BS Physics in 4 Years 2016-2017
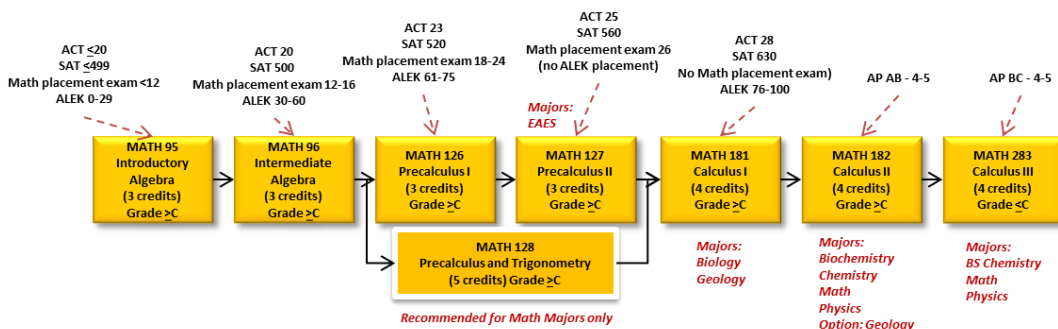
Department of Physics & Astronomy

Catalog Year: Fall 2016 - 2017 ♦ Catalog Expires: Summer 2027 ♦ Graduation: Spring 2020
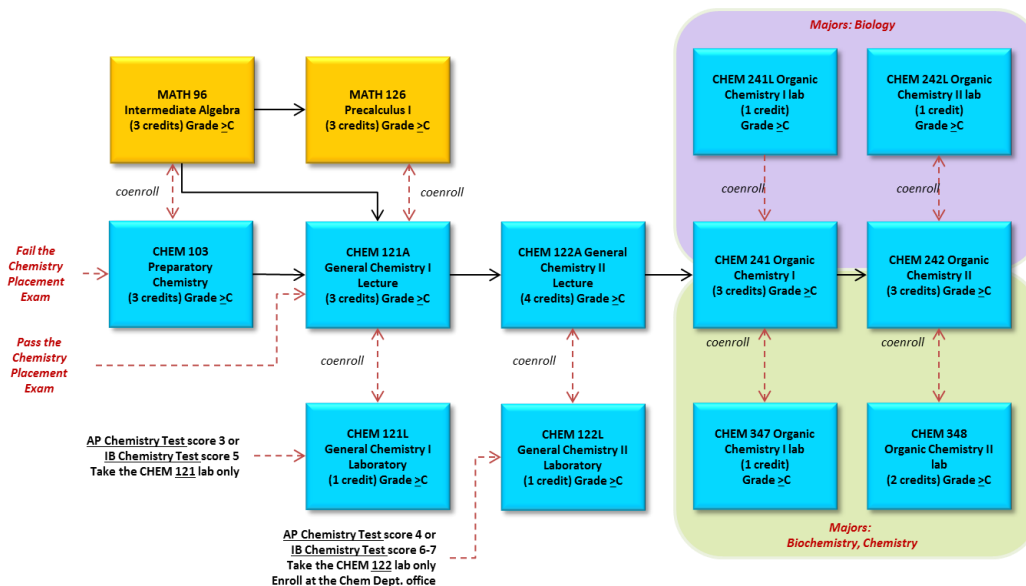
1st Year

First Semester	Credits
Course	*Credits*
→ ENG 101 English Composition I	3
→ MATH181 Calculus I*	4
Choose First Year Seminar (SCI-101 recommended)	2
→ CHEM121/121L General Chemistry	4
*Choose Social Science Field 1**	3
Total First Semester:	**16**

Second Semester	Credits
Course	*Credits*
→ ENG 102 Composition II	3
→ MATH 182 Calculus II	4
→ CHEM122/122L General Chemistry II	4
HIST 100 or PSC 101 US NV Consitution	4
Total Second Semester:	**15**

2nd Year

Third Semester	Credits
Course	*Credits*
→ PHYS 180 Engineering Physics I	3
→ PHYS 180L Engineering Physics I lab	1
→ MATH 283 Calculus III	4
Choose Second Year Seminar	3
Science, Computer Science or Engineering course	4
Total Third Semester:	**15**

