

# SCIENCE

The Associate of Science degree is appropriate for those students who plan to pursue further study in Astronomy, Biology, Chemistry, Geology, Mathematics or Physics. This degree is also appropriate for those interested in careers in Statistics, Mathematics, Bio-technology, Medical Sciences, Engineering and Secondary Education majors who plan to major in a Science (e.g. Math, Biology, Geology, Chemistry or Physics teachers).

It is required that individuals considering a career in science meet with one of the science faculty to discuss specific courses to meet their academic needs.

Degree seekers should choose from one of two pathways: Life Sciences or Physical Sciences.

## Program Outcomes

1. Design and implement a basic research project using scientific methodology.
2. Keep a well organized and detailed laboratory notebook, demonstrating the skills to effectively collect, document and analyze data.
3. Demonstrate laboratory skills for their particular area of study.
4. Apply descriptive and inferential statistical methods to support the analysis of laboratory results.
5. Make an effective presentation of their scientific activities to an appropriate audience.

## Requirements

### Life Sciences

Code	Title	Credits
<b>English Composition and Communications</b>		<b>6.00</b>
COM-150	PUBLIC SPEAKING <sup>1</sup>	
ENG-121	ENGLISH COMPOSITION I <sup>1</sup>	
<b>Humanities or Fine Arts</b>		<b>6.00</b>
Complete two courses from two different prefixes from the following:		
ART-100	ART APPRECIATION <sup>1</sup>	
ART-220	HISTORY OF ART I <sup>1</sup>	
ART-221	HISTORY OF ART II <sup>1</sup>	
COM-110	INTERPERSONAL COMMUNICATIONS	
ENG-201	WOMEN & LITERATURE <sup>1</sup>	
ENG-233	CHILDRENS LITERATURE <sup>1</sup>	
ENG-234	WORLD MYTHOLOGIES <sup>1</sup>	
HIST-101	WEST CIV I: ANCIENT WORLD-1715 <sup>1</sup>	
HIST-102	WESTERN CIV II <sup>1</sup>	
HUM-101	MODERN CULTURE & THE ARTS <sup>1</sup>	
HUM-125	INTRODUCTION TO HUMAN SERVICES	
LNG-161	SPANISH I	
LNG-162	SPANISH II <sup>1</sup>	
LNG-163	SPANISH III <sup>1</sup>	
LNG-261	SPANISH IV <sup>1</sup>	
MUS-150	MUSIC APPRECIATION <sup>1</sup>	
PHIL-210	ETHICS <sup>1,2</sup>	

REL-231	COMPARATIVE RELIGION	
<b>Social Sciences</b>		<b>6.00</b>
Complete two courses from two different prefixes from the following:		
ANTH-201	INTRO TO CULTURAL ANTHROPOLOGY <sup>1</sup>	
ECON-203	PRIN OF ECONOMICS-MICRO <sup>1</sup>	
HIST-201	US HISTORY I <sup>1</sup>	
HIST-202	US HIST II: RECONSTRUC-PRESENT <sup>1</sup>	
PSI-110	AMERICAN GOV'T & POLITICAL SCI <sup>1</sup>	
PSY-101	PSYCHOLOGY	
PSY-210	HUMAN GROWTH & DEVELOPMENT <sup>1</sup>	
PSY-220	ABNORMAL PSYCHOLOGY <sup>1</sup>	
PSY-250	HUMAN SEXUALITY <sup>1</sup>	
PSY-260	SOCIAL PSYCHOLOGY <sup>1</sup>	
SOC-120	PRIN OF SOCIOLOGY <sup>1</sup>	
SOC-121	MODERN SOCIAL PROBLEMS <sup>1</sup>	
SOC-220	MARRIAGE & FAMILY LIVING <sup>1</sup>	
<b>Life Sciences Pathway</b>		<b>31.00</b>
BIO-110	BIOLOGICAL FORM AND FUNCTION	
BIO-121	MOLECULAR AND CELLULAR BIOLOGY <sup>1</sup>	
BIO-122	ORGANISMAL BIOLOGY <sup>1</sup>	
CHEM-133	GENERAL CHEMISTRY I <sup>1</sup>	
CHEM-134	GENERAL CHEMISTRY II <sup>1</sup>	
CHEM-210	ORGANIC CHEMISTRY I	
CHEM-211	ORGANIC CHEMISTRY II	
MATH-161	CALCULUS I & ANALYTIC GEOMETRY <sup>1</sup>	
Plus select two classes from the following (Must equal 7 or 8 credits):		
BIO-101	HUMAN BIOLOGY <sup>1</sup>	
BIO-125	ENVIRONMENT AND SOCIETY <sup>1</sup>	
BIO-230	MICROBIOLOGY <sup>1</sup>	
GEOG-142	PHYSICAL GEOGRAPHY <sup>1</sup>	
GEOL-145	PHYSICAL GEOLOGY <sup>1</sup>	
PHYS-144	ASTRONOMY	
<b>Total Credits</b>		<b>49.00</b>

