

Course Placement Service Report



SOUTHERN ARKANSAS UNIVERSITY (0142)
Magnolia, AR

Placement Group: FEMALES

Subject Area: Science

Data Cohort: 20152016

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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
BIO/PHYS SCI & LAB	ACT Science Score	414	20.2	3.6	75	22.2	2.9
	High School Natural Science Grade Avg	371	3.3	0.6	70	3.6	0.4
	ACT Science Score and High School Natural Science Grade Avg	371	20.4 3.3	3.6 0.6	70	22.3 3.6	3.0 0.4

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
BIO/PHYS SCI & LAB	ACT Science Score	75	2.3	1.2	45	79	1	Yes
	High School Natural Science Grade Avg	70	2.4	1.1	47	83	1	Yes
	ACT Science Score and High School Natural Science Grade Avg	70	2.4	1.1	47	83	1	Yes

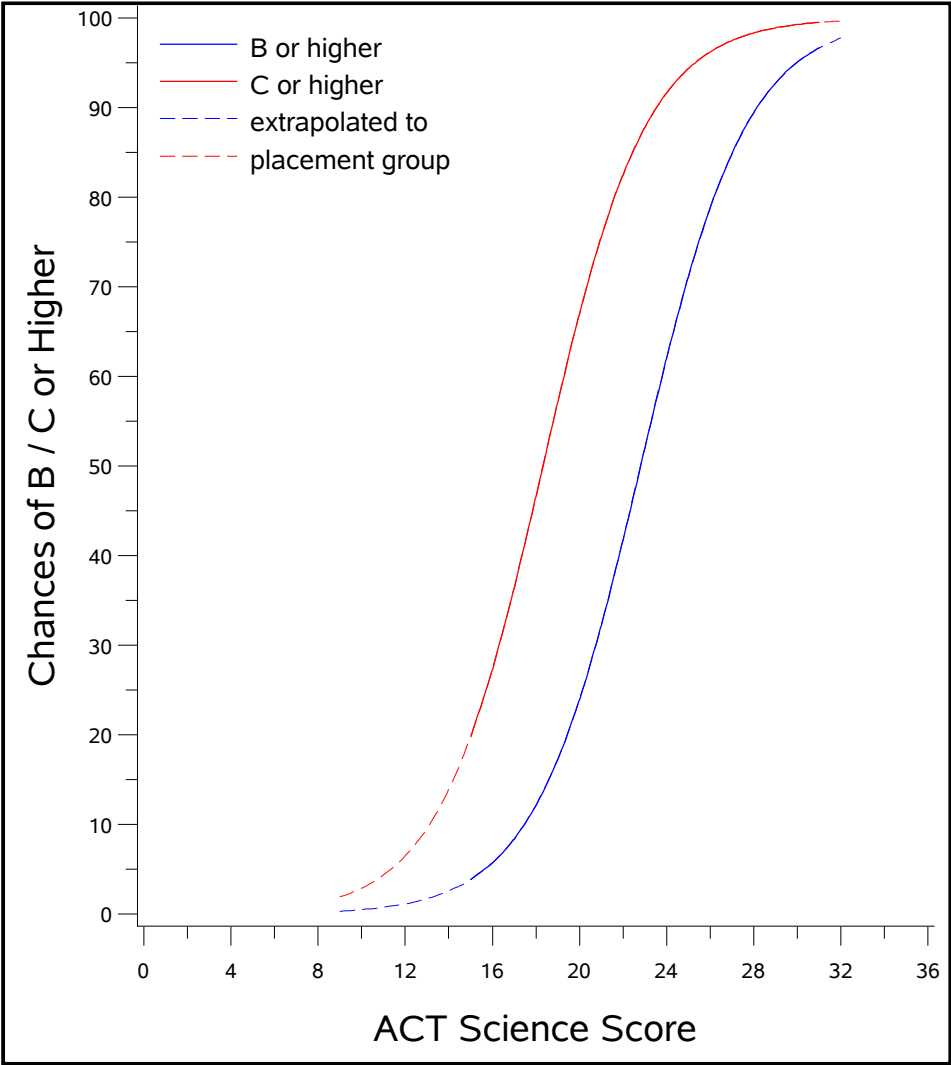
This table and graph report students' chances of achieving a B / C or higher in BIO/PHYS SCI & LAB, given their ACT Science Score. For example, the chance that a student with an ACT Science Score of 21 would obtain a B or higher in BIO/PHYS SCI & LAB is 32%.

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 BIO/PHYS SCI & LAB.

