

A1040A  
Associate in Science  
Pre-Major Biology and Biology Education

General Education

<b>Required Courses</b>			Class	Lab	Clinic/Exp	Credits
<i>Students must take all of the following courses:</i>						
ENG	111	Expository Writing	3	0	0	3
BIO	111	General Biology I	3	3	0	4
CHM	151	General Chemistry I	3	3	0	4
CHM	152	General Chemistry II	3	3	0	4
<b>English Composition</b>						
<i>Students must select a course from the following:</i>						
ENG	112	Argument-Based Research	3	0	0	3
ENG	113	Literature-Based Research	3	0	0	3
ENG	114	Prof Research & Reporting	3	0	0	3
<b>Humanities/Fine Arts</b>						
<i>Students must select 9 hours from the following courses:</i>						
ART	111	Art Appreciation	3	0	0	3
COM	110	Introduction to Communication	3	0	0	3
COM	120	Intro Interpersonal Com	3	0	0	3
COM	231	Public Speaking	3	0	0	3
DRA	122	Oral Interpretation	3	0	0	3
DRA	126	Storytelling	3	0	0	3
ENG	131	Introduction to Literature	3	0	0	3
ENG	231	American Literature I	3	0	0	3
ENG	232	American Literature II	3	0	0	3
ENG	241	British Literature I	3	0	0	3
ENG	242	British Literature II	3	0	0	3
ENG	243	Major British Writers	3	0	0	3
ENG	261	World Literature I	3	0	0	3
ENG	262	World Literature II	3	0	0	3
FRE	111	Elementary French I	3	0	0	3
FRE	112	Elementary French II	3	0	0	3
FRE	211	Intermediate French I	3	0	0	3
FRE	212	Intermediate French II	3	0	0	3
GER	111	Elementary German I	3	0	0	3
GER	112	Elementary German II	3	0	0	3
GER	211	Intermediate German I	3	0	0	3
GER	212	Intermediate German II	3	0	0	3
HUM	110	Technology and Society	3	0	0	3

HUM	115	Critical Thinking	3	0	0	3
HUM	120	Cultural Studies	3	0	0	3
HUM	121	The Nature of America	3	0	0	3
HUM	130	Myth in Human Culture	3	0	0	3
HUM	150	American Womens Studies	3	0	0	3
HUM	160	Introduction to Film	2	2	0	3
HUM	220	Human Values and Meaning	3	0	0	3
ITA	111	Elementary Italian I	3	0	0	3
ITA	112	Elementary Italian II	3	0	0	3
ITA	211	Intermediate Italian I	3	0	0	3
ITA	212	Intermediate Italian II	3	0	0	3
MUS	110	Music Appreciation	3	0	0	3
MUS	112	Introduction to Jazz	3	0	0	3
MUS	210	History of Rock Music	3	0	0	3
MUS	211	History of Country Music	3	0	0	3
PHI	215	Philosophical Issues	3	0	0	3
PHI	240	Introduction to Ethics	3	0	0	3
REL	110	World Religions	3	0	0	3
REL	211	Intro to Old Testament	3	0	0	3
REL	212	Intro to New Testament	3	0	0	3
REL	221	Religion in America	3	0	0	3
RUS	111	Elementary Russian I	3	0	0	3
RUS	112	Elementary Russian II	3	0	0	3
RUS	211	Intermediate Russian I	3	0	0	3
RUS	212	Intermediate Russian II	3	0	0	3
SPA	111	Elementary Spanish I	3	0	0	3
SPA	112	Elementary Spanish II	3	0	0	3
SPA	211	Intermediate Spanish I	3	0	0	3
SPA	212	Intermediate Spanish II	3	0	0	3
DRA	111	Theatre Appreciation	3	0	0	3

### Social/Behavioral Science-History

*Students must select a course from the following:*

HIS	121	Western Civilization I	3	0	0	3
HIS	122	Western Civilization II	3	0	0	3
HIS	131	American History I	3	0	0	3
HIS	132	American History II	3	0	0	3

### Social/Behavioral Science Elective

*Students must select 6 hours from the following courses:*

ANT	210	General Anthropology	3	0	0	3
ANT	220	Cultural Anthropology	3	0	0	3
ECO	151	Survey of Economics	3	0	0	3
ECO	251	Prin of Microeconomics	3	0	0	3
ECO	252	Prin of Macroeconomics	3	0	0	3
GEO	111	World Regional Geography	3	0	0	3
GEO	112	Cultural Geography	3	0	0	3

