NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1334

Institution and Course Information

Name of Institution	Western New Mexico University
Chief Academic Officer Name	William Crocker
Chief Academic Officer Email	William.Crocker@wnmu.edu
Registrar Name	Susan Garland / Russell
Registrar Email	Susan.Garland@wnmu.edu
Department	Academic Affairs
Prefix	GEOL
Number	2130
Suffix	L
Title	Introduction to Meteorology - Lab
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	
Number	
Suffix	
Title	

New Mexico Common Course information

Prefix	GEOL
Number	2130
Suffix	L
Title	Introduction to Meteorology - Lab

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☒ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

1. Recall, describe, or explain the various elements of the Earth's atmosphere, Earth's relation to the sun, incoming solar radiation, the ozone layer, the primary temperature controls, and the unequal heating of land and water 2. Recall, describe, or explain weather variables and parameters. 3. Recall, describe, or explain air masses, pressure systems, the various fronts and associated types of storms, weather symbols, monsoons, the various forms of precipitation, along with causes and effects of lightning. 4. Recall, describe, or explain the hydrologic cycle, the characteristics and influences of the oceans and continents on the weather, the Southern Oscillation (i.e., El Nino), and the effects of land/water distribution 5. Recall, describe, or explain specific impacts by humans on weather, climate, and on the ecosystem at large 6. Evaluate and interpret information from maps, diagrams, remote sensing devices, graphs, and tables. 7. Apply critical thinking skills such as inductive, deductive, and mathematical reasoning to solve problems using the scientific method 8. Recognize and discuss the effect of human activity on climate, climate change and the greenhouse effect. 9. Synthesize information from external, current sources and personal observations and discuss their relationships to class material.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Problem Setting:
Understand that scientists rely on evidence obtained from observations. Students learn to make basic scientific observations related to earth and atmospheric processes.

Evidence Acquisition:
Students are expected to be able to describe the processes of scientific thought including observation, hypotheses formation, experiment design, positive and negative controls in experiments and alternative hypotheses. Students make observations of earth processes and generate a hypothesis to understand and explain their observations.

Evidence Evaluation:
Throughout the semester, students are required to gather information from experiments in a group setting. The students then compare their data with the data from other teams and compare and contrast aspects of their respective experiments. For some online assignments, they may be required to review websites and webmaps of weather and climate data and draw conclusions regarding the occurrence of severe weather (e.g., Where is a cold front likely to occur in the next 48 hours? Why is Tornado Alley situated where it is? What data support researchers suggesting Tornado Alley is shifting due to changing climate?)

Reasoning and Conclusion:
Students are required to formulate a hypothesis and then design and conduct an experiment to test the hypothesis. Students assessed their results in the context of results from other teams and then remark on the materials and methods of the experiments. Additionally, students are required to identify weaknesses and issues associated with their experiment or data analysis and provide suggestions as how to move forward with revised experiments.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Communication/Representation of Quantitative Information:
The students work together to perform experiments and collect the data or analyze existing data, and are required to provide individual reports and data analysis in graphical formats. Students are compelled to show their work throughout the mathematical analysis of the data to effectively communicate the quantitative reasoning and method applied.

Analysis of Quantitative Arguments:
Students are required to select and perform appropriate quantitative analyses of scientific observations. Students graph data (e.g., sea surface temperature, flood recurrence interval) and interpret trends in the data. Students perform calculations from mapped data.

Application of Quantitative Models:
Students collect data from websites and webmaps and apply discrete data points on a graph or map. Students are then expected to think outside the parameters of the experiment to make predictions about how different conditions

would affect the outcomes. After the gathering of quantitative data, students are required to identify possible sources of error relating to the data sets and methods used.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
Sustainability and the Natural and Human Worlds: Students should gain knowledge of natural Earth system (e.g., rocks, air, water) and how natural processes affect society as well as how human systems affect the environment. Students become aware of the dynamic changes of the Earth and the time dependent nature of Earth processes and resources. Students gain understanding of the dynamic nature of the Earth, both from natural and anthropogenic processes. Civic Discourse, Civic Knowledge and Engagement – Local and Global: Students, as members of society, gain knowledge of the scientific method and how to apply this method to real-world problems (e.g., how to assess geohazard to a potential new home site, is this homesite situated in a location to experience a tornado or hurricane). Students learn how to use scientific data and methods (i.e., the scientific method is not a belief) for the betterment of society in public discourse and policy. Students understand how to interpret and develop scientific concepts and how these ultimately are used to create policy (e.g, insurance rates for homes and buildings in a floodplain, coastal areas affected by hurricanes, or "Tornado Alley"). Students also are encouraged through course assignments to review and reflect on the preparedness materials available on the ready.gov site. This site has resources for developing family emergency response plans and enrolling in emergency alerts systems to be aware of severe weather events. The course project involves investigating a historic severe weather-related disaster for a region of interest. For example, New Mexico has experienced 12 Severe Storm, 1 Hurricane, and 19 Flood Federal Emergency Management Agency (FEMA) Disaster Declarations since 1954. This course promotes national STEM learning objectives that ensure we effectively communicate the use science, math, and engineering in society (e.g., interpretation of maps and graphs with quantitative analysis).