Chance of Success in BIO/PHYS SCI & LAB,
Given ACT Science Score

ACT Science Score		Chance of success (B or higher)	Chance of success (C or higher)
Opt. B	32	98	99
	31	97	99
	30	95	99
	29	93	99
	28	89	98
	27	85	97
	26	79	96
	25	71	94
	24	62	92
	23	52	88
	22	42	83
	21	32	76
Opt. C	20	24	67
	19	17	57
	18	12	47
	17	8	36
	16	6	27
	15	4	20
	14	3	14
	13	2	10
	12	1	7
	11	1	4
	10	1	3
	9	0	2

Chance of Success in BIO/PHYS SCI & LAB,
Given ACT Science Score



Placement Information for BIO/PHYS SCI & LAB Using ACT Science Score

This table shows the effects of using different ACT Science Score cutoffs in BIO/PHYS SCI & LAB. For example, if you were to require students to have an ACT Science Score of at least 21 to be placed into BIO/PHYS SCI & LAB, then you would expect:

- about 51% of your students would be placed in a lower-level course
- about 70% of your placement decisions would be correct
- about 52% of those placed in BIO/PHYS SCI & LAB would obtain a B or higher

ACT Science Score			B or higher		C or higher	
		Percent placed in lower-level course	Accuracy rate	Success rate	Accuracy rate	Success rate
	32	99	68	98	36	100
	31	99	69	97	36	100
	30	99	69	97	37	99
	29	98	70	94	37	99
	28	98	70	93	38	99
	27	97	71	91	39	99
	26	93	73	84	42	97
	25	89	75	79	46	96
Opt. B	24	84	76	74	50	95
	23	74	76	66	57	92
	22	64	75	59	64	89
	21	51	70	52	71	86
	20	40	64	47	75	82
Opt. C	19	30	57	42	76	79
	18	21	50	39	75	75
	17	16	47	37	74	73
	16	11	42	35	72	70
	15	5	36	33	68	67
	14	3	35	33	67	66
	13	2	34	32	66	65
	12	1	33	32	65	65
	11	0	32	32	65	64
	10	0	32	32	64	64
	9		32	32	64	64

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

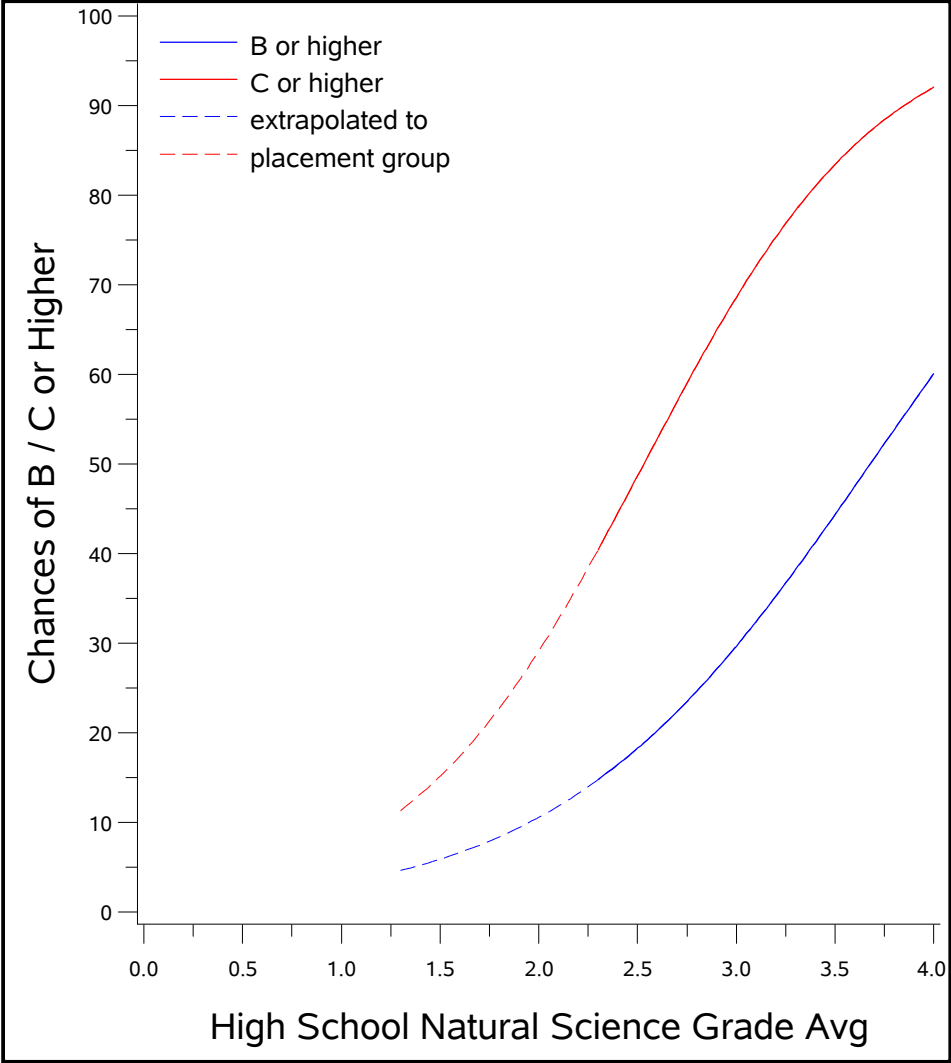
This table and graph report students' chances of achieving a B / C or higher in BIO/PHYS SCI & LAB, given their High School Natural Science Grade Avg. For example, the chance that a student with a High School Natural Science Grade Avg of 2.7 would obtain a B or higher in BIO/PHYS SCI & LAB is 22%.

