

Science, technology, engineering and math transfer guide from Luna Community College to New Mexico Highlands University





Notes

Luna Community College
&
New Mexico Highlands University

Science, Technology, Engineering & Mathematics
Transfer Guide

Luna Community College/New Mexico Highlands University
STEM Transfer Guide



This transfer guide is to assist students in the fields of Science, Technology, Engineering and Mathematics (STEM) who wish to transfer from Luna Community College to New Mexico Highlands University. Students who complete their associate's of science degree in Life Sciences or Physical Sciences, including the 35-hour state mandated core, will automatically meet NMHU general education proficiency and extended core requirements.

Admissions

Any STEM student who is in good standing at Luna Community College and has successfully completed 16 or more credits with at least a "C" average, will be admitted to NMHU. The admissions process consists of an undergraduate application, and official academic transcripts from LCC and any other colleges/university attended. An individual transfer analysis will be completed by the Registrar's Office to determine the academic standing and remaining degree requirements of the prospective transfer student. The Registrar will refer the transfer student to an advisor in his/her major who will assist the student to develop a semester-by-semester program of study.

Students may enroll in classes at both LCC and NMHU during any given semester. If financial is awarded, students must complete a Consortium Agreement at their home institution in order to utilize financial aid at both institutions. Per the Consortium Agreement, grades from both institutions must be submitted to the home institution.

For further information on either institution, please contact:

NMHU Admissions Office

Box 9000

New Mexico Highlands University

Las Vegas, New Mexico 87701

Phone: (505)454-3439/3434/3437

Toll Free: 1-877-850-9064

Email: Admissions@nmhu.edu

LCC Admissions Office

366 Luna Drive

Luna Community College

Las Vegas, New Mexico 87701

Phone: (505)454-2550

Email: Admissions@luna.edu

Visit our websites for on-line application and/or information:

www.nmhu.edu; click on Future Students- then click on Admissions.

www.luna.edu.

LCC Degree Requirements

LCC requires a minimum of 66-68 credit hours for the Life Science, Physical Science, or Mathematics degree for graduation. An overall GPA of "C" or better is required in all LCC coursework for graduation. Students who have signed a Consortium Agreement may submit grades from both institutions to their home institution to determine overall semester GPA. For specific academic policies, procedures, degree and program requirements, please refer to the LCC 2009-2012 catalog.

NMHU Degree Requirements

A minimum of 128 degree credits, including a major and minor*, is required for graduation. In addition, students must earn at least 51 credits in upper-division courses (junior and/or senior level courses), and must satisfy Highlands' residency requirements. An overall GPA of "C" or better is required for graduation, and no credits earned with a grade less than 'C' will be credited to the major or minor. The LCC grade point average is not transferred, and will not be included in the NMHU cumulative GPA; however, it is used in the admission's process and in the cumulative GPA computation for graduation honors. Students who have signed a Consortium Agreement may submit grades from both institutions to their home institution to determine overall semester GPA. For specific academic policies, procedures, degree and program requirements, please refer to the NMHU 2009-2011 catalog.

*The minor requirement is waived for students transferring with an earned associate's degree.

This guide was a result of work conducted through funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

Highlights of the LCC/NMHU STEM Articulation Agreement

Signed October 11, 2010

Program students are entitled to the same rights, privileges, and responsibilities as other students.

Students may participate in the Dual-Degree Option between LCC and NMHU through one of the following three options:

- The Transfer Degree Option is designated for students who have completed an associate's degree from LCC and wish to complete a Bachelor of Science degree from NMHU.
- The Integrated Degree Option is for students who wish to pursue an associate's degree from LCC while simultaneously completing the requirements for a Bachelor of Science degree from NMHU in partnership with LCC.
- The Inverted Degree Option is for NMHU students pursuing NMHU degree requirements who also want to complete associate's degree requirements at LCC.

Or may participate in the STEM Single/Traditional Degree Option

- Individuals at their respective institution may complete articulated STEM core courses at either institution while pursuing a degree at their home institution.

Admission to the program requires the student to satisfy admission qualifications (i.e. grade point average, placement tests) at both institutions. Some degree programs may have enrollment restrictions, physical requirements or additional eligibility criteria. Once matriculated, the student shall be considered a program participant at both institutions. The LCC and NMHU catalogs in effect at program entry will be considered the "catalogs of record" governing the students' degree requirements.

Students may enroll in courses at either or both institutions during any semester. The combined registration, however, should not exceed 18 credit hours in any one semester.

