

Proposed Revision of UNM-LA's Associate of Science in Science

Overall rationale for change: Reducing credit hours to meet state mandated change to 60 hours for Associate degree.

CURRENT TEXT

About the Program

This program represents the first two years of course work in general science with an emphasis in physics, chemistry, and biology. Completion of this degree will enable students to transfer to a four-year institution for additional studies leading to a bachelor's degree. It will also provide background studies for students wishing to enter the work force as technicians in science.

Specific Requirements

A minimum of 66 credit hours with a minimum grade-point average of 2.0. At least 15 of these 66 hours must be UNM-LA catalog credit courses taken in residence. It is strongly recommended that the student check the specific requirements for the B.S. or B.A. in the particular area of interest in science (biology, biochemistry, chemistry, earth and planetary science, physics, astrophysics) in order to make the best choices among the optional courses below.

General Education Requirements

Writing and Speaking: (6 Credit hours)

ENGL 110: Accelerated Composition (3)

or

ENGL 112: Composition II (3)

PROPOSED REVISION

About the Program

This program represents the first two years of course work in general science with an emphasis in physics, chemistry, and biology. Completion of this degree will enable students to transfer to a four-year institution for additional studies leading to a bachelor's degree. It will also provide background studies for students wishing to enter the work force as technicians in science.

NO change in this text.

Specific Requirements

A minimum of 60 credit hours with a minimum grade-point average of 2.0. At least 15 of these 60 hours must be UNM catalog credit courses taken in residence. It is strongly recommended that the student check the specific requirements for the B.S. or B.A. in the particular area of interest in science (biology, biochemistry, chemistry, earth and planetary science, physics, astrophysics) in order to make the best choices among the optional courses below.

Rationale: Change in wording from UNM-LA to UNM catalog credit courses taken in residence, since the residency is UNM's not UNM-LA's. Minimum credit hours revised to 60.

General Education Requirements

Writing and Speaking: (9 credit hours)

ENGL 110: Accelerated Composition (3)

or

ENGL 112: Composition II (3)

<p>or</p> <p>ENGL 113: Enhanced Composition (3)</p> <p>ENGL 120: Composition III (3)</p>	<p>or</p> <p>ENGL 113: Enhanced Composition (3)</p> <p>ENGL 120: Composition III (3)</p> <p>ENGL 219: Technical Writing (3)</p> <p><i>Rationale: Changes made to meet the required number (9) of general education credits in Writing and Speaking. The additional Writing and Speaking requirement that was previously listed under "Other" required credit hours has been moved here to meet the 9-credit requirement.</i></p>
<p>Mathematics and Statistics: (6 credit hours)</p> <p>MATH 162: Calculus I (4)</p> <p>MATH 163: Calculus II (4)</p> <p><i>Note: MATH 180 & 181 may be substituted for MATH 162 and 163, but will only be accepted for some bachelor degrees in science (e.g. Biology)</i></p>	<p>Mathematics and Statistics (minimum 3 credit hours)</p> <p>MATH 162: Calculus I (4)</p> <p>or</p> <p>MATH 180: Elements of Calculus I (3)</p> <p><i>Note: MATH 180 may be substituted for MATH 162, but will only be accepted for some bachelor degrees in science (e.g. Biology)</i></p> <p><i>Rationale: MATH 163 was moved to the list of technical core requirements as this course is beyond the general education requirement for mathematics.</i></p>
<p>Social And Behavioral Sciences (3 Credit Hours)</p> <p>Select any UNM Core Curriculum course in this area.</p>	<p>Social And Behavioral Sciences (6 Credit Hours)</p> <p>Select any UNM Core Curriculum course in this area.</p> <p><i>Rationale: Changes made to meet the required number (6) of general education credits in Social and Behavioral Sciences.</i></p>
<p>Humanities (3 Credit Hours)</p>	<p>Humanities (6 Credit Hours)</p>

<p>Select any UNM Core Curriculum course in this area.</p>	<p>Select any UNM Core Curriculum course in this area.</p> <p><i>Rationale: Changes made to meet the required number (6) of general education credits in the Humanities.</i></p>
<p>Foreign Language (3 Credit Hours)</p> <p>Select any UNM Core Curriculum course in this area.</p>	<p>Foreign Language (3 Credit Hours)</p> <p>Select any UNM Core Curriculum course in this area.</p> <p><i>NO change in this text.</i></p>
<p>Fine Arts (3 Credit Hours)</p> <p>Select any UNM Core Curriculum course in this area.</p>	<p>Fine Arts (3 Credit Hours)</p> <p>Select any UNM Core Curriculum course in this area.</p> <p><i>NO change in this text.</i></p>
<p>TOTAL GENERAL EDUCATION REQUIREMENTS (NOT INCLUDING SCIENCE) 24 CREDIT HOURS</p>	<p>TOTAL GENERAL EDUCATION REQUIREMENTS (NOT INCLUDING SCIENCE) 30 CREDIT HOURS</p> <p><i>Rationale: Changes made to meet the required number of general education credits</i></p>
<p>Technical Core Requirements</p>	<p>Technical Core Requirements</p>
<p>Physical and Natural Sciences: (20 Credit hours)</p> <p>Must include:</p> <ul style="list-style-type: none"> • CHEM 121/123L: General Chemistry I(3)/General Chemistry I Lab (1) • CHEM 122/124L: General Chemistry II(3)/General Chemistry II Lab (1) • PHYC 160: General Physics (3) • PHYC 160L: General Physics Lab (1) • PHYC 161: General Physics (3) • PHYC 161L: General Physics Lab (1) <p><i>And additional course (4 credit hours) selected from:</i></p> <ul style="list-style-type: none"> • BIOL 201: Molecular and Cell Biology (4) 	<p>Must Include:</p> <p>Mathematics and Statistics (4 credit hours) MATH 163: Calculus II (4)</p> <p><i>Note: MATH 181 may be substituted for MATH 163, but will only be accepted for some bachelor degrees in science (e.g. Biology)</i></p> <p>Physical and Natural Sciences: (20 Credit hours)</p> <p>CHEM 121/123L: General Chemistry I(3)/General Chemistry I Lab (1)</p>