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://academic.wnmu.edu/wp-content/uploads/sites/82/2019/07/WNMU-General-Education-Assessment-Plan-2019-2020.pdf

Name:_____ **Lab Time:** _____

Teammates: _____

Lab adapted from Mark Francek, Central Michigan University

Part I: Collecting Weather Data

Go to https://www.wunderground.com/ and, in the search box, type "Silver City, NM". Results should return the San Vicente Station. Contact your Instructor if you landed on a different station.

Click the "Forecast" and "History" tabs to answer the following questions:

(1) Current Temperature: _____

(2) What is the expected high temperature (max) for today?_____

(3) What is the hottest temperature on record for today? _____

(4) What is the expected low temperature (min) for today? _____

(5) What is the lowest temperature on record for today? _____

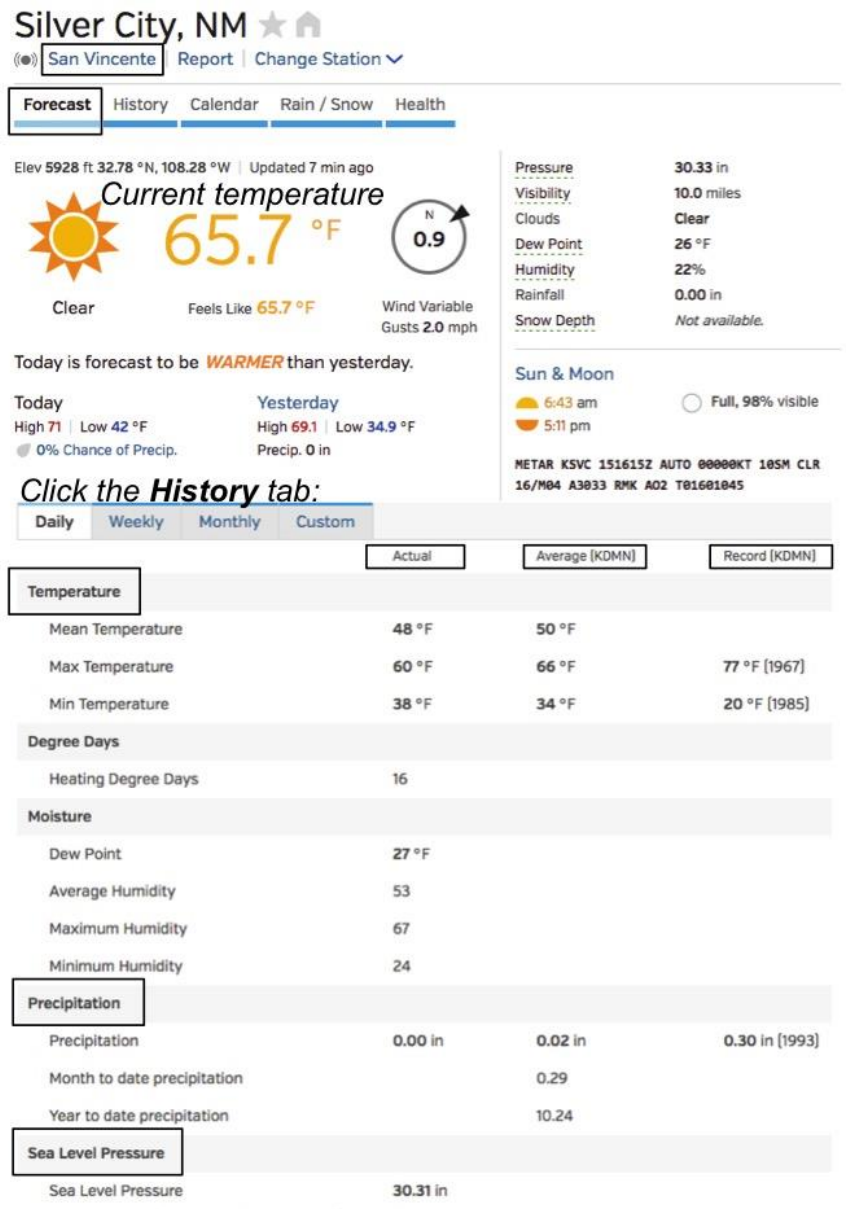
(6) What is the expected precipitation for today? _____

(7) What is the average precipitation for today? _____

(8) What is the max precipitation on record for today? _____

(9) What is the sea level pressure today? _____

This barometric pressure measurement is in units of in Hg (inches mercury). Convert it to millibar by the conversion factor 1 miillibar = 0.02953 in Hg. Show your work:



https://www.wunderground.com/cgi-bin/findweather/getForecast?query=silver+city%2C+nm

Pressure in millibars: _____

Part II: Investigating Pressure Systems: The map below shows the sea level pressures (millibars) for various locations across the country.

