

## Bio Foundations Two Semester Assessment Data

### Results

The details of the assessment results are found in Attachment B. The summary of the first 2 semesters are:

Table 1. BIO 120 assessment results for first year of implementation.

Our students clearly did better at the Scientific Method questions that only require an understanding of technique and terminology. When analysis of patterns and the need to make numeric predictions was added (Genetics), average performance declined. Finally, when synthesis was required (Evolution), the student performance declined even further.

An examination of the first semester's results prompted some discussion among the faculty, and new pedagogical techniques were used to improve evolutionary understandings and synthesis ability. This may have been the reason for the improvement in the Evolution scores, but other factors may have also led to improvement. Clearly, teaching in this area could further improve.

<b>Table 1</b>		
<b>Concept</b>	<b>Fall 2003</b>	<b>Spring 2004</b>
Scientific Method	84.8%	89.3%
Genetics	69.1%	67.9%
Evolution	38.4%	49.7%
<b>Annual Mean</b>	64.1%	69.0%

**Fall 2003**

**Scientific Method Questions**

**Ave. % Correct 84.8**

Question #1			Question #2			Question #3				
Lecturer	# stu	# corr	Lecturer	# stu	# corr	Lecturer	# stu	# corr		
Clokey	108	104	Clokey	108	81	Clokey	108	106		
Katovich	47	45	Katovich	47	34	Katovich	47	42		
Linton	108	101	Linton	108	84	Linton	108	100		
Lowry	176	152	Lowry	176	124	Lowry	176	144		
TOTAL	439	402	TOTAL	439	323	TOTAL	439	392		
% Correct			91.6	% Correct			73.6	% Correct		89.3

**Dragonfly Genetics Questions**

**Ave. % Correct 69.1**

Question #1			Question #2			Question #3			Question #4			
Lecturer	# stu	# corr	Lecturer	# stu	# corr	Lecturer	# stu	# corr	Lecturer	# stu	# corr	
Clokey	108	79	Clokey	108	79	Clokey	108	91	Clokey	108	88	
Katovich	47	34	Katovich	47	34	Katovich	47	37	Katovich	47	42	
Linton	108	60	Linton	108	75	Linton	108	88	Linton	108	81	
Lowry	176	98	Lowry	176	98	Lowry	176	115	Lowry	176	114	
TOTAL	439	271	TOTAL	439	286	TOTAL	439	331	TOTAL	439	325	
% Correct			61.7	% Correct			65.1	% Correct			75.4	74.0
						Correct			Correct			

**Antibiotic Evolution Questions**

**Ave. % Correct 38.4**

Question #1			Question #2			Question #3				
Lecturer	# stu	# corr	Lecturer	# stu	# corr	Lecturer	# stu	# corr		
Clokey	108	27	Clokey	108	25	Clokey	108	38		
Katovich	47	25	Katovich	47	26	Katovich	47	9		
Linton	108	74	Linton	108	36	Linton	108	28		
Lowry	176	82	Lowry	176	74	Lowry	176	62		
TOTAL	439	208	TOTAL	439	161	TOTAL	439	137		
% Correct			47.4	% Correct			36.7	% Correct		31.2

Grand Average

64.1 %

Spring 2004

Scientific Method Questions

Ave. % Correct

89.3

Question #1

Question #2

Question #3

Lecturer	# stu	# corr	Lecturer	# stu	# corr	Lecturer	# stu	# corr
Clokey	208	202	Clokey	208	162	Clokey	208	191
Linton	167	159	Linton	167	141	Linton	167	154
Lowrey	81	78	Lowrey	81	58	Lowrey	81	74
DWB	109	106	DWB	109	90	DWB	109	98
TOTAL	565	545	TOTAL	565	451	TOTAL	565.0	517.0
% Correct		96.5	% Correct		79.8	% Correct		91.5

Dragonfly Genetics Questions

Ave. % Correct

67.9

Question #1

Question #2

Question #3

Question #4

Lecturer	# stu	# corr	Lecturer	# stu	# corr	Lecturer	# stu	# corr	Lecturer	# stu	# corr
Clokey	208	62	Clokey	208	137	Clokey	208	187	Clokey	208	187
Linton	167	99	Linton	167	123	Linton	167	119	Linton	167	110
Lowrey	81	44	Lowrey	81	56	Lowrey	81	59	Lowrey	81	55
DWB	109	76	DWB	109	69	DWB	109	72	DWB	109	80
TOTAL	565	281	TOTAL	565	385	TOTAL	565.0	437.0	TOTAL	565.0	432.0
% Correct		49.7	% Correct		68.1	% Correct		77.3	% Correct		76.5

Antibiotic Evolution Questions

Ave. % Correct

49.7

Question #1

Question #2

Question #3

Lecturer	# stu	# corr	Lecturer	# stu	# corr	Lecturer	# stu	# corr
Clokey	208	104	Clokey	208	100	Clokey	208	144
Linton	167	108	Linton	167	106	Linton	167	55
Lowrey	81	39	Lowrey	81	33	Lowrey	81	25
DWB	109	43	DWB	109	56	DWB	109	30
TOTAL	565	294	TOTAL	565	295	TOTAL	565.0	254.0

% Correct	52.0	% Correct	52.2	% Correct	45.0
<b>Grand Average</b>					<b>69.0</b>

**2003-2004 Assessment Results**

**% Correct**

<b>Topic</b>	<b>Fall</b>	<b>Spring</b>
Scientific Method	84.8	89.3
Genetics	69.1	67.9
Evolution	38.4	49.7
Average	64.1	69.0