

# Course Placement Service Report



**SOUTHERN ARKANSAS UNIVERSITY (0142)**  
**Magnolia, AR**

**Placement Group:** FEMALES

**Subject Area:** Mathematics

**Data Cohort:** 20152016

**Date of Report:** May 22, 2017



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**Mathematics**

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# **Course Placement Report**

Information for Making Placement Decisions

**Placement Group: FEMALES**



Summary of Placement Variables

This table summarizes the placement variables used in requested analyses for each reference course. The table shows number of students, mean value, and standard deviation.

The descriptive statistics for course completers are based on students who receive A-F grades. However, if you chose to treat W grades as unsuccessful outcomes, the statistics will also include students with W grades.

		FEMALES			Students who completed course		
Reference course	Placement variable	N	Mean	SD	N	Mean	SD
CLG ALG/MTH LIT	ACT Mathematics Score	414	19.4	3.5	162	19.5	3.0
	High School Mathematics Grade Average	374	3.3	0.7	152	3.2	0.7
	ACT Mathematics Score and High School Mathematics Grade Average	374	19.6 3.3	3.6 0.7	152	19.4 3.2	3.0 0.7



### Summary of Course Outcomes

This table summarizes the course outcomes used in requested analyses for each reference course.

The table shows number of students, mean course grade, standard deviation, percent B or higher, percent C or higher, total of just W and I grades, and W grades not treated as successful.

		Grades used in analysis						
Reference course	Placement variable	N	Mean	SD	Percent B or higher	Percent C or higher	Total of W and I grades	W grades treated as not successful
CLG ALG/MTH LIT	ACT Mathematics Score	162	2.7	1.3	65	81	2	Yes
	High School Mathematics Grade Average	152	2.8	1.2	68	82	2	Yes
	ACT Mathematics Score and High School Mathematics Grade Average	152	2.8	1.2	68	82	2	Yes



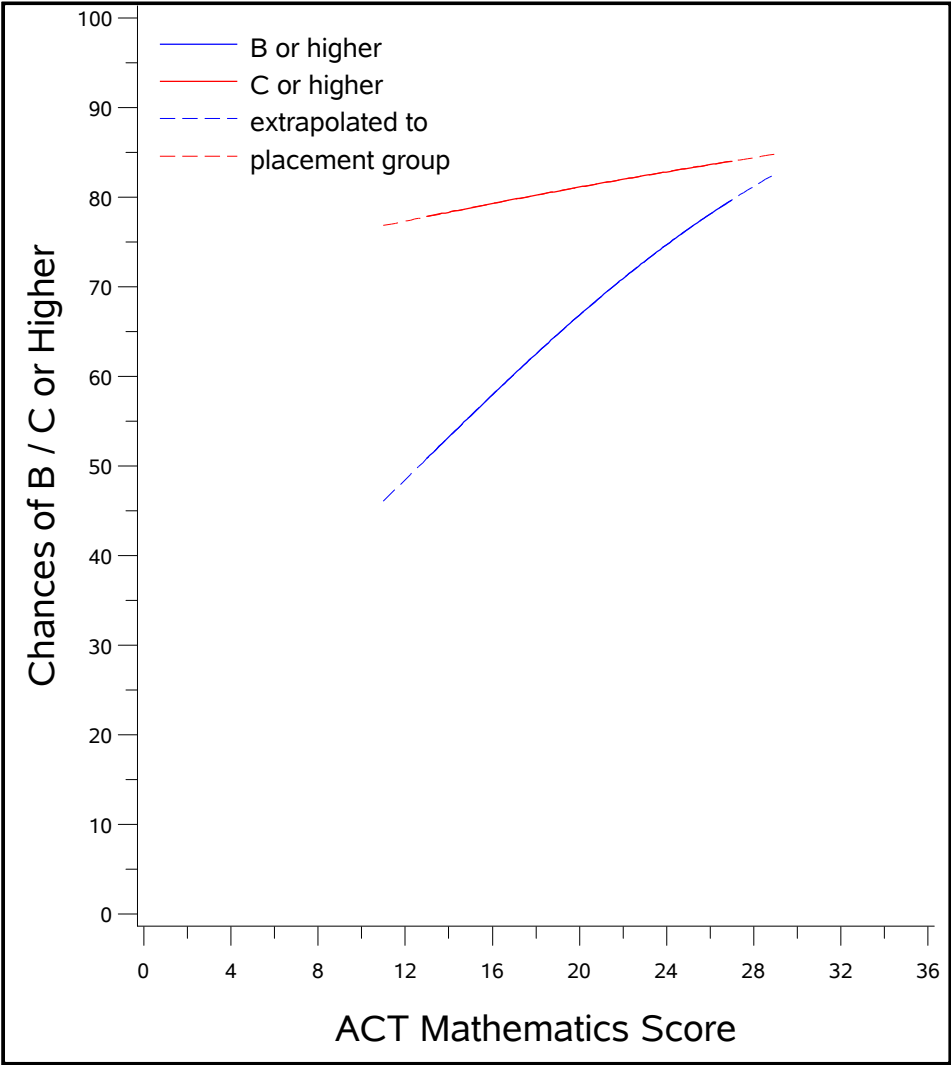
This table and graph report students' chances of achieving a B / C or higher in CLG ALG/MTH LIT, given their ACT Mathematics Score. For example, the chance that a student with an ACT Mathematics Score of 20 would obtain a B or higher in CLG ALG/MTH LIT is 67%.