1) **Draw** lines every 4 millibars connecting regions with equal pressure *(Note: these are called 'isobars' and the concept is the same as using contour lines to mark equal elevation).* **Label** each isobar with the corresponding pressure value.

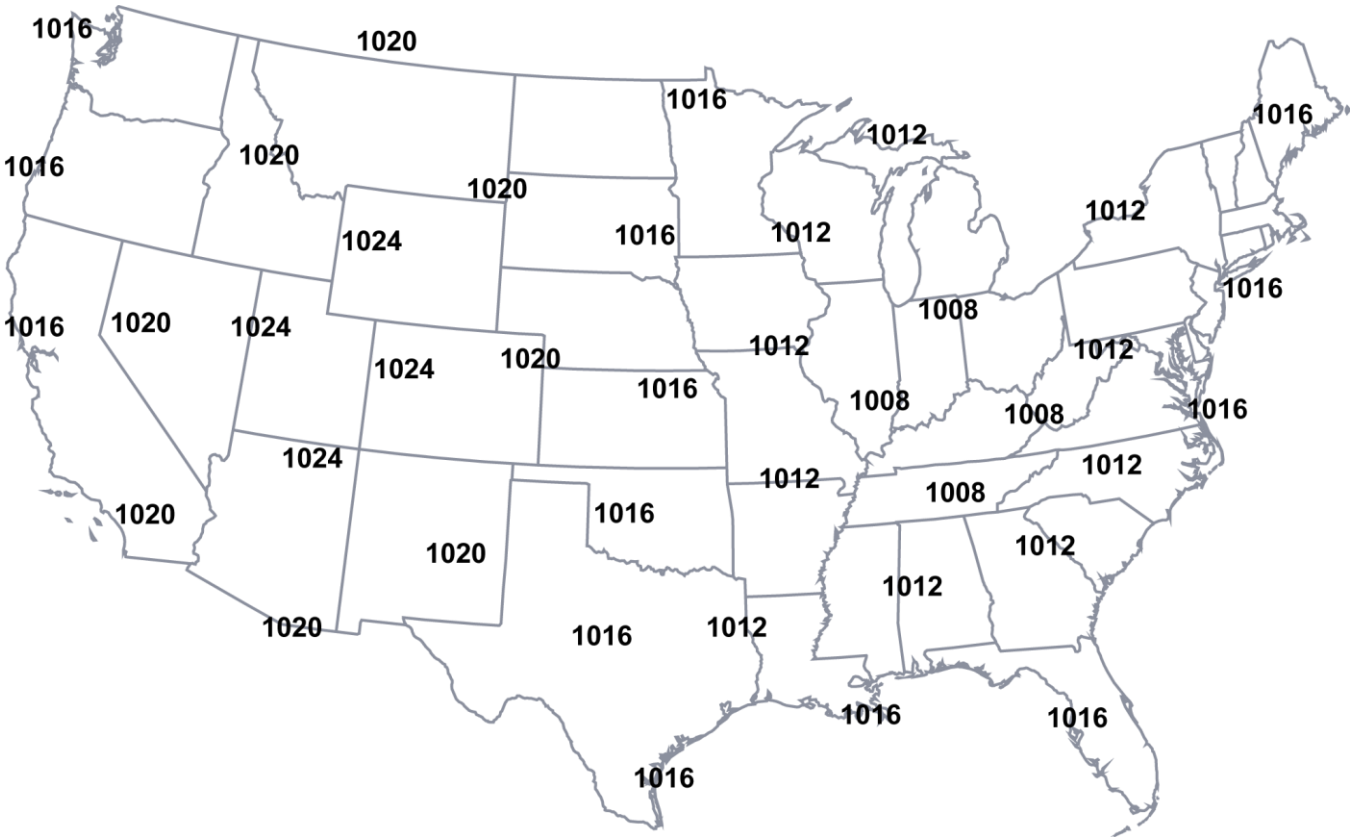
2) Isobars can be used to identify "High" and "Low" pressure systems. The pressure in a High is *greater* than the surrounding air. The pressure in a Low is *lower* than the surrounding air. **Label** the center of the high pressure system with H and the low pressure system with L.