Fourth Semester	Credits
Course	*Credits*
→ PHYS 181 Enginering Physics II	3
→ PHYS 181 Engineering Physics II lab	1
→ PHYS 182 Engineering Physics III	3
→ PHYS 182L Engineering Physics III lab	1
*Choose Humanities Field 2**	3
Science, Computer Science or Engineering course	3
Total Third Semester:	**14**

3rd Year

Fifth Semester	Credits
Course	*Credits*
→ PHYS 411 Modern Physics I	3
→ PHYS 421 Electricity & Magnetism I	3
→ PHYS 423 Mechanics I	3
Science, Computer Science or Engineering course	3
*Choose Social Science Field 2**	3
Total Fifth Semester:	**15**

Sixth Semester	Credits
Course	*Credits*
→ PHYS 413 Intermediate Lab I	3
→ PHYS 422 Electricity & Magnetism II	3
→ PHYS 424 Mechanics II	3
*Choose Social Science Field 3**	3
*Choose Humanities Field 1**	3
Total Sixth Semester:	**15**

4th Year

Seventh Semester	Credits
Course	*Credits*
→ PHYS 414 Intermediate Lab II	3
→ PHYS 467 Thermodynamics	3
→ PHYS 481 Quantum Mechanics I	3
→ Science, Computer Science or Engineering upper division course	3
Choose Upper Division Physics course	3
Total Seventh Semester:	**15**

Eighth Semester	Credits
Course	*Credits*
→ PHYS 493 Special Problems (1-3 credits)	1
→ Science, Computer Science or Engineering upper division course	3
Choose Upper Division Physics course	3
Choose Fine Arts**	3
Electives	5
Total Eighth Semester:	**15**

Notes

→ course has a prerequisite--see reverse side for course sequences or go to the UNLV online catalog at http://catalog.unlv.edu/

ΔA minimum of six (6) credits are required, to be composed of a three-credit multicultural course and a three-credit international course that may simultaneously fulfill other general education requirements. A single course may not simultaneously meet both the multicultural and international requirements. Discuss with your Academic Advisor!

The minimum number of semester credits required for a bachelor's degree for a student graduating under the regulations of the 2016 - 2017 Undergraduate Catalog is 120. At least half of the credits required for a baccalaureate degree at the institution must be earned at a four-year institution.

A candidate for the baccalaureate degree must complete the last 30 UNLV semester credits in uninterrupted resident credit as a declared major in the degree-granting college. A student must declare a major prior to enrolling in their last 30 UNLV resident credits.

In order to graduate, an undergraduate student must have a minimum cumulative grade point average of 2.00 for the total of all college-level credit attempted at the University of Nevada, Las Vegas (UNLV GPA). College and department GPA requirements must also be met.

LOWER DIVISION PREREQUISITE COURSE SEQUENCES FOR BS PHYSICS & BS PHYSICS/APPLIED MAJORS
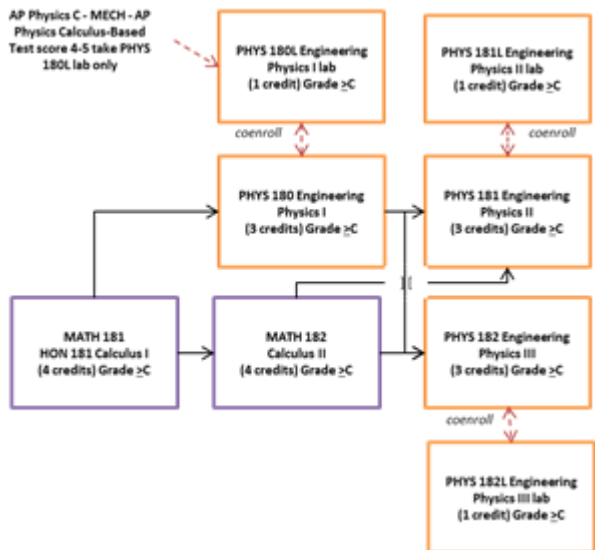
Lower Division Math Sequence