If present, the boldface scores labeled as Opt. B and Opt. C in the table show the cutoff scores that are associated with the maximum accuracy rate. The information in the table and graph can be used to advise students about their chances of success in CLG ALG/MTH LIT.

Chance of Success in CLG ALG/MTH LIT,  
Given ACT Mathematics Score

ACT Mathematics Score		Chance of success (B or higher)	Chance of success (C or higher)
Opt. B	29	83	85
	28	81	84
	27	80	84
	26	78	84
	25	76	83
	24	75	83
	23	73	82
	22	71	82
	21	69	82
	20	67	81
	19	65	81
	18	63	80
	17	60	80
	16	58	79
	15	56	79
	14	53	78
	<b>13</b>	51	78
	11	46	77

Chance of Success in CLG ALG/MTH LIT,  
Given ACT Mathematics Score



Note: The chances of success for one or both criteria are all above or below 50%. No optimal cutoff score exists.



### Placement Information for CLG ALG/MTH LIT Using ACT Mathematics Score

This table shows the effects of using different ACT Mathematics Score cutoffs in CLG ALG/MTH LIT. For example, if you were to require students to have an ACT Mathematics Score of at least 20 to be placed into CLG ALG/MTH LIT, then you would expect:

- about 58% of your students would be placed in a lower-level course
- about 54% of your placement decisions would be correct
- about 73% of those placed in CLG ALG/MTH LIT would obtain a B or higher

ACT Mathematics Score			B or higher		C or higher	
		Percent placed in lower-level course	Accuracy rate	Success rate	Accuracy rate	Success rate
	29	99	35	83	19	85
	28	99	35	82	20	85
	27	97	37	80	21	84
	26	93	39	79	24	84
	25	90	40	78	26	84
	24	83	44	77	31	83
	23	78	46	76	34	83
	22	70	49	75	39	83
	21	64	52	74	43	83
	20	58	54	73	47	82
	19	47	57	71	53	82
	18	38	59	70	59	82
	17	25	62	68	67	81
	16	10	64	66	75	81
	15	3	65	66	79	81
	14	1	65	65	80	81
Opt. B	13	0	65	65	81	81
	11		65	65	81	81

If present, the shaded rows highlight the optimal cutoff scores (i.e., those that lead to the highest percentage of correct placement decisions).