3) High pressure regions are usually associated with dry weather because as the air sinks it warms and the moisture evaporates. Low pressure regions usually bring precipitation because when the air rises it cools and the water vapor condenses. **Label** the region that will receive precipitation and the region that will have clear skies.

4) Using arrows, **draw the wind direction** around the two systems *(Note: remember the Coriolis effect!)*

5) Below the map, **draw a cross section** of the surface (ground) and winds associated with the high and low pressure systems.

6) Based on the data collected for Silver City, **hypothesize** whether you are experiencing a high or low pressure system:



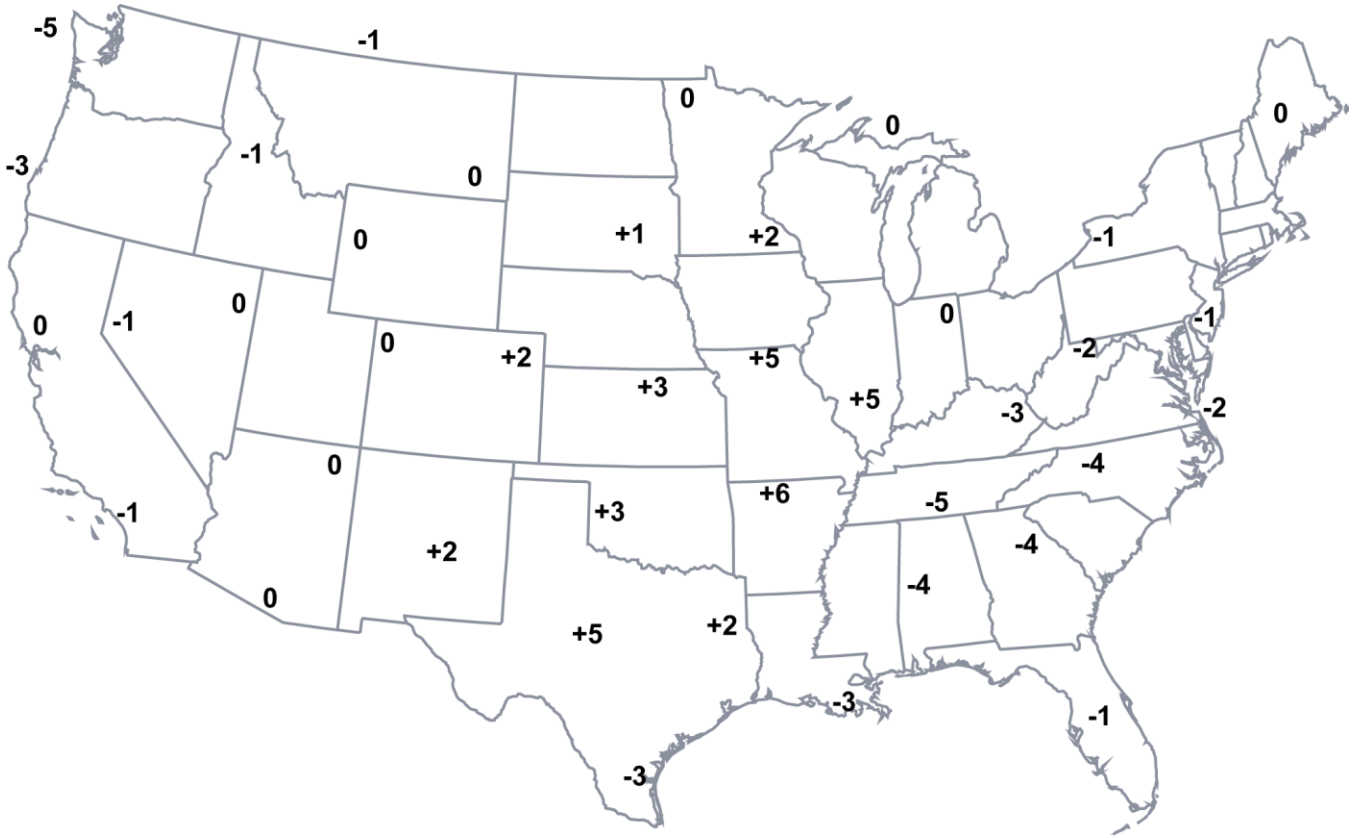
: Pressure, Fronts, and Weather

1) **Draw** lines connecting equal values of pressure change for every two millibars. **Label** each line with the corresponding pressure change.

Cold fronts are often located in areas where the pressure change is the greatest (i.e., steep gradient). The front represents the boundary of different air masses. Cold air is more dense than warm air so when a cold front pass your location, the pressure increases. You can identify the boundary of these air masses by identifying where the greatest change is occurring. **Label** the cold and warm air masses on the map. **Label** the front.