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 BIO/PHYS SCI & LAB.

Chance of Success in BIO/PHYS SCI & LAB,
Given High School Natural Science Grade Avg

Chance of Success in BIO/PHYS SCI & LAB,
Given High School Natural Science Grade Avg

High School Natural Science Grade Avg		Chance of success (B or higher)	Chance of success (C or higher)
Opt. B	4.0	60	92
	3.8	54	89
	3.7	51	88
	3.5	44	83
	3.3	38	78
	3.0	30	69
Opt. C	2.8	25	61
	2.7	22	57
	2.5	18	49
	2.3	15	40
	2.0	11	29
	1.8	8	23
	1.7	7	20
	1.5	6	15
	1.3	5	11



Placement Information for BIO/PHYS SCI & LAB Using High School Natural Science Grade Avg

This table shows the effects of using different High School Natural Science Grade Avg cutoffs in BIO/PHYS SCI & LAB. For example, if you were to require students to have a High School Natural Science Grade Avg of at least 2.7 to be placed into BIO/PHYS SCI & LAB, then you would expect:

- about 15% of your students would be placed in a lower-level course
- about 51% of your placement decisions would be correct
- about 45% of those placed in BIO/PHYS SCI & LAB would obtain a B or higher

High School Natural Science Grade Avg			B or higher		C or higher	
		Percent placed in lower-level course	Accuracy rate	Success rate	Accuracy rate	Success rate
Opt. B	4.0	73	65	60	48	92
	3.8	70	65	59	51	92
	3.7	57	66	57	60	90
	3.5	51	65	55	64	90
	3.3	38	62	52	72	87
Opt. C	3.0	22	55	47	78	83
	2.8	21	55	47	78	83
	2.7	15	51	45	79	81
	2.5	11	49	44	79	80
	2.3	6	46	42	78	78
	2.0	2	42	41	76	76
	1.8	2	42	41	76	76
	1.7	2	42	41	76	75
	1.5	1	41	41	75	75
	1.3		40	40	74	74

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 BIO/PHYS SCI & LAB, Given ACT Science Score and High School Natural Science Grade Avg

The matrix reports students' chances of achieving a B or higher in BIO/PHYS SCI & LAB, given their ACT Science Score and High School Natural Science Grade Avg. For example, the chance that a student with an ACT Science Score of 17 and a High School Natural Science Grade Avg of 2.2 would obtain a B or higher in BIO/PHYS SCI & LAB is 1%.

If present, the dark gold area shows the combinations of ACT Science Score and High School Natural Science Grade Avg 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 Natural Science Grade Avg