ACT <20 / SAT <499 / Math placement exam <12 / ALEK 0-29

ACT 20 / SAT 500 / Math placement exam 12-16 / ALEK 30-60

ACT 23 / SAT 520 / Math placement exam 18-24 / ALEK 61-75

ACT 25 / SAT 560 / Math placement exam 26 (no ALEK placement) — *Majors: EAES*

ACT 28 / SAT 630 / No Math placement exam / ALEK 76-100

AP AB - 4-5

AP BC - 4-5

- **MATH 95** Introductory Algebra (3 credits) Grade >C
- **MATH 96** Intermediate Algebra (3 credits) Grade >C
- **MATH 126** Precalculus I (3 credits) Grade >C
- **MATH 127** Precalculus II (3 credits) Grade >C
- **MATH 181** Calculus I (4 credits) Grade >C
- **MATH 182** Calculus II (4 credits) Grade >C
- **MATH 283** Calculus III (4 credits) Grade <C

MATH 128 Precalculus and Trigonometry (5 credits) Grade >C
Recommended for Math Majors only

Majors: Biology Geology (under MATH 181)

Majors: Biochemistry Chemistry Math Physics Option: Geology (under MATH 182)

Majors: BS Chemistry Math Physics (under MATH 283)

Lower Division Chemistry Sequence

Majors: Biology

- **MATH 96** Intermediate Algebra (3 credits) Grade >C
- **MATH 126** Precalculus I (3 credits) Grade >C

- **CHEM 241L** Organic Chemistry I lab (1 credit) Grade >C
- **CHEM 242L** Organic Chemistry II lab (1 credit) Grade >C

coenroll

Fail the Chemistry Placement Exam

Pass the Chemistry Placement Exam

- **CHEM 103** Preparatory Chemistry (3 credits) Grade >C
- **CHEM 121A** General Chemistry I Lecture (3 credits) Grade >C
- **CHEM 122A** General Chemistry II Lecture (4 credits) Grade >C
- **CHEM 241** Organic Chemistry I (3 credits) Grade >C
- **CHEM 242** Organic Chemistry II (3 credits) Grade >C

coenroll

AP Chemistry Test score 3 or IB Chemistry Test score 5 Take the CHEM 121 lab only

- **CHEM 121L** General Chemistry I Laboratory (1 credit) Grade >C
- **CHEM 122L** General Chemistry II Laboratory (1 credit) Grade >C
- **CHEM 347** Organic Chemistry I lab (1 credit) Grade >C
- **CHEM 348** Organic Chemistry II lab (2 credits) Grade >C

AP Chemistry Test score 4 or IB Chemistry Test score 6-7 Take the CHEM 122 lab only Enroll at the Chem Dept. office

Majors: Biochemistry, Chemistry

Lower Division Engineering Physics Sequence

AP Physics C - MECH - AP Physics Calculus-Based Test score 4-5 take PHYS 180L lab only

- **PHYS 180L** Engineering Physics I lab (1 credit) Grade >C
- **PHYS 181L** Engineering Physics II lab (1 credit) Grade >C

coenroll

- **PHYS 180** Engineering Physics I (3 credits) Grade >C
- **PHYS 181** Engineering Physics II (3 credits) Grade >C

- **MATH 181** HON 181 Calculus I (4 credits) Grade >C
- **MATH 182** Calculus II (4 credits) Grade >C
- **PHYS 182** Engineering Physics III (3 credits) Grade >C

coenroll

- **PHYS 182L** Engineering Physics IIII lab (1 credit) Grade >C

Lower Division English Sequence

ACT 18-29 / SAT 500-670 / Either AP - 3

ACT 30-36 / SAT 680-800 / Either AP - 4-5

- **ENG 101** English Composition I Grade >C
- **ENG 102** English Composition II Grade >C

ACT 1-17 / SAT 200-490

- **ENG 101E** English Composition I Extended I Grade >C
- **ENG 101F** English Composition I Grade >C

2-semester sequence

Read the UNLV Catalog for Upper Division Course Prerequisites http://catalog.unlv.edu/