2) In the space below the map, **draw a cross section** of the major frontal system shown on the map:

The map below shows *change* in surface pressure (millibars) during the past three hours at various locations.

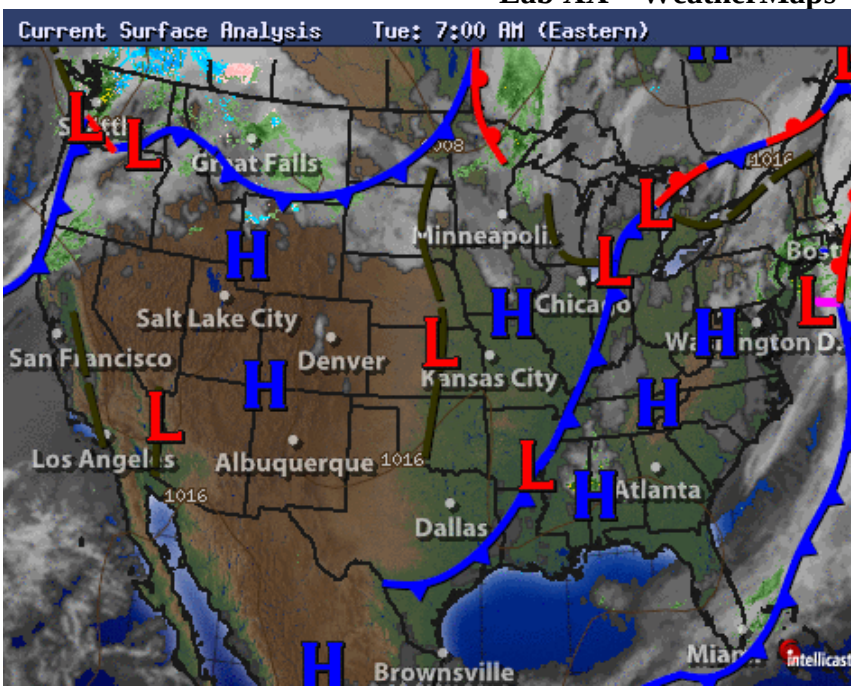


Part IV: Real Time Data

Visit the following websites:

- *https://www.wunderground.com/maps/surface-analysis/12hr* and
- *https://earth.nullschool.net/; Zoom to North America*

These maps show current weather conditions from ground-based weather stations, including high/low pressure positions and fronts. On the map at right, clouds are also shown, which will help visualize the weather at these conditions. *Map from http://www.intellicast.com/National/Surface/Current.aspx?location=default*



(1) Analyze the pressure systems on the two animated maps. Where in the country do you expect severe precipitation today? Explain your reasoning.

(2) Where do you expect dry conditions today? Consider the map symbology and explain your reasoning.

Part V: Forecast

Go to *https://www.wunderground.com/maps*. This website shows radar and satellite maps, showing time increments of 12 hours for temperature, precipitation, wind, and cloud cover, among other datasets. Scroll down to the *Surface Analysis* area of the website and note that there are four maps representing 12-, 24-, 36-, and 48-hour surface forecasts. High and Low pressure systems are labeled.

(1) Consider the changing pressure conditions across the U.S.. Imagine you are a meteorologist, where would you forecast severe weather to occur in the future? What are the air conditions that lead your prediction?

(2) What are the pressure conditions (high/low) in New Mexico throughout the next 48 hours? Explain.

(3) Are there any fronts that may bring precipitation to New Mexico in the next 48 hours? Explain.

Part VI: Preparing for Severe Weather

Go to *https://www.ready.gov/* and, from the *Disasters and Emergencies* dropdown, select **Severe Weather**. This website gives information about severe weather and how you, family, and friends can prepare for this type of natural hazard (e.g., tornadoes, floods, thunder and lightning, winter weather).

(1) Review the *Take Action* section and subsection "*Make a family emergency plan*". In this area, you learn to develop a family emergency plan based on local weather hazards. In the space below, write a family emergency response plan. There are many materials and resources on this site to help you are your draft your plan!

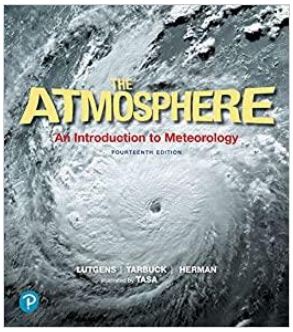
(2) Share the draft of your family plan with members of your family and friends. Remember that your plan should be tailored to your specific daily living needs and responsibilities. Did you forget anything? In the space below, revise your plan based on feedback from your family and friends.