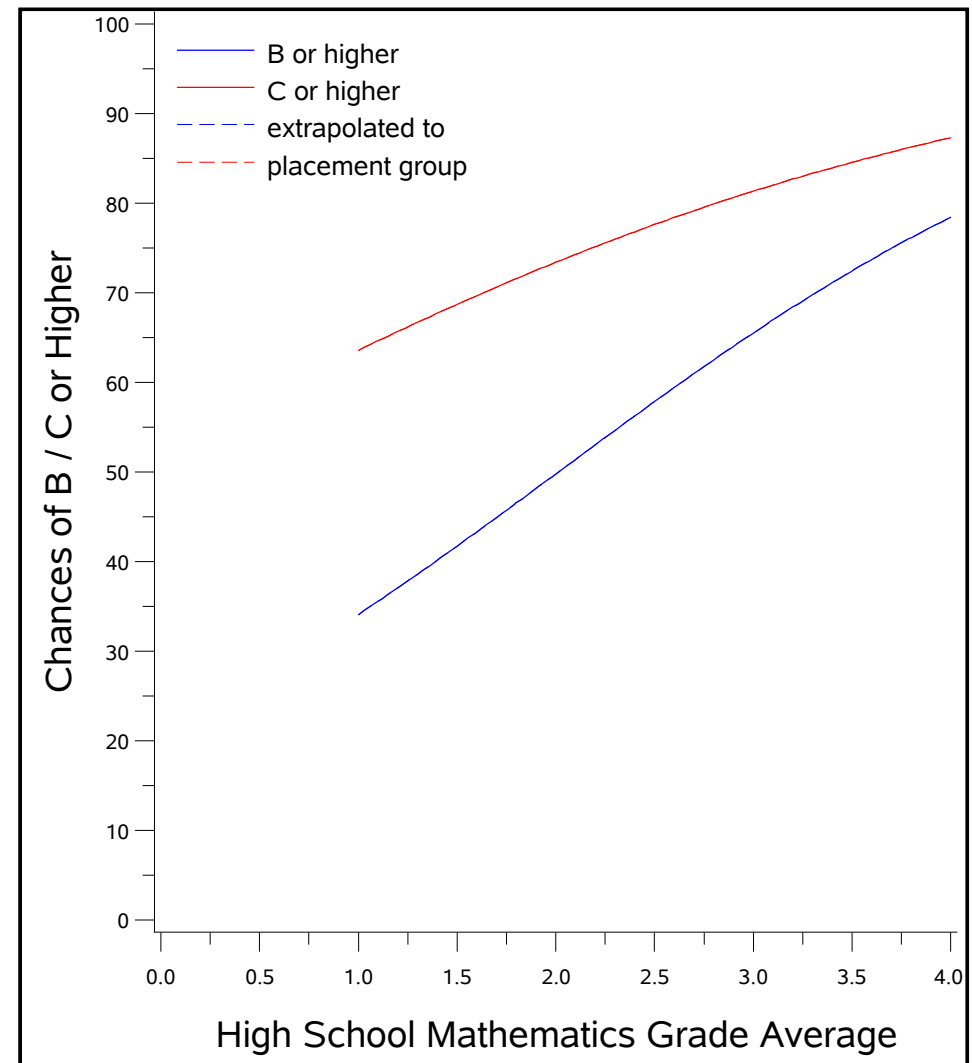
This table and graph report students' chances of achieving a B / C or higher in CLG ALG/MTH LIT, given their High School Mathematics Grade Average. For example, the chance that a student with a High School Mathematics Grade Average of 2.5 would obtain a B or higher in CLG ALG/MTH LIT is 58%.

If present, the boldface scores labeled as Opt. B and Opt. C in the table show the cutoff scores that are associated with the maximum accuracy rate. The information in the table and graph can be used to advise students about their chances of success in CLG ALG/MTH LIT.

**Chance of Success in CLG ALG/MTH LIT,  
Given High School Mathematics Grade Average**

High School Mathematics Grade Average		Chance of success (B or higher)	Chance of success (C or higher)
Opt. B	4.0	78	87
	3.8	76	86
	3.7	75	86
	3.6	74	85
	3.5	72	85
	3.4	71	84
	3.3	70	83
	3.2	68	83
	3.0	66	81
	2.8	63	80
	2.7	61	79
	2.6	59	78
	2.5	58	78
	2.4	56	77
	2.3	55	76
	<b>2.0</b>	50	73
	1.8	47	72
	1.7	45	71
	1.5	42	69
	1.3	39	67
	1.0	34	64

**Chance of Success in CLG ALG/MTH LIT,  
Given High School Mathematics Grade Average**



Note: The chances of success for one or both criteria are all above or below 50%. No optimal cutoff score exists.



