

# SCIENCE-BUSINESS MINOR (BUSINESS MAJORS)

The Science-Business minors, joint minors between the Fermanian School of Business and the Biology and Chemistry Departments, are for business students who are interested in pursuing business careers in innovative science-related industries such as biotechnology, medical device, and pharmaceutical. Three emphases are available:

- Chemistry Emphasis
- Ecology Emphasis
- Molecular Emphasis

## Emphases

- Chemistry (p. 1)
- Ecology (p. 1)
- Molecular (p. 1)

### Science-Business Minor with Chemistry Emphasis

Code	Title	Units
<b>Lower-Division Requirements</b>		
ACC 2001	Principles of Financial Accounting	4
CHE 1052 and CHE 1052L	General Chemistry I (FE) and General Chemistry I Lab (FE)	5
CHE 1053 and CHE 1053L	General Chemistry II and General Chemistry II Lab	4
CHE 2013	Analytical Chemistry	3
CHE 2094 and CHE 2094L	Organic Chemistry I and Organic Chemistry I Lab	4
MGT 2012	Principles of Management	3
Choose one (1) course from the following:		4
BIO 1001 and BIO 1001L	Human Biology and Bioethics (FE) and Human Biology and Bioethics Laboratory (FE)	
BIO 1003 and BIO 1003L	Introduction to Biology (FE) and Introduction to Biology Laboratory (FE)	
BIO 2010 and BIO 2010L	Cell Biology and Biochemistry (FE) and Cell Biology and Biochemistry Laboratory (FE)	
Choose one (1) course from the following:		3-4
MTH 1044	Calculus with Applications (FE)	
MTH 1064	Calculus I (FE)	
MTH 1073	Business Calculus (FE)	
<b>Upper-Division Requirements</b>		
MKT 3032	Principles of Marketing	3
Choose three (3) additional courses from BUS or MGT 3000-4099 for nine (9) units		9
<b>Total Units</b>		<b>42-43</b>

### Science-Business Minor with Ecology Emphasis

Code	Title	Units
<b>Lower-Division Requirements</b>		
ACC 2001	Principles of Financial Accounting	4
BIO 2011 and BIO 2011L	Ecological and Evolutionary Systems (FE) and Ecological and Evolutionary Systems Laboratory (FE) <sup>1</sup>	4

BIO 2012 and BIO 2012L	Organismal Biology and Organismal Biology Laboratory	4
MGT 2012	Principles of Management	3
Choose one (1) course from the following:		4-5
CHE 1001	Chemistry and Society (FE)	
CHE 1003 and CHE 1003L	Introduction to General, Organic, and Biological Chemistry (FE) and Introduction to General, Organic, and Biological Chemistry Lab (FE)	
CHE 1052 and CHE 1052L	General Chemistry I (FE) and General Chemistry I Lab (FE)	
Choose one (1) course from the following:		3-4
MTH 1044	Calculus with Applications (FE)	
MTH 1064	Calculus I (FE)	
MTH 1073	Business Calculus (FE)	

<b>Upper-Division Requirements</b>		
BIO 3063 and BIO 3063L	Conservation Ecology and Conservation Ecology Laboratory	4
MKT 3032	Principles of Marketing	3
Choose one additional course from BUS or MGT 3000-4099 for three (3) units		3
Choose 3-4 units from the following: <sup>2</sup>		3-4
BIO 3012	Applied Plant Biology	
BIO 3015	Microbiology	
BIO 3015L	Microbiology Laboratory	
BIO 3023	Introduction to Oceanography	
BIO 3023L	Introduction to Oceanography Laboratory	
BIO 3033	Marine Biology	
BIO 3033L	Marine Biology Laboratory	
BIO 3040	Field Biology: Neotropical Ecology	
BIO 4010	Vertebrate Biology	
BIO 4010L	Vertebrate Biology Laboratory	
BIO 4023	Advanced Human Physiology	
BIO 4023L	Advanced Human Physiology Laboratory	
BIO 4030	Animal Behavior	
BIO 4030L	Animal Behavior Laboratory	
EVS 3096	Advanced Biology <sup>3</sup>	
EVS 3097	Advanced Ecology <sup>3</sup>	
EVS 3098	Advanced Ecological Applications <sup>3</sup>	

**Total Units** **35-38**

<sup>1</sup> BIO 1005 and BIO 1005L may be substituted with the permission of the Biology Department

<sup>2</sup> Courses and their corresponding lab (if applicable) must be taken concurrently.

<sup>3</sup> Can be taken at Au Sable or Costa Rica with our sister school (prior permission is required for any substitutions) and used to transfer in these units.

### Science-Business Minor with Molecular Emphasis

Code	Title	Units
<b>Lower-Division Requirements</b>		
ACC 2001	Principles of Financial Accounting	4

2 Science-Business Minor (Business Majors)

BIO 2010 and BIO 2010L	Cell Biology and Biochemistry (FE) and Cell Biology and Biochemistry Laboratory (FE)	4
BIO 2011 and BIO 2011L	Ecological and Evolutionary Systems (FE) and Ecological and Evolutionary Systems Laboratory (FE)	4
MGT 2012	Principles of Management	3
Choose one (1) course from the following:		4-5
CHE 1001	Chemistry and Society (FE)	
CHE 1003 and CHE 1003L	Introduction to General, Organic, and Biological Chemistry (FE) and Introduction to General, Organic, and Biological Chemistry Lab (FE)	
CHE 1052 and CHE 1052L	General Chemistry I (FE) and General Chemistry I Lab (FE)	
Choose one (1) course from the following:		3-4
MTH 1044	Calculus with Applications (FE)	
MTH 1064	Calculus I (FE)	
MTH 1073	Business Calculus (FE)	
<b>Upper-Division Requirements</b>		
BIO 3045 and BIO 3045L	Genetics and Genetics Laboratory	4
BIO 3052	Research Methodology	3
MKT 3032	Principles of Marketing	3
Choose one additional course from BUS or MGT 3000-4099 for three (3) units		3
Choose one (1) course from the following:		4
BIO 3015	Microbiology	
BIO 3015L	Microbiology Laboratory	
BIO 3050	Advanced Cell Biology	
BIO 3050L	Advanced Cell Biology Laboratory	
BIO 3080	Molecular Biology	
BIO 3080L	Molecular Biology Laboratory	
BIO 3090	Immunology	
BIO 3090L	Immunology Laboratory	
BIO 4000	Developmental Biology	
BIO 4000L	Developmental Biology Laboratory	
BIO 4010	Vertebrate Biology	
BIO 4010L	Vertebrate Biology Laboratory	
BIO 4050 and BIO 4050L	Advanced Biochemistry and Advanced Biochemistry Laboratory	

**Total Units** **39-41**