(3) Review the *Take Action* section and subsection "*Be informed about emergency alerts*". Public safety officials use timely and reliable systems to alert you to emergency situations. Sign up you or a family member or friend for at least one type of warning alert system related to severe weather (e.g., Emergency Alert System, NOAA Weather Radio, FEMA Mobile App). Take a screenshot of the app and insert in the space below:

GEOL 2130/L: Introduction to Meteorology [Online]

Live Online Meetings

Lecture Instructor: Dr Corrie Neighbors
Office: Harlan Hall 119A
E-mail: corrie.neighbors@wnmu.edu
Phone (office): 575-538-6352
Office Hours: by appointment



Lecture Time: Wednesdays 5-6 PM MT
Lecture Room: Canvas

Lab Time: Online
Lab Room: *https://wnmu.zoom.us/my/neighbors*

Pre-requisites: None. Both lecture and lab are required for this course and you will receive the same grade for each.

Course Description & Objectives

Overview: Introduction to Earth's atmosphere and the dynamic world of weather as it happens. Working with current meteorological data delivered via the Internet and coordinated with learning investigations keyed to the current weather; and via study of select archives.

Objectives: This course meets the NM General Education Core Competencies for Area III.

- Recall, describe, or explain the various elements of the Earth's atmosphere, Earth's relation to the sun, incoming solar radiation, the ozone layer, the primary temperature controls, and the unequal heating of land and water.
- Recall, describe, or explain weather variables and parameters.
- Recall, describe, or explain air masses, pressure systems, the various fronts and associated types of storms, weather symbols, monsoons, the various forms of precipitation, along with causes and effects of lightning.
- Recognize and discuss the effect of human activity on climate, climate change and the greenhouse effect
- Synthesize information from external, current sources and personal observations and discuss their relationships to class material
-

Objectives:

- Recall, describe, or explain the hydrologic cycle, the characteristics and influences of the oceans and continents on the weather, the Southern Oscillation (i.e., El Nino), and the effects of land/water distribution.
- Recall, describe, or explain specific impacts by humans on weather, climate, and on the ecosystem at large.
- Evaluate and interpret information from maps, diagrams, remote sensing devices, graphs, and tables.
- Evaluate and interpret information from maps, diagrams, remote sensing devices, graphs, and tables.

Course Format

Format: This class will use online lecture videos and textbook readings to deliver content. Lecture activities will be interspersed with lecture videos. It is critical that you watch the lecture videos prepared to learn and complete the textbook readings, homework and lecture activities assigned.

Technical Support: There is web support for this class in Canvas. Direct questions about lab & email access, WNMU student accounts, and technical to the Help Desk.

Course Materials

An integral part of the class is the Canvas course site, which will be updated throughout the term with course materials. You are encouraged to take advantage of these resources plus any additional other resources to get the most out of this course.

- **Textbook**: The Atmosphere: An Introduction to Meteorology by Lutgens, Tarbuck, and Herman (published by Pearson) is the text for the course. This textbook was selected for the range of topics, the clear writing and the illustrations. The required textbook is also on reserve in the Miller Library.
    - In addition to this book, course content will take a variety of forms and formats such online lecture notes, PDF readings, online content, and online videos.
    - The textbook and materials posted on Canvas are the accepted references for the course; any unverified content obtained from outside sources may not be accepted for a grade.

- **Hardware**:
    - ***Headset with Microphone*:** You will need a headset with microphone to participate in online Zoom meetings. Headsets give clearer audio and diminish background noise. Earbuds with a microphone typically work as well.
    - ***Webcam:*** To build a community and facilitate conversations during the live web meetings, you will be required to have a webcam. The webcam may be external or built-in to your device.
    - ***Access to a Printer*:** When possible, materials will be in an electronic format. However, to conduct some types of analysis (e.g., map reading), you may be required to make annotations on "handouts". Therefore, you will need a printer, or access to a printer, for the duration of the course. A scanner is advantageous, but not required as you may use a smart phone app (*https://www.pcmag.com/roundup/349681/the-best-mobile-scanning-apps*) to take high-resolution images of your work.

- **Handheld Materials**:
    - ***Ruler:*** This class will involve some numeric and spatial analysis (e.g., calculating distances on a map) so have a ruler, preferably with both English (i.e., inches) and metric (i.e., millimeters and centimeters) units for your assignments.
    - ***Calculator:*** You may also want to have a calculator on hand for calculations (e.g., flood frequency).

Throughout the semester, the instructor will be placing course materials on the Canvas web site. Since you are enrolled in the class, you should be able to access this site to download lecture handouts and lab exercises. You are encouraged to take advantage of these and other resources that you have access to in order to get the most out of this course. This may mean watching a video more than once or finding an alternative resource through a search of the Internet.