### Placement Information for CLG ALG/MTH LIT Using High School Mathematics Grade Average

This table shows the effects of using different High School Mathematics Grade Average cutoffs in CLG ALG/MTH LIT. For example, if you were to require students to have a High School Mathematics Grade Average of at least 2.5 to be placed into CLG ALG/MTH LIT, then you would expect:

- about 12% of your students would be placed in a lower-level course
- about 69% of your placement decisions would be correct
- about 71% of those placed in CLG ALG/MTH LIT would obtain a B or higher

High School Mathematics Grade Average			B or higher		C or higher	
		Percent placed in lower-level course	Accuracy rate	Success rate	Accuracy rate	Success rate
Opt. B	4.0	78	44	78	34	87
	3.8	71	48	78	39	87
	3.7	64	51	77	44	87
	3.6	61	53	77	46	87
	3.5	55	55	76	50	86
	3.4	52	56	76	52	86
	3.3	41	61	75	60	86
	3.2	38	62	75	61	86
	3.0	23	67	73	71	85
	2.8	18	68	72	74	84
	2.7	15	69	72	76	84
	2.6	14	69	72	76	84
	2.5	12	69	71	77	84
	2.4	11	69	71	77	84
	2.3	9	69	71	79	84
	2.0	5	69	70	81	83
	1.8	3	69	70	81	83
	1.7	3	69	69	82	83
	1.5	2	69	69	82	83
	1.3	0	69	69	82	83
	1.0		69	69	83	83

If present, the shaded rows highlight the optimal cutoff scores (i.e., those that lead to the highest percentage of correct placement decisions).



### Chance of a B or Higher in CLG ALG/MTH LIT, Given ACT Mathematics Score and High School Mathematics Grade Average

The matrix reports students' chances of achieving a B or higher in CLG ALG/MTH LIT, given their ACT Mathematics Score and High School Mathematics Grade Average. For example, the chance that a student with an ACT Mathematics Score of 17 and a High School Mathematics Grade Average of 2.2 would obtain a B or higher in CLG ALG/MTH LIT is 52%.

If present, the dark gold area shows the combinations of ACT Mathematics Score and High School Mathematics Grade Average values that are at or near a 50% chance level. The combinations that maximize the percentage of correct placement decisions (accuracy rate) always correspond to a chance of 50%.