<sup>1</sup> Course has prerequisite(s)

<sup>2</sup> PHIL-210 may be applied to Social Sciences requirement if not being used to fulfill Humanities or Fine Arts requirement.

### Minimum Credits needed 60 credits

**Note:** No courses below the 100 level will be accepted toward this degree

**Note:** Anyone beginning the Associate of Science Degree at Glen Oaks in Fall 2016 or later must complete MTA requirements in order to qualify for the degree

Tuition is calculated by contact hours per semester.

Current/Updated: 07/01/2023

### Physical Sciences

Code	Title	Credits
<b>English Composition and Communications</b>		<b>6.00</b>
COM-150	PUBLIC SPEAKING <sup>1</sup>	

ENG-121	ENGLISH COMPOSITION I <sup>1</sup>	
<b>Humanities or Fine Arts</b>		<b>8.00</b>
Complete two courses from two different prefixes from the following:		
ART-100	ART APPRECIATION <sup>1</sup>	
ART-220	HISTORY OF ART I <sup>1</sup>	
ART-221	HISTORY OF ART II <sup>1</sup>	
COM-110	INTERPERSONAL COMMUNICATIONS	
ENG-201	WOMEN & LITERATURE <sup>1</sup>	
ENG-233	CHILDRENS LITERATURE <sup>1</sup>	
ENG-234	WORLD MYTHOLOGIES <sup>1</sup>	
HIST-101	WEST CIV I: ANCIENT WORLD-1715 <sup>1</sup>	
HIST-102	WESTERN CIV II <sup>1</sup>	
HUM-101	MODERN CULTURE & THE ARTS <sup>1</sup>	
LNG-161	SPANISH I	
LNG-162	SPANISH II	
LNG-163	SPANISH III	
LNG-261	SPANISH IV	
MUS-150	MUSIC APPRECIATION <sup>1</sup>	
PHIL-210	ETHICS <sup>1,2</sup>	
REL-231	COMPARATIVE RELIGION <sup>1</sup>	
<b>Social Sciences</b>		<b>8.00</b>
Complete two courses from two different prefixes from the following:		
ANTH-201	INTRO TO CULTURAL ANTHROPOLOGY <sup>1</sup>	
ECON-203	PRIN OF ECONOMICS-MICRO <sup>1</sup>	
HIST-201	US HISTORY I <sup>1</sup>	
HIST-202	US HIST II: RECONSTRUC-PRESENT <sup>1</sup>	
PSI-110	AMERICAN GOV'T & POLITICAL SCI <sup>1</sup>	
PSY-101	PSYCHOLOGY <sup>1</sup>	
PSY-210	HUMAN GROWTH & DEVELOPMENT <sup>1</sup>	
PSY-220	ABNORMAL PSYCHOLOGY <sup>1</sup>	
PSY-250	HUMAN SEXUALITY <sup>1</sup>	
PSY-260	SOCIAL PSYCHOLOGY <sup>1</sup>	
SOC-120	PRIN OF SOCIOLOGY <sup>1</sup>	
SOC-121	MODERN SOCIAL PROBLEMS <sup>1</sup>	
SOC-220	MARRIAGE & FAMILY LIVING <sup>1</sup>	
<b>Physical Sciences Pathway</b>		<b>34.00</b>
CHEM-133	GENERAL CHEMISTRY I <sup>1</sup>	
CHEM-134	GENERAL CHEMISTRY II <sup>1</sup>	
CHEM-210	ORGANIC CHEMISTRY I	
CHEM-211	ORGANIC CHEMISTRY II	
MATH-161	CALCULUS I & ANALYTIC GEOMETRY <sup>1</sup>	
MATH-162	CALCULUS II & ANALYTIC GEOM <sup>1</sup>	
PHYS-251	PHYSICS I <sup>1</sup>	
PHYS-253	PHYSICS II <sup>1</sup>	
<b>Electives</b>		<b>4.00</b>
Complete one course from the MTA Natural Science listing		
<b>Total Credits</b>		<b>60.00</b>