Students who have completed the 35-credit general education module approved statewide will *have* satisfied the 35 -credit general education requirement at either institution. Additional requirements, as noted in the transfer guide, must be satisfied. Students transferring with an AS/AAS from LCC will have the NMHU proficiency, extended core and minor requirements waived. However, all other university requirements, including the university's state mandated 35-hour common core, program requirements, residency and the 51 upper-division credit requirements must be met before granting of the BS.

Advisers at LCC will endeavor to inform students of the opportunities to complete an AS or AAS degree that facilitates the continuation of academic work which leads to the completion of a BS degree at NMHU. Students who intend to transfer to NMHU to pursue a bachelor's of science degree will be advised to integrate upper level courses from NMHU while pursuing their LCC AS or AAS degree. Students from both institutions are encouraged to take the aligned courses at either institution in order to meet scheduling and/or financial needs. Students will be advised at their home institution that they must provide official transcripts for all courses not taken at their home institution to the registrar at the end of each semester as a requirement in order to assure transfer of credits towards degree completion.

Tuition and fee charges will be assessed in accordance with published rates and procedures by each institution. Students enrolled through the Dual-Degree Option may apply for student financial aid. A consortium agreement between the two institutions allows students to continue to receive financial aid funds while studying at a school other than his or her home institution. Eligibility for assistance is determined by the standard financial aid application process and will be processed by the degree-granting (home) institution. Students must complete and sign a consortium agreement in order to use their financial aid at both institutions.

This guide was a result of work conducted through funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

**LCC Physical Science (AS) & NMHU Environmental Geology (BS)
Watershed Management Concentration**

The required courses listed below are equivalent and may be taken at either institution.

LCC	Course Title	NMHU
GEO 101	Survey of Earth Science	Geo 101
GEO 202	Earth History ¹	Geo 202
BIO 110	General Biology I/1 ²	Biol 211
CHEM 111/111L	General Chemistry I/1 & Lab	Chem 211
CHEM 112/112L	General Chemistry II/2 & Lab	Chem 212
PHYS 115	General (Algebra) Physics I/ Algebra Physics I/1 ^a	Phys 151
PHYS 116	General (Algebra) Physics II/Algebra Physics II/1 ^a	Phys 152
MATH 195	Calculus I	Math 211
MATH 212	Calculus II	Math 252

¹LCC Requirement. LCC students should confer with program advisor. ²NMHU Requirement. ^aCalculus Physics may be taken in place of Algebra Physics.

The courses below must be taken at each institution to meet each institution's degree requirements.

LCC Requirements		NMHU Requirements	
SMET 101	Introduction to Science, Math & Engineering Technology	Geol 301	Environmental Geology
SMET 105	Computer Use for Technology	Geol 317	Depositional Environment
Major Total: 30 credit hours		Geol 375	Field Geology
		Geol 421	Environmental Ground Water Hydrology
		Geol 425	Geomorphology
		Geol 495	Senior Geol Applic
		Additional Requirements	
		Biol 389	Ecology
		For 305	Natural Resource Economics
		For 315	Soil Science
		For 330	Natural Resource Law and Policy
		For 333	Water Science
		For 340	Quantitative Methods
		For 400	Surface Hydrology
		For 412	Survey and Geographic Info Systems
		For 417	Watershed Management
		For 453	Toxicology in Life Science
		Engl 367	Technical Writing
		Math 160	PreCalculus ⁵
		Electives	
		Choose one course from each group listed in NHMU undergraduate catalog.	
		Major Total: 95-100 credit hours	
		⁵ Not required if student has completed Calculus.	

This guide was a result of work conducted though funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

New Mexico Common Core

Area I: Communications: 9 Credit Hours

LCC Course Number	Course Title (LCC/NMHU)	NMHU Course Number
ENG111	Freshman Comp. I	Engl 111
ENG115	Freshman Comp. II	Engl 112
SPCH111	Public Speaking	Mart 124

Area II: Mathematics: 3 Credit Hours

Completed in the requirements for AS/BS degree.

Area III: Laboratory Science: 8 Credit Hours

Completed in the requirements for BS degree at New Mexico Highlands University. LCC students refer to 2009-2012 for your program of study.

Area IV: Social/ Behavioral Sciences: 6 or 9 Credit hours (If student chooses 6 credit hours in Area IV, student must choose 9 in Humanities/Fine Arts).

LCC Course Number	Course Title (LCC/NMHU)	NMHU Course Number
ANTH103	Intro. To Anthropology/Intro to Sociocultural Anthropology	Anth 102
ANTH221	Culture of the World/ Intro to Phys Anth & Arch	Anth 103
ECON208	Principles of Macroeconomics	Econ 216
ECON209	Principles of Microeconomics	Econ 217
POLS151	American National Government	Pols 151
POLS167	State & Local Government	
PSYC101	Intro. to Psychology/Psychology & Society	Psyc 101
SOC101	Intro. to Sociology	Soc 152

Area V: Humanities and Fine Arts: 6 or 9 Credit hours (If student chooses 6 credit hours in Area V, student must choose 9 in Social/ Behavioral Sciences).

