coll (BA)	Subtotal	
Lower Level Statistics																														
Introductory Statistics (no Calc prereq)	155	167 [14.3]	243 -	275 [16.7]	45	115	205 [16.3]	41	104	188 [15.1]	43	104	188 [15.1]	58	12	70	12	70 [2.2]	54	12	70	58	12	70	66 [2.1]	12	12	12	66 [2.1]	
Introductory Statistics (Calc prereq, for non-majors)			42 -	56 [6.2]	8	14	36 [6.1]	7	14	34 [5.8]	13	14	34 [5.8]	16	3	20	3	20 [1.4]	16	3	20	16	3	20	20 [1.4]	3	3	3	20 [1.4]	
Probability & Statistics (no Calc prereq)	17	21 [5.5]	19 -	NA NA	NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA NA	
Statistics for pre-service elementary or middle grade teachers			66 -	1 [0.3]	1	0	1 [0.3]	1	0	1 [0.3]	0	0	1 [0.3]	0	0	0	0	0 [0.0]	0	0	0	0	0	0	0 [0.0]	0	0	0	0 [0.0]	
Statistics for pre-service high school teachers			122 -	0 [0.2]	0	0	0 [0.2]	0	0	0 [0.2]	0	0	0 [0.2]	0	0	0	0	0 [0.0]	0	0	0	0	0	0	0 [0.0]	0	0	0	0 [0.0]	
Other Intro. Level Statistics	17	13 [2.5]	8 -	15 [2.9]	3	6	11 [2.8]	3	6	11 [2.8]	2	6	11 [2.8]	4	0	4	0	4 [0.7]	4	0	4	4	0	4	4 [0.7]	0	0	0	4 [0.7]	
Subtotal Intro. Level Statistics	190	202 [14.9]	312 -	347 [20.7]	57	134	253 [20.2]	53	123	235 [18.6]	58	123	235 [18.6]	78	16	94 [2.9]	16	94 [2.9]	74	15	94	78	16	94	90 [2.9]	15	94	90 [2.9]		

Note: 0 means less than 500 enrollments. Standard errors for combined enrollments across mathematics and statistics departments were not calculated in 2010.

TABLE A.2, Cont. Enrollment (in 1000s) in statistics courses in 2000, 2005, 2010, and 2015 in mathematics and statistics departments [with SE for 2005 and 2015 totals]. (SEs for 2010 Mathematics and Statistics department totals in CBMS2010, Table A.2 P. 190.) Roundoff may cause marginal totals to appear incorrect.

Statistics Courses	2000	2005	2010	Total 2015	Fall 2015 Enrollment (in 1000s)								
					Mathematics Departments				Statistics Departments				
					Univ (PhD)	Univ (MA)	Coll (BA)	Subtotal	Univ (PhD)	Univ (MA)	Subtotal		
Upper Level Statistics													
Prob & Statistics for majors (no calc prereq)				38 [4.7]	1	15	6	21 [4.6]	15	2	17 [1.5]		
Math. Statistics (Calc prereq)	18	12 [2.1]	8 -	8 [0.7]	2	1	2	5 [0.7]	3	0	3 [0.2]		
Probability (Calc prereq)	17	10 [1.0]	12 -	16 [1.2]	7	2	4	12 [1.2]	4	0	4 [0.4]		
Prob & Statistics Combined		16 [2.0]	12 -	19 [1.8]	4	2	5	12 [1.8]	7	1	7 [0.7]		
Stochastic Processes	1	1 [0.2]	1 -	2 [0.3]	1	0	0	1 [0.3]	1	0	1 [0.1]		
Applied Statistical Analysis	6	7 [1.2]	5 -	4 [0.9]	1	1	1	2 [0.9]	2	0	2 [0.2]		
Data Science/Analytics				2 [0.2]	0	0	0	0 [0.2]	2	0	2 [0.3]		
Design & Anal of Experiments	2	1 [0.2]	2 -	2 [0.2]	0	0	0	1 [0.2]	1	0	1 [0.1]		
Regression & Correlation	2	3 [0.5]	4 -	5 [0.4]	0	1	1	2 [0.4]	3	0	3 [0.2]		
Biostatistics	2	2 [0.6]	1 -	2 [0.4]	0	0	0	1 [0.4]	1	0	1 [0.2]		
Nonparametric Statistics	1	0 [0.1]	0 -	1 [0.0]	0	0	0	0 [0.0]	1	0	1 [0.1]		

Note: 0 means less than 500 enrollments. Standard errors for combined enrollments across mathematics and statistics departments were not calculated in 2010.

TABLE A.3. Enrollment (in 1000s) in computer science courses in fall 2000, 2005, 2010, and 2015 [with SE for 2005, 2010, and 2015 totals]. Roundoff may cause marginal totals to appear incorrect.

CS Courses	Fall 2015 Enrollment (in 1000s)													
	2000	2005	2010	Total 2015	Total (Including Distance Courses)					Total (Non-Distance Courses)				
					Univ (PhD)	Univ (MA)	Coll (BA)	Univ (PhD)	Univ (MA)	Coll (BA)	Univ (PhD)	Univ (MA)	Coll (BA)	Subtotal
General Education CS Courses														
Computers & Society, Issues in Computer Science	4	5 [1.8]	10.1 [5.3]	2 [0.8]	0	0	2	0	0	2	2	0	0	2 [0.8]
Intro to Software Pkgs	25	12 [4.1]	11.1 [3.6]	6 [2.0]	0	1	5	0	0	5	5	0	0	5 [2.0]
Other CS general ed courses	6	11 [4.8]	9.4 [3.6]	12 [3.5]	0	1	11	0	1	11	11	0	1	12 [3.4]
Subtotal general education courses	35	28 [6.2]	30.6 [7.3]	20 [3.9]	0	1	18	0	1	18	18	0	1	19 [3.8]
Lower-Level CS Courses														
Computer Programming I *	23	10 [1.8]	15.2 [1.9]	15 [3.1]	2	2	11	2	2	11	11	2	2	15 [3.1]
Computer Programming II *	6	2 [0.6]		3 [0.9]	0	1	2	0	1	2	2	0	1	3 [0.9]
Discrete Structures for CS	4	1 [0.5]	1.5 [0.5]	2 [0.6]	1	0	1	1	0	1	1	1	0	2 [0.6]
Other Lower-level CS Courses	22	4 [1.1]	4.4 [1.3]	5 [1.7]	0	1	4	0	1	4	4	0	1	5 [1.6]
Subtotal Lower-Level CS	55	18 [2.9]	25.4 [3.2]	25 [4.7]	4	4	18	4	4	18	18	4	4	25 [4.6]
All intermediate-level courses	18	8 [1.4]	11.7 [1.8]	16 [3.4]	1	2	14	1	2	14	14	1	2	16 [3.4]
All upper-level CS courses	17	5 [1.3]	9.8 [2.4]	6 [1.5]	0	2	5	0	2	5	5	0	2	6 [1.5]
Total Computer Science	123	59 [9.9]	77.4 [11.2]	68 [10.8]	5	8	55	5	8	55	54	5	8	67 [10.6]

* For 1995 and 2000, this course category was described in the 1991 ACM/IEEE CS curriculum report. For 2005, these courses were described in the 2001 ACM/IEEE report "Model Curricula for Computing." For 2015, they are described in "Computer Science Curricular 2013," a joint IEEE Computer Society/ACM Task Force Report.