- BIOL 202: Genetics (4)
- BIOL 203L: Ecology and Evolution (4)
- BIOL 204L: Plant and Animal Form and Function (4)
- CHEM 212: Integrated Organic Chemistry and BioChemistry (4)
- EPS 101: How the Earth Works—An Introduction to Geology (3)
- EPS 105L: Physical Geology Laboratory (1)
- EPS 201L: Earth History (4)
- ENVS 101: The Blue Planet (3)
- ENVS 102L: The Blue Planet Laboratory (2)
- PHYC 167: Problems in General Physics (1)
- PHYC 168: Problems in General Physics (1)
- PHYC 262: General Physics (3)
- PHYC 262L: General Physics Lab (1)
- PHYC 267: Problems in General Physics (1)

NOTE: CHEM 131L and 132L could be substituted for CHEM 121/123L and 122/124L, although it is not usually offered at UNM-LA. PHYC 151, 151L, 152, 152L may be substitute or PHYC 160, 160L, 161, 161L but will not be acceptable for some baccalaureate degrees in science (biology B.A. or B.S., Chemistry B.A., earth & planetary science B.A.)

CHEM 122/124L: General Chemistry II (3)/General Chemistry II Lab (1)

PHYC 160: General Physics (3)

PHYC 160L: General Physics Laboratory (1)

PHYC 161: General Physics (3)

PHYC 161L: General Physics Laboratory (1)

And an additional 6 credit hours should be selected from:

Math:

MATH 264: Calculus III (4)

Physical and Natural Sciences:

- BIOL 201: Molecular and Cell Biology (4)
- BIOL 202: Genetics (4)
- BIOL 203L: Ecology and Evolution (4)
- BIOL 204L: Plant and Animal Form and Function (4)
- CHEM 212: Integrated Organic Chemistry and BioChemistry (4)
- EPS 101: How the Earth Works—An Introduction to Geology (3)
- EPS 105L: Physical Geology Laboratory (1)
- EPS 201L: Earth History (4)
- ENVS 101: The Blue Planet (3)
- ENVS 102L: The Blue Planet Laboratory (2)
- PHYC 167: Problems in General Physics (1)
- PHYC 168: Problems in General Physics (1)
- PHYC 262: General Physics (3)
- PHYC 262L: General Physics Lab (1)

PHYC 267: Problems in General Physics (1)

Rationale: Changes made to meet the required number of credits (60). The Writing and Speaking Technical Core Requirements were moved to the General Education Writing and Speaking requirement. The Humanities Technical Core requirement was moved to fit in with the Humanities general education requirement.

*Rather than having two separate lists of additional courses from which students must choose X number of credits, the lists were combined into one since the lists were identical
. The number of credits was edited to reflect the requirement that the total number of credits add up to 60.*

OTHER (22 CREDIT HOURS)

To complete the required number of hours for this degree, other courses (22 credit hours) may be chose from the following if not already counted in your degree program:

Writing and Speaking (Maximum of 3 credit hours)

- ENGL 219: Technical Writing (3)

Physical and Natural Sciences

- BIOL 201: Molecular and Cell Biology (4)
 - BIOL 202: Genetics (4)
 - BIOL 203L: Ecology and Evolution (4)
 - BIOL 204L: Plant and Animal Form and Function (4)
 - CHEM 212: Integrated organic Chemistry and BioChemistry (4)
 - EPS 101: How the Earth Works–An Introduction to Geology (3)
 - EPS 105L: Physical Geology Laboratory (1)
 - EPS 201L: Earth History (4)
 - ENVS 101: The Blue Planet (3)
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- ENVS 102L: The Blue Planet Laboratory (2)
- PHYC 167: Problems in General Physics (1)
- PHYC 168: Problems in General Physics (1)
- PHYC 262: General Physics (3)
- PHYC 262L: General Physics Lab (1)
- PHYC 267: Problems in General Physics (1)

Mathematics and Statistics

- MATH 264: Calculus III (4)

Computer Science

CS 151L: Computer Programming Fundamentals for Non-Majors (3)

Humanities (Maximum 3 credit hours)

Select any UNM core course in this area.

Social and Behavioral Sciences (Maximum of 3 credit hours)

Select any UNM Core Curriculum course in this area.

Total Technical Core Requirements
42 Credit Hours

TOTAL CREDIT HOURS 66 CREDIT HOURS

Total Technical Core Requirements
30 Credit Hours

TOTAL CREDIT HOURS 60 CREDIT HOURS

Rationale: Minimum credit hours revised to 60.

Memorandum

To: Kay Willerton, Interim Dean of Instruction
From: Dennis Davies-Wilson, Library Director
Date: October 19, 2015
Re: Library support for revisions of AS Program in Science Form C

Proposed changes will not impact the library's current level of support for the program.

**UNM-Los Alamos
Degree Program Change Proposal**

Associate of Science in Science

The UNM-Los Alamos Curriculum Committee has approved the proposed changes associated with the degree program indicated above.

Dennis Davies-Wilson 10-30-15
Dennis Davies-Wilson, Chair Date