Communication

Have questions? Use the modes of communication listed below *(recommended in this order)*:

- **Online Meetings**
    - Online meetings will aid you in understanding lecture material and completing assignments. You will be required to log in to online lecture meetings at the scheduled time once a week to meet with the instructor. The online meetings will take place in the Zoom app. This time will be spent chatting about and clarifying course content. Specific questions about course content and help with assignments can be discussed in the online meetings. More information on this aspect of your grade can be found in the 'Criteria for Evaluation' section below.
    - Online meeting topics may include:
        - **Concept Review and Q&A**: the instructor will discuss the concepts covered in that week's lectures, utilizing lecture slides and digital whiteboard to answer questions. Having viewed the lectures before attending office hours will make this discussion more meaningful.
        - **Activity Discussion and Q&A**: the instructor will introduce that week's assignment(s) and will field questions.
    - It is very important that you arrive to the online meeting prepared; you should have your headset (with microphone), notebook, and be located in an appropriate learning environment. It is best that you use a broadband wired connection when logging into Zoom; otherwise, you may experience video delays that interfere with your ability to follow and interact in the discussion.

- **Individual Office Hours** (by appointment)
  - If you would like additional time to meet with the instructor, set-up an appointment. Additional office hours may be needed for extra help or to discuss private matters (grades, etc.)

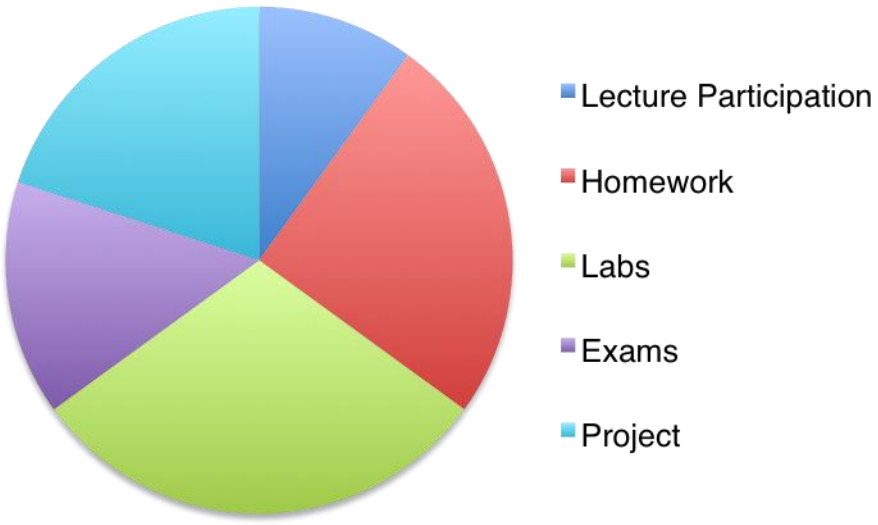
- **Email**
  - Email is for private communication about sensitive matters (e.g., grades, absences). Detailed explanations of course content are generally not possible via email.
  - The subject line of ALL emails should include 'GEOL 2130'. Please allow up to 12 hours for a response.
  - Remember this is a professional environment; craft an appropriate, considerate email. Emails with suitable etiquette (salutation, grammatically correct body, and closing) will be answered promptly during business hours.
    - Inappropriate behavior, including disrespectful behavior toward other students or faculty; sexual harassment; insulting gender, racial, sexual orientation or religious comments; jokes in poor taste, or offensive language (i.e. swearing) are not tolerated in this course. A first offense will result in a private discussion between you and the instructor. A second offense will result in a conversation between the instructor, your faculty advisor, and the department chair. A third offense will result in your being dropped from the course.

Criteria for Evaluation

Each student is responsible for the following:

- Completely reading the syllabus and understanding course requirements;
- Staying informed and up-to-date on all course-related work each and every week;
- Watching weekly lecture videos and attending online meetings;
- Completing all coursework by the assigned deadlines;
- Being active on the Canvas course site by checking email regularly and reading announcements.

Note that this course requires a significant amount of independent work and time management. You will be given the structure, resources and guidance for learning the course content, but it is ultimately your responsibility to watch the lecture videos and complete assignments on time. You are expected to stay engaged and informed about the course by watching lecture videos, attending online meetings with the instructor, and reading the textbook.



Online Meeting Attendance & Participation (10%):

You are required to attend online meetings every week. During this time, you should log in from a quiet location where you can adequately take notes and participate in a discussion with the instructor. You are required to use your full name (as it appears in Canvas) to receive credit for being in attendance. Discussion attendance and participation will be graded out of 2 points with 1 point assigned to each of the following:

- logging in from a quiet learning-appropriate location with your webcam turned on and focused on your face,

- attending and engaging with the instructor and other students in a meaningful way, such as speaking through the microphone and using the chat tool to ask (and answer) content-related questions.