LCC Course Number	Course Title (LCC/NMHU)	NMHU Course Number
ART110	Intro. To Art	Art 100
ART210	Art History	Art 100
HIST101	Western Civilization 1	Hist 100
HIST102	Western Civilization 2	Hist 100
HIST161	American History 1	Hist 201
HIST162	American History 2	Hist 202
HIST220	History of New Mexico	
MUS108	Music Appreciation /Introduction to Music	Mus 100
MUS110	Music History/ Rudiments of Music	Mus 101
PHIL101	Intro. to Philosophy	Phil 100
THEO222	History of Christianity	
THEO232	World Religions	
THTR110	Intro. to Theater	Thea 100

This guide was a result of work conducted though funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

LCC Life Science (AS) & NMHU Biology (BS)

The required courses listed below are equivalent and may be taken at either institution.		
LCC	Course Title	NMHU
ENV 102	Env. Sci/Humans & Ecosystems ¹	For 105
GEO 101	Survey of Earth Science ¹	Geo 101
BIO 110	General Biology I/1	Bio 211
BIO 111	General Biology II/2	Bio 212
CHEM 111/111L	General Chemistry I/1 & Lab	Chem 211
CHEM 112/112L	General Chemistry II/2 & Lab	Chem 212
PHYS 115	General (Algebra) Physics I/ Algebra Physics I/1 ^a	Phys 151
PHYS 116	General (Algebra) Physics II/Algebra Physics II/1 ^a	Phys 152
MATH 195	Calculus ²	Math 211

¹LCC Requirement. LCC students should confer with faculty advisor. ²NMHU Requirement. ^aCalculus Physics may be taken in place of Algebra Physics.

The courses below must be taken at each institution to meet each institution's degree requirements.	
LCC Requirements	NMHU Requirements
BIO 127 General Botany ³	Biol 300 Genetics
BIO 142 General Zoology ³	Biol 301 General Microbiology
SMET 101 Introduction to Science, Math & Engineering Technology	Biol 302 Animal Structure and Function
SMET 105 Computer Use for Technology	Biol 303 Plant Structure and Function
³ Students planning to pursue the BS degree at NMHU will also have to take BIOL 302 and BIOL 303 at NMHU.	Biol 405 Bacterial Physiology
Major Total: 30 credit hours	OR
	Biol 423 Molecular & Cell Biology
	Biol 492 Senior Project
	Chem 341 Organic Chemistry I
	Math160 Pre-Calculus
	For 340 Quantitative Methods
	OR
	Math 345 Statistics
	Electives: 16 credit hours
	In consultation with your Biology advisor, choose any combination of electives to receive a minimum of 16 credit hours with at least 12 hours from Biology and the remainder from other sciences. See NMHU undergraduate catalog for the list of electives.
	Major Total: 81-83 credit hours

This guide was a result of work conducted through funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

LCC Physical Science (AS) & NMHU Environmental Geology (BS) Geology Concentration

The required courses listed below are equivalent and may be taken at either institution.		
LCC	Course Title	NMHU
GEO 101	Survey of Earth Science	Geol 101
GEO 202	Earth History ¹	Geol 202
CHEM 111/111L	General Chemistry I/1 & Lab	Chem 211
CHEM 112/112L	General Chemistry II/2 & Lab	Chem 212
PHYS 115	General (Algebra) Physics I/ Algebra Physics I/1 ^a	Phys 151
PHYS 116	General (Algebra) Physics II/Algebra Physics II/1 ^a	Phys 152
MATH 195	Calculus I	Math 211
MATH 212	Calculus II	Math 252

¹LCC Requirement. LCC students should confer with program advisor. ^aCalculus Physics may be taken in place of Algebra Physics.

The courses below must be taken at each institution to meet each institution's degree requirements.	
LCC Requirements	NMHU Requirements
SMET 101 Introduction to Science, Math & Engineering Technology	Geol 301 Environmental Geology
SMET 105 Computer Use for Technology	For 315 Soil Science
Major Total: 30 credit hours	Geol 317 Depositional Environment
	Geol 325 Earth Materials
	Geol 330 Structural Geology
	For 340 Quantitative Methods
	Geol 375 Field Geology
	For 412 Surveying and GIS
	Geol 421 Environmental Ground Water Hydrology
	Geol 422 Genesis and Impact of Earth Resources
	Geol 424 Environmental Geophysics
	OR
	Geol 432 Environmental Geochemistry
	Geol 425 Geomorphology
	For 453 Toxicology in Life Science
	Geol 495 Senior Geology Applications
	Additional Requirements
	Chem 341 Organic Chemistry I
	Engl 367 Technical Writing
	Math 160 PreCalculus ⁵
	Electives
	Choose one course from each of three groups listed in NMHU undergraduate catalog.
	Major Total: 96-102 credit hours
	⁵ Not required if student has already passed Calculus.