<sup>1</sup> Course has prerequisite(s)

<sup>2</sup> PHIL-210 may be applied to Social Sciences requirement if not being used to fulfill Humanities or Fine Arts requirement.

### Minimum Credits needed 60 credits

**Note:** No courses below the 100 level will be accepted toward this degree  
**Note:** Anyone beginning the Associate of Science Degree at Glen Oaks in Fall 2016 or later must complete MTA requirements in order to qualify for the degree

Tuition is calculated by contact hours per semester.  
 Current/Updated: 07/01/2023

## Suggested Schedule

### Life Sciences Pathway (Biological or Biomedical Sciences)

Course	Title	Credits
<b>Fall 1</b>		
BIO-110	BIOLOGICAL FORM AND FUNCTION	3.00
CHEM-133	GENERAL CHEMISTRY I	4.00
ENG-121	ENGLISH COMPOSITION I	3.00
HUMANITIES - MTA		3.00
ELECTIVE		4.00
<b>Credits</b>		<b>17.00</b>
<b>Winter 1</b>		
BIO-121	MOLECULAR AND CELLULAR BIOLOGY	4.00
CHEM-134	GENERAL CHEMISTRY II	4.00
COM-150	PUBLIC SPEAKING	3.00
HUMANITIES - MTA		3.00
<b>Credits</b>		<b>14.00</b>
<b>Fall 2</b>		
BIO-122	ORGANISMAL BIOLOGY	4.00
CHEM-210	ORGANIC CHEMISTRY I	4.00
MATH-161	CALCULUS I & ANALYTIC GEOMETRY	4.00
LIFE SCIENCE ELECTIVE		3.00
<b>Credits</b>		<b>15.00</b>
<b>Winter 2</b>		
CHEM-211	ORGANIC CHEMISTRY II	4.00
SOCIAL SCIENCE - MTA		3.00
SOCIAL SCIENCE - MTA		3.00
LIFE SCIENCE ELECTIVE		4.00
<b>Credits</b>		<b>14.00</b>
<b>Total Credits</b>		<b>60.00</b>

<sup>1</sup> Recommended for students placing in MATH lower than MATH-161 CALCULUS I & ANALYTIC GEOMETRY, will not count towards Science degree --Science elective may come from BIO, CHEM, GEOG, or GEOL prefix

### Physical Sciences Pathway (Chemistry, Physics or Pre-Engineering)

Course	Title	Credits
<b>Fall 1</b>		
CHEM-133	GENERAL CHEMISTRY I	4.00
ENG-121	ENGLISH COMPOSITION I	3.00
MATH-161	CALCULUS I & ANALYTIC GEOMETRY	4.00
HUMANITIES - MTA		3.00
<b>Credits</b>		<b>14.00</b>
<b>Winter 1</b>		
CHEM-134	GENERAL CHEMISTRY II	4.00

COM-150	PUBLIC SPEAKING	3.00
MATH-162	CALCULUS II & ANALYTIC GEOM	4.00
HUMANITIES - MTA		3.00
<b>Credits</b>		<b>14.00</b>
<b>Fall 2</b>		
CHEM-210	ORGANIC CHEMISTRY I	4.00
PHYS-251	PHYSICS I	5.00
SOCIAL SCIENCE - MTA		3.00
NATURAL SCIENCE - MTA		4.00
<b>Credits</b>		<b>16.00</b>
<b>Winter 2</b>		
CHEM-211	ORGANIC CHEMISTRY II	4.00
PHYS-253	PHYSICS II	5.00
SOCIAL SCIENCE		3.00
ELECTIVES		4.00
<b>Credits</b>		<b>16.00</b>
<b>Total Credits</b>		<b>60.00</b>