4.0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	4	6	9	13	18	26	35	46	57	67	76	83	88	92	95	97	98	99	99	99	99	99	
3.9	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	8	11	17	23	32	43	53	64	73	81	87	91	94	96	97	98	99	99	99	99	
3.8	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	4	7	10	15	21	29	39	50	61	71	79	85	90	93	96	97	98	99	99	99	99	
3.7	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	9	13	19	27	36	47	58	68	77	84	89	92	95	97	98	99	99	99	99	
3.6	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	8	12	17	24	33	43	54	65	74	82	87	91	94	96	98	98	99	99	99	
3.5	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	7	10	15	22	30	40	51	62	71	79	86	90	94	96	97	98	99	99	99	
3.4	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	9	13	19	27	37	47	58	68	77	84	89	93	95	97	98	99	99	99	
3.3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	4	5	8	12	17	25	34	44	55	65	75	82	88	92	94	96	98	98	99	99	
3.2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	7	11	16	22	31	41	52	62	72	80	86	91	94	96	97	98	99	99	
3.1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	9	14	20	28	37	48	59	69	78	84	89	93	95	97	98	99	99	
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	4	5	8	12	18	25	34	45	56	66	75	82	88	92	95	96	98	99	99	
2.9	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	7	11	16	23	31	41	52	63	73	80	86	91	94	96	97	98	99	
2.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	10	14	20	28	38	49	60	70	78	85	90	93	95	97	98	99	
2.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	4	6	9	13	18	26	35	46	57	67	76	83	88	92	95	97	98	99
2.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	8	11	16	23	32	42	53	64	73	81	87	91	94	96	97	98
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	4	7	10	15	21	29	39	50	61	70	79	85	90	93	96	97	98
2.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	9	13	19	26	36	46	57	68	76	83	89	92	95	97	98
2.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	8	12	17	24	33	43	54	64	74	81	87	91	94	96	98
2.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	4	7	10	15	21	30	40	51	61	71	79	86	90	93	96	97
2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	9	13	19	27	36	47	58	68	77	84	89	93	95	97
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	8	12	17	24	33	44	55	65	74	82	87	92	94	96
1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	7	10	15	22	30	40	51	62	72	80	86	90	94	96
1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	9	14	20	28	37	48	59	69	77	84	89	93	95
1.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	4	5	8	12	18	25	34	45	55	66	75	82	88	92	
1.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	7	11	16	23	31	41	52	63	72	80	86	91	
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	10	14	20	28	38	49	60	70	78	85	90	
1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	4	6	8	12	18	26	35	45	56	67	76	83	88	
1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	7	11	16	23	32	42	53	63	73	81	87	
1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	7	10	14	21	29	39	49	60	70	79	85		
1.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	4	6	9	13	19	26	35	46	57	67	76	83		
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	8	11	17	24	32	43	54	64	74	81		
0.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	4	7	10	15	21	30	39	50	61	71	79		
0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	9	13	19	27	36	47	58	68	77		
0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	8	12	17	24	33	43	54	65	74		
0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	5	7	10	15	22	30	40	51	62	71		
0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	6	9	14	20	27	37	48	58	69		
	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			

ACT Science Score

The matrix reports students' chances of achieving a C or higher in BIO/PHYS SCI & LAB, given their ACT Science Score and High School Natural Science Grade Avg. For example, the chance that a student with an ACT Science Score of 17 and a High School Natural Science Grade Avg of 2.2 would obtain a C or higher in BIO/PHYS SCI & LAB is 7%.

High School Natural Science Grade Avg

ACT Science Score

Placement Information for BIO/PHYS SCI & LAB Using ACT Science Score and High School Natural Science Grade Avg

This table shows the impact of using different combinations of ACT Science Scores and High School Natural Science Grade Avgs as cutoff scores in BIO/PHYS SCI & LAB. For example, if you were to require students to have at least a 50% chance of a B or higher based on their ACT Science Scores and High School Natural Science Grade Avgs to be placed into BIO/PHYS SCI & LAB (see page 9), then you would expect:

- about 74% of your students would be placed in a lower-level course
- about 80% of your placement decisions would be correct
- about 71% of those placed in BIO/PHYS SCI & LAB 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	98	71	98	87	49	98
85 - 90	96	72	95	65	69	95
82 - 84	94	75	91	58	74	93
79 - 81	93	75	90	54	76	92
76 - 78	90	77	86	53	77	92
73 - 75	89	77	84	50	78	91
70 - 72	88	77	84	47	80	90
67 - 69	86	78	81	47	80	90
64 - 66	84	79	79	44	81	88
61 - 63	82	79	78	40	82	87
58 - 60	81	79	77	39	82	86
55 - 57	76	80	73	39	82	86
52 - 54	74	80	71	34	82	84
49 - 51	74	80	71	32	82	83
46 - 48	69	80	67	31	82	82
43 - 45	66	79	65	31	82	82
40 - 42	66	79	65	28	82	81
37 - 39	65	79	65	26	81	80
34 - 36	61	78	61	26	81	80
31 - 33	57	77	59	25	81	79
28 - 30	57	76	58	23	80	78
25 - 27	52	74	56	22	80	77
22 - 24	50	73	54	21	79	76
19 - 21	49	73	54	20	79	76
16 - 18	45	70	51	17	76	73
10 - 15	37	65	47	12	73	70
1 - 9	17	47	37	4	66	65

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
BIO/PHYS SCI & LAB	Intercept	-9.39		-7.73		
	ACT Science Score	0.41	0.0006	0.42	0.0013	0.48
	Intercept	-4.68		-4.23		
	High School Natural Science Grade Avg	1.27	0.038	1.67	0.0233	0.32
	Intercept	-14.84		-14.40		
	ACT Science Score and High School Natural Science Grade Avg	0.44 1.36	0.0012 0.0519	0.47 1.75	0.0021 0.0431	0.56