This guide was a result of work conducted through funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

LCC Physical Science (AS) & NMHU Chemistry (BS)

The required courses listed below are equivalent and may be taken at either institution.		
LCC	Course Title	NMHU
GEO 101	Survey of Earth Science ¹	Geol 101
GEO 202	Earth History ¹	Geol 202
CHEM 111/111L	General Chemistry I/1 & Lab	Chem 211
CHEM 112/112L	General Chemistry II/2 & Lab	Chem 212
MATH 195	Calculus I	Math 211
MATH 212	Calculus II	Math 252

¹LCC Requirement. See LCC Common Core requirements for listing of lab Science offerings; eight credit hours other than program of study requirements.

The courses below must be taken at each institution to meet each institution's degree requirements.	
LCC Requirements	NMHU Requirements
PHYS 115 General (Algebra) Physics 1	Phys 291 Calculus Physics 1
PHYS 116 General (Algebra) Physics 2	Phys 292 Calculus Physics 2
SMET 101 Introduction to Science, Math & Engineering Technology	Chem 317 Physical Chemistry Lab
SMET 105 Computer Use for Technology	Chem 321 Quantitative Analysis
Major Total: 30 credit hours	Chem 322 Instrumental Analysis
Fifteen (15) credit hours required in the major field and counted toward an associate degree.	Chem 341 Organic Chemistry I
	Chem 342 Organic Chemistry II
	Chem 371 Physical Chemistry I
	Chem 372 Physical Chemistry II
	Chem 419 Advanced Synthesis & Instrumental Analysis
	Chem 461 Inorganic Chemistry I
	Chem 481 Biochemistry I
	Chem 495 Senior Chem Appl
	Electives
	In consultation with your Chemistry advisor, choose 6 credit hours from the chemistry electives. See NMHU Undergraduate Catalog for list of electives.
	Additional Requirements
	Math 273 Calculus III
	Math 320 Linear Algebra
	Engl 317 Technical Writing
	Major Total: 81 credit hours

LCC Life Science (AS) & NMHU Forestry (BS) Forestry Management Concentration

The required courses listed below are equivalent and may be taken at either institution.		
LCC	Course Title	NMHU
ENV 102	Env. Sci/Humans & Ecosystems ¹	For 105
GEO 101	Survey of Earth Science ¹	Geo 101
BIO 110	General Biology I/1	Bio 211
BIO 111	General Biology II/2	Bio 212
CHEM 111/111L	General Chemistry I/1 & Lab	Chem 211
CHEM 112/112L	General Chemistry II/2 & Lab	Chem 212
PHYS 115	General (Algebra) Physics I/ Algebra Physics I/1 ^a	Phys 151
PHYS 116	General (Algebra) Physics II/Algebra Physics II/1 ^a	Phys 152
MATH 195	Calculus ²	Math 211

¹LCC Requirement. LCC students should confer with faculty advisor. ²NMHU Requirement. ^aCalculus Physics may be taken in place of Algebra Physics.

The courses below must be taken at each institution to meet each institution's degree requirements.	
LCC Requirements	NMHU Requirements
BIO 127 General Botany ³	FOR 200 Forestry Field Practicum
BIO 142 General Zoology ³	FOR 305 Natural Resources Economics
SMET 101 Introduction to Science, Math & Engineering Technology	FOR 310 Mensuration and Biometrics
SMET 105 Computer Use for Technology	FOR 315 Soil Science
³ Students planning to pursue the BS degree at NMHU will also have to take BIOL 302 and BIOL 303 at NMHU.	FOR 318 Natural Resources Ecology
Major Total: 30 credit hours	FOR 321 Forest Entomology
Fifteen (15) credit hours required in the major field and counted toward an associate degree.	FOR 322 Forest Pathology
	FOR 330 Natural Resources Law and Policy
	FOR 340 Quantitative Methods
	FOR 402 Silviculture
	FOR 405 Wildlife Fire Management
	FOR 410 Forest Management
	FOR 412 Surveying and Geographic Info Systems
	FOR 415 Dendrology
	FOR 420 Wildlife Habitat Management
	FOR 440 Senior Project
	Additional Requirements
	BIOL 303 Plant Structure and Function
	BIOL 389 Ecology
	ENGL 367 Technical Writing
	Electives
	Choose one course from the Resources group and one from the Biology group. See NMHU catalog for list.
	Major Total: 98-102 credit hours