High School Mathematics Grade Average

4.0	54	55	57	58	60	61	62	64	65	66	68	69	70	71	73	74	75	76	77	78	79	80	81	82	83	84	84	85	86	87	87	88	88	89	90	90
3.9	52	54	55	57	58	60	61	62	64	65	66	68	69	70	72	73	74	75	76	77	78	79	80	81	82	83	84	84	85	86	87	87	88	88	89	90
3.8	51	52	54	55	57	58	60	61	62	64	65	67	68	69	70	72	73	74	75	76	77	78	79	80	81	82	83	84	84	85	86	87	87	88	88	89
3.7	50	51	52	54	55	57	58	60	61	62	64	65	67	68	69	70	72	73	74	75	76	77	78	79	80	81	82	83	84	84	85	86	87	87	88	89
3.6	48	50	51	52	54	55	57	58	60	61	63	64	65	67	68	69	70	72	73	74	75	76	77	78	79	80	81	82	83	84	84	85	86	87	87	88
3.5	47	48	50	51	53	54	55	57	58	60	61	63	64	65	67	68	69	70	72	73	74	75	76	77	78	79	80	81	82	83	84	84	85	86	87	87
3.4	45	47	48	50	51	53	54	55	57	58	60	61	63	64	65	67	68	69	70	72	73	74	75	76	77	78	79	80	81	82	83	84	84	85	86	87
3.3	44	45	47	48	50	51	53	54	56	57	58	60	61	63	64	65	67	68	69	70	72	73	74	75	76	77	78	79	80	81	82	83	84	84	85	86
3.2	42	44	45	47	48	50	51	53	54	56	57	58	60	61	63	64	65	67	68	69	70	72	73	74	75	76	77	78	79	80	81	82	83	84	84	85
3.1	41	42	44	45	47	48	50	51	53	54	56	57	58	60	61	63	64	65	67	68	69	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
3.0	40	41	42	44	45	47	48	50	51	53	54	56	57	59	60	61	63	64	65	67	68	69	71	72	73	74	75	76	77	78	79	80	81	82	83	84
2.9	38	40	41	43	44	45	47	48	50	51	53	54	56	57	59	60	61	63	64	65	67	68	69	71	72	73	74	75	76	77	78	79	80	81	82	83
2.8	37	38	40	41	43	44	45	47	48	50	51	53	54	56	57	59	60	61	63	64	66	67	68	69	71	72	73	74	75	76	77	78	79	80	81	82
2.7	36	37	38	40	41	43	44	45	47	48	50	51	53	54	56	57	59	60	61	63	64	66	67	68	69	71	72	73	74	75	76	77	78	79	80	81
2.6	34	36	37	38	40	41	43	44	46	47	48	50	51	53	54	56	57	59	60	61	63	64	66	67	68	69	71	72	73	74	75	76	77	78	79	80
2.5	33	34	36	37	38	40	41	43	44	46	47	48	50	51	53	54	56	57	59	60	62	63	64	66	67	68	69	71	72	73	74	75	76	77	78	79
2.4	32	33	34	36	37	38	40	41	43	44	46	47	49	50	51	53	54	56	57	59	60	62	63	64	66	67	68	70	71	72	73	74	75	76	77	78
2.3	31	32	33	34	36	37	38	40	41	43	44	46	47	49	50	51	53	54	56	57	59	60	62	63	64	66	67	68	70	71	72	73	74	75	76	78
2.2	29	31	32	33	34	36	37	38	40	41	43	44	46	47	49	50	52	53	54	56	57	59	60	62	63	64	66	67	68	70	71	72	73	74	75	76
2.1	28	29	31	32	33	34	36	37	39	40	41	43	44	46	47	49	50	52	53	54	56	57	59	60	62	63	64	66	67	68	70	71	72	73	74	75
2.0	27	28	29	31	32	33	34	36	37	39	40	41	43	44	46	47	49	50	52	53	55	56	57	59	60	62	63	64	66	67	68	70	71	72	73	74
1.9	26	27	28	29	31	32	33	35	36	37	39	40	41	43	44	46	47	49	50	52	53	55	56	57	59	60	62	63	64	66	67	68	70	71	72	73
1.8	25	26	27	28	29	31	32	33	35	36	37	39	40	41	43	44	46	47	49	50	52	53	55	56	58	59	60	62	63	64	66	67	68	70	71	72
1.7	24	25	26	27	28	29	31	32	33	35	36	37	39	40	41	43	44	46	47	49	50	52	53	55	56	58	59	60	62	63	65	66	67	68	70	71
1.6	23	24	25	26	27	28	29	31	32	33	35	36	37	39	40	42	43	44	46	47	49	50	52	53	55	56	58	59	60	62	63	65	66	67	68	70
1.5	22	23	24	25	26	27	28	30	31	32	33	35	36	37	39	40	42	43	44	46	47	49	50	52	53	55	56	58	59	60	62	63	65	66	67	69
1.4	21	22	23	24	25	26	27	28	30	31	32	33	35	36	37	39	40	42	43	44	46	47	49	50	52	53	55	56	58	59	60	62	63	65	66	67
1.3	20	21	22	23	24	25	26	27	28	30	31	32	33	35	36	37	39	40	42	43	44	46	47	49	50	52	53	55	56	58	59	61	62	63	65	66
1.2	19	20	21	22	23	24	25	26	27	28	30	31	32	33	35	36	37	39	40	42	43	45	46	47	49	50	52	53	55	56	58	59	61	62	63	65
1.1	18	19	20	21	22	23	24	25	26	27	28	30	31	32	33	35	36	37	39	40	42	43	45	46	48	49	50	52	53	55	56	58	59	61	62	63
1.0	17	18	19	20	21	22	23	24	25	26	27	28	30	31	32	33	35	36	38	39	40	42	43	45	46	48	49	50	52	53	55	56	58	59	61	62
0.9	16	17	18	19	20	21	22	23	24	25	26	27	28	30	31	32	34	35	36	38	39	40	42	43	45	46	48	49	51	52	53	55	56	58	59	61
0.8	16	16	17	18	19	20	21	22	23	24	25	26	27	29	30	31	32	34	35	36	38	39	40	42	43	45	46	48	49	51	52	54	55	56	58	59
0.7	15	16	16	17	18	19	20	21	22	23	24	25	26	27	29	30	31	32	34	35	36	38	39	40	42	43	45	46	48	49	51	52	54	55	56	58
0.6	14	15	16	16	17	18	19	20	21	22	23	24	25	26	27	29	30	31	32	34	35	36	38	39	40	42	43	45	46	48	49	51	52	54	55	56
0.5	14	14	15	16	16	17	18	19	20	21	22	23	24	25	26	27	29	30	31	32	34	35	36	38	39	40	42	43	45	46	48	49	51	52	54	55
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