GEO	113	Economic Geography	3	0	0	3
GEO	130	General Physical Geography	3	0	0	3
HIS	111	World Civilizations I	3	0	0	3
HIS	112	World Civilizations II	3	0	0	3
HIS	115	Intro to Global History	3	0	0	3
HIS	121	Western Civilization I	3	0	0	3
HIS	122	Western Civilization II	3	0	0	3
HIS	131	American History I	3	0	0	3
HIS	132	American History II	3	0	0	3
POL	110	Intro Political Science	3	0	0	3
POL	120	American Government	3	0	0	3
POL	210	Comparative Government	3	0	0	3
POL	220	International Relations	3	0	0	3
PSY	150	General Psychology	3	0	0	3
PSY	237	Social Psychology	3	0	0	3
PSY	241	Developmental Psych	3	0	0	3
PSY	281	Abnormal Psychology	3	0	0	3
SOC	210	Introduction to Sociology	3	0	0	3
SOC	213	Sociology of the Family	3	0	0	3
SOC	220	Social Problems	3	0	0	3
SOC	225	Social Diversity	3	0	0	3

**Natural Sciences**

*Students must select a course from the following:*

BIO	112	General Biology II	3	3	0	4
BIO	120	Introductory Botany	3	3	0	4
BIO	130	Introductory Zoology	3	3	0	4

**Mathematics I**

*Students must select a course from the following:*

MAT	175	Precalculus	4	0	0	4
MAT	271	Calculus I	3	2	0	4
MAT	272	Calculus II	3	2	0	4
MAT	273	Calculus III	3	2	0	4

**Mathematics II**

*Students must select a course from the following:*

CIS	115	Intro to Prog & Logic	2	3	0	3
MAT	151	Statistics I	3	0	0	3
MAT	155	Statistical Analysis	3	0	0	3

## Core

### Required Courses

*Students must take the following course:*

PED	110	Fit and Well for Life	1	2	0	2
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### Other Required Hours

*Students must select 8 hours from the following set (s) of courses:*

#### Set Number 1

CHM	251	Organic Chemistry I	3	3	0	4
CHM	252	Organic Chemistry II	3	3	0	4

#### Set Number 2

PHY	151	College Physics I	3	2	0	4
PHY	152	College Physics II	3	2	0	4

#### Set Number 3

PHY	251	General Physics I	3	3	0	4
PHY	252	General Physics II	3	3	0	4

### Other Required Hours-Biology

*Students must select a course from the following:*

BIO	112	General Biology II	3	3	0	4
BIO	120	Introductory Botany	3	3	0	4
BIO	130	Introductory Zoology	3	3	0	4
BIO	175	General Microbiology	2	2	0	3

### Other Required Hours-Elective

*Students must select 5 hours from the following courses:*

AST	111	Descriptive Astronomy	3	0	0	3
AST	111A	Descriptive Astronomy Lab	0	2	0	1
AST	151	General Astronomy I	3	0	0	3
AST	151A	General Astronomy I Lab	0	2	0	1
AST	152	General Astronomy II	3	0	0	3
AST	152A	General Astronomy II Lab	0	2	0	1
BIO	120	Introductory Botany	3	3	0	4
BIO	130	Introductory Zoology	3	3	0	4
BIO	140	Environmental Biology	3	0	0	3
BIO	140A	Environmental Biology Lab	0	3	0	1
BIO	163	Basic Anat & Physiology	4	2	0	5
BIO	165	Anatomy and Physiology I	3	3	0	4
BIO	166	Anatomy and Physiology II	3	3	0	4
BIO	168	Anatomy and Physiology I	3	3	0	4
BIO	169	Anatomy and Physiology II	3	3	0	4
BIO	175	General Microbiology	2	2	0	3