This guide was a result of work conducted through funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

This guide was a result of work conducted through funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

LCC Life Science (AS) & NMHU Forestry (BS) Wildland Fire Concentration

The required courses listed below are equivalent and may be taken at either institution.		
LCC	Course Title	NMHU
ENV 102	Env. Sci/Humans & Ecosystems ¹	For 105
GEO 101	Survey of Earth Science ¹	Geo 101
BIO 110	General Biology I/1	Bio 211
BIO 111	General Biology II/2	Bio 212
CHEM 111/111L	General Chemistry I/1 & Lab	Chem 211
CHEM 112/112L	General Chemistry II/2 & Lab ¹	Chem 212
PHYS 115	General (Algebra) Physics I/ Algebra Physics I/1 ^a	Phys 151
PHYS 116	General Physics (Algebra) II/Algebra Physics II/1 ^a	Phys 152
MATH 195	Calculus ²	Math 211

¹LCC Requirement. LCC students should confer with faculty advisor. ²NMHU Requirement. ^aCalculus Physics may be taken in place of Algebra Physics.

The courses below must be taken at each institution to meet each institution's degree requirements.		
LCC Requirements		NMHU Requirements
BIO 127	General Botany ³	For 200 Forestry Field Practicum
BIO 142	General Zoology ³	For 305 Natural Resources Economics
SMET 101	Introduction to Science, Math & Engineering Technology	For 310 Mensuration and Biometrics
SMET 105	Computer Use for Technology	For 315 Soil Science
³ Students planning to pursue the BS degree at NMHU will also have to take BIOL 302 and BIOL 303 at NMHU.		For 318 Natural Resources Ecology OR
Major Total: 30 credit hours		For 450 Fire Ecology
Fifteen (15) credit hours required in the major field and counted toward an associate degree.		For 321 Forest Entomology
		For 330 Natural Resources Law and Policy
		For 340 Quantitative Methods
		For 351 Atmospheric Science
		For 402 Silviculture
		For 410 Forest Management
		For 412 Surveying and Geographic Info Systems
		For 415 Dendrology
		For 420 Wildlife Habitat Management
		For 440 Senior Project
		For 451 Project Fires & Rehabilitation
		For 452 Prescribed Fire Laboratory
		For 454 Landscape Ecology & Wildfires
		Additional Requirements
		Biol 303 Plant Structure and Function
		Biol 389 Ecology
		Engl 367 Technical Writing
		Electives
		Choose courses from the Resources group. See NMHU catalog for list.
		Major Total: 104-109 credit hours

This guide was a result of work conducted through funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)

LCC Mathematics (AS) & NMHU Mathematics (BS)

The required courses listed below are equivalent and may be taken at either institution.		
LCC	Course Title	NMHU
MATH 195	Calculus I	Math 211
MATH 212	Calculus II	Math 252
MATH 213	Calculus III	Math 273

Also, need 8 credit hours of Laboratory Sciences to meet Area III of the New Mexico Common Core

The courses below must be taken at each institution to meet each institution's degree requirements.		
SMET 101 Introduction to Math, Science and Engineering Technology		Math 317 Discrete Math
MATH 130 Statistics		Math 320 Linear Algebra
MATH 190 Trigonometry		Math325 Applied Ordinary Differential Equations
MATH 202 Discrete Mathematics ⁴		Math 345 Math Statistics I
Approved Electives (Choose 6 hours)		
SMET 105 Computer Use for Technology		Math421 Applied Abstract Algebra
CS105 Introduction to Computer Science		Math 425 Introduction to Real Analysis
CS112 Introduction to Operating Systems		Math 430 Mathematical Problem Solving
CS121 Introduction to Programming		Electives
Major Total: 32 credit hours		
⁴ Discrete mathematics has not yet been aligned, Math 317 & Math 345 taken at NMHU will be accepted for MATH202 and MATH 130 at LCC.		
		Choose two 400 level math electives
		CS 144 Introduction to Computer Science
		CS 145 Introduction to Object Oriented Programming
SCIENCE MINOR REQUIRED		
Total credits required for minor are dependent on minor chosen.		
Major Total: 47 credit hours		

This guide was a result of work conducted through funds provided by United States Department of Education Grant (CCRAA-HSI: The College Cost Reduction Administrative Act / Hispanic Serving Institutions, Award Number PO31C080040)