ACT Mathematics Score



The matrix reports students' chances of achieving a C or higher in CLG ALG/MTH LIT, given their ACT Mathematics Score and High School Mathematics Grade Average. For example, the chance that a student with an ACT Mathematics Score of 17 and a High School Mathematics Grade Average of 2.2 would obtain a C or higher in CLG ALG/MTH LIT is 75%.

If present, the dark gold area shows the combinations of ACT Mathematics Score and High School Mathematics Grade Average values that are at or near a 50% chance level. The combinations that maximize the percentage of correct placement decisions (accuracy rate) always correspond to a chance of 50%.

[illegible]



**Placement Information for CLG ALG/MTH LIT Using ACT Mathematics Score and High School Mathematics Grade Average**

This table shows the impact of using different combinations of ACT Mathematics Scores and High School Mathematics Grade Averages as cutoff scores in CLG ALG/MTH LIT. For example, if you were to require students to have at least a 50% chance of a B or higher based on their ACT Mathematics Scores and High School Mathematics Grade Averages to be placed into CLG ALG/MTH LIT (see page 9), then you would expect:

- about 7% of your students would be placed in a lower-level course
- about 70% of your placement decisions would be correct
- about 71% of those placed in CLG ALG/MTH LIT would obtain a B or higher

	B or higher			C or higher		
Chance range	Percent below	Accuracy rate	Success rate	Percent below	Accuracy rate	Success rate
91 - 99						
85 - 90	99	32	86	73	37	87
82 - 84	95	35	84	46	56	86
79 - 81	87	40	82	22	71	85
76 - 78	77	46	81	11	78	84
73 - 75	62	53	79	6	80	83
70 - 72	52	58	77	3	82	83
67 - 69	41	62	76	2	82	83
64 - 66	31	65	75	0	83	83
61 - 63	25	67	74			
58 - 60	17	68	73			
55 - 57	13	69	72			
52 - 54	10	70	71			
49 - 51	7	70	71			
46 - 48	6	70	70			
43 - 45	4	69	70			
40 - 42	2	69	69			
37 - 39	1	69	69			
34 - 36	0	69	69			
31 - 33	0	69	69			
28 - 30						
25 - 27						
22 - 24						
19 - 21						
16 - 18						
10 - 15						
1 - 9						

If present, the shaded rows highlight the optimal cutoff combinations (i.e., those that lead to the highest percentage of correct placement decisions).



### Logistic Regression Weights and Correlations

This table contains the estimated logistic regression weights used to calculate the chances of success in each course. The weights associated with each set of placement variables are shown with the corresponding significance level (p-value). This information can be used to calculate the chances of success for a given student.

A p-value is an estimate of the probability that a regression weight of magnitude equal to that reported in the table would occur by chance if the true regression weight were 0; the smaller the p-value, the more highly "statistically significant" the regression weight is. The correlation between the placement variables and course grades also is listed.

		B or higher		C or higher		
Course	Placement variable(s)	Logistic regression weight	P-value	Logistic regression weight	P-value	Correlation
CLG ALG/MTH LIT	Intercept	-1.20		0.88		
	ACT Mathematics Score	0.10	0.1002	0.03	0.6707	0.18
	Intercept	-1.31		0.10		
	High School Mathematics Grade Average	0.65	0.0122	0.46	0.1193	0.21
	Intercept	-2.20		0.01		
	ACT Mathematics Score and High School Mathematics Grade Average	0.06 0.57	0.3608 0.0341	0.01 0.45	0.9342 0.1466	0.25