BIO	250	Genetics	3	3	0	4
BIO	271	Pathophysiology	3	0	0	3
BIO	275	Microbiology	3	3	0	4
BIO	285	Research & Measurement	2	4	0	4
CHM	131	Introduction to Chemistry	3	0	0	3
CHM	131A	Intro to Chemistry Lab	0	3	0	1
CHM	132	Organic and Biochemistry	3	3	0	4
CHM	135	Survey of Chemistry I	3	2	0	4
CHM	136	Survey of Chemistry II	3	2	0	4
CHM	251	Organic Chemistry I	3	3	0	4
CHM	252	Organic Chemistry II	3	3	0	4
CHM	263	Analytical Chemistry	3	4	0	5
CHM	271	Biochemical Principles	3	0	0	3
CHM	271A	Biochem Principles Lab	0	3	0	1
CIS	110	Introduction to Computers	2	2	0	3
CSC	134	C++ Programming	2	3	0	3
CSC	139	Visual BASIC Prog	2	3	0	3
CSC	151	JAVA Programming	2	3	0	3
CSC	239	Adv Visual BASIC Prog	2	3	0	3
CTS	115	Info Sys Business Concept	3	0	0	3
GEL	111	Introductory Geology	3	2	0	4
GEL	113	Historical Geology	3	2	0	4
GEL	120	Physical Geology	3	2	0	4
GEL	230	Environmental Geology	3	2	0	4
MAT	151	Statistics I	3	0	0	3
MAT	151A	Statistics I Lab	0	2	0	1
MAT	155	Statistical Analysis	3	0	0	3
MAT	155A	Statistics Analysis Lab	0	2	0	1
MAT	161	College Algebra	3	0	0	3
MAT	161A	College Algebra Lab	0	2	0	1
MAT	162	College Trigonometry	3	0	0	3
MAT	165	Finite Mathematics	3	0	0	3
MAT	165A	Finite Math Lab	0	2	0	1
MAT	167	Discrete Mathematics	3	0	0	3
MAT	167A	Discrete Mathematics Lab	0	2	0	1
MAT	171	Precalculus Algebra	3	0	0	3
MAT	171A	Precalculus Algebra Lab	0	2	0	1
MAT	172	Precalculus Trigonometry	3	0	0	3
MAT	172A	Precalculus Trig Lab	0	2	0	1
MAT	175	Precalculus	4	0	0	4
MAT	175A	Precalculus Lab	0	2	0	1
MAT	263	Brief Calculus	3	0	0	3
MAT	263A	Brief Calculus Lab	0	2	0	1
MAT	280	Linear Algebra	3	0	0	3
MAT	285	Differential Equations	3	0	0	3
PED	111	Physical Fitness I	0	3	0	1
PED	113	Aerobics I	0	3	0	1

PED	115	Step Aerobics I	0	3	0	1
PED	117	Weight Training I	0	3	0	1
PED	119	Circuit Training	0	3	0	1
PED	120	Walking for Fitness	0	3	0	1
PED	121	Walk, Jog, Run	0	3	0	1
PED	122	Yoga I	0	2	0	1
PED	125	Self-Defense-Beginning	0	2	0	1
PED	128	Golf-Beginning	0	2	0	1
PED	130	Tennis-Beginning	0	2	0	1
PED	132	Racquetball-Beginning	0	2	0	1
PED	139	Bowling-Beginning	0	2	0	1
PED	143	Volleyball-Beginning	0	2	0	1
PED	145	Basketball-Beginning	0	2	0	1
PED	147	Soccer	0	2	0	1
PED	152	Swimming-Beginning	0	2	0	1
PED	153	Swimming-Intermediate	0	2	0	1
PED	154	Swimming for Fitness	0	3	0	1
PED	155	Water Aerobics	0	3	0	1
PED	156	Scuba Diving	0	2	0	1
PED	158	Whitewater Rafting	0	2	0	1
PED	160	Canoeing-Basic	0	2	0	1
PED	163	Kayaking-Basic	0	2	0	1
PED	170	Backpacking	0	2	0	1
PED	171	Nature Hiking	0	2	0	1
PED	172	Outdoor Living	1	2	0	2
PED	174	Wilderness Pursuits	0	2	0	1
PED	181	Snow Skiing-Beginning	0	2	0	1
PED	187	Social Dance-Beginning	0	2	0	1
PED	212	Snowboarding-Beginning	0	2	0	1
PED	215	Outdoor Cycling	0	2	0	1
PED	216	Indoor Cycling	0	3	0	1
PED	217	Pilates I	0	2	0	1
PED	230	Shotokan Karate	0	3	0	1
PED	231	Judo	0	3	0	1
PED	235	Tai Chi	0	3	0	1
PED	239	Kickboxing	0	3	0	1
PED	240	Advanced PE Skills	0	2	0	1

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## COMMENTS

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At least one (1) humanities course must be a literature selected from ENG 231, ENG 232, ENG 241, ENG 242, ENG 261, or ENG 262.

At least one (1) humanities course must be a communications course selected from COM 110, COM 120, or COM 231.

Other Required Hours choices may also be selected from the general education core course listed in this program of study.

Advisory Alert: PED 172 is a two (2) credit course.

Total Credit Hours: 65

Forsyth Technical Community College  
AS Pre-Major Biology/Biology Edu A1040A  
2011\*03 (fall 2011)