Simply logging in to the online Zoom room will not suffice for achieving credit. Outside of an excused absence that is discussed prior to the class, meeting attendance cannot be made-up after the meeting has passed.

Additionally, proper netiquette and webcam behavior should be observed throughout every meeting and students are expected to be respectful toward the Instructor and other students. If a student is unprepared for discussion, logged in from an inappropriate learning-environment, or acting inappropriately, they will be removed from the meeting and will not receive attendance credit.

Homework (25% of final grade)
There will be homework assignments based on textbook readings on a weekly basis. The textbook and any given sources are the only acceptable reference materials; answers found from unverified external sources may not receive credit. Each assignment will be assigned a point value at the time of assignment. Students must submit the completed homework to Canvas on or prior to the due date. No late work accepted, no emailed work accepted, and no make-up work will be accepted.

Lab Activities (30% of final grade)
Laboratory exercises are designed to encourage students to explore geologic concepts, ask questions, and work in a scientific manner. Labs for the course are written by the instructor and emphasize connections between concepts and real-world applications of the lecture and textbook material. Students must submit the completed assignment to Canvas on or prior to the due date. No late work accepted, no emailed work accepted, and no make-up work will be accepted.

Exams (15% of final grade)
There will be two regular exams held during the semester. Exams will consist of multiple choice, short answer and short essay questions and interpretation of graphs and diagrams. You may be required to meet with your instructor in an online environment, with microphone and webcam on, to complete the exam. More information will be given as each exam approaches. There are no make-up exams and the lowest score of the three exams will be dropped at the end of the semester.

Project (20% of final grade)
There will be a semester long project that will culminate in a final report. This final report takes the place of a final exam (i.e., there is no final exam in the course). Projects are self designed and explore a type of weather hazard or recent/historic weather event and resulting damage of interest to the student. Detailed information and guidelines for the project will be posted in Canvas.

****** Technical difficulties, computer failures, loss of work due to mismanagement of course materials are NOT an excuse for submitting assignments & files late. ******

I plan to base your final grades on the following scale, although minor adjustments may be made.
A: 90 - 100% B: 80 – 89% C: 70 – 79% D: 60 – 69% F: Less than 60%

NF Grade: An NF grade, or failure due to absences, will be given if the instructor determines that the student did not attend, stops attending or has insufficient attendance to pass the course according to the standards established in the course syllabus.

Course Schedule
The semester-based course schedule is appended to the syllabus as well as posted in Canvas. The schedule contains an approximate guideline of the topics we will cover each week of the semester, including assignment and exam due dates.

General topics and readings below:

Course Modules	Textbook Readings
Introduction to the Atmosphere	Chapter 1
Heating Earth's Surface and Atmosphere, Temperature	Chapters 2 & 3
Moisture and Atmospheric Stability, Condensation and Precipitation	Chapters 4 & 5
Air Pressure and Winds, Circulation of the Atmosphere	Chapters 6 & 7
Air Masses, Weather Patterns	Chapters 8 & 9
Thunderstorms and Tornadoes	Chapter 10
Cyclones and Hurricanes	Chapter 11
Weather Analysis and Forecasting	Chapter 12
World Climates	Chapter 15
Changing Climate, Air Pollution	Chapters 13 & 14

Class Policies

Makeup: In general, make-up work will not be allowed. No make-up work will be accepted after the due date without prior notice. Extensions are granted only under the most pressing of circumstances and must be pre-arranged with the instructor. If you have a planned absence, the assignment should be turned in prior to the due date. If you have an emergency, please notify the instructor **before** the due date and provide the appropriate official note explaining your absence.

Any approved make-up work must be submitted by the due date and time specified by the instructor. If you miss a due date or online meeting due to an official University sporting event, you will need a note from the coaching staff.

Academic Integrity Policy and Procedures: Each student shall observe standards of honesty and integrity in academic work as defined in the WNMU catalog. Violations of academic integrity include "any behavior that misrepresents or falsifies a student's knowledge, skills or ability with the goal of unjustified or illegitimate evaluation or gain" (WNMU Faculty Handbook, 2008). Generally violations of the academic integrity include cheating and plagiarism. Penalties for infractions of academic integrity in this class are as follows:

Plagiarism: "the intentional or unintentional representation of another's work as one's own without proper acknowledgement of the original author or creator of the work" (WNMU Faculty Handbook, 2008).

Cheating: "using or attempting to use unauthorized materials…and unauthorized collaboration with others, copying the work of another or any action that presents the work of others to misrepresent the student's knowledge" (WNMU Faculty Handbook, 2008).

Students will receive a warning and '0' on the relevant question for the first incidence of plagiarism or cheating. They will receive no credit on the assignment for the second incidence. If they are found guilty of plagiarism or cheating a third time they will fail the course. Note that exams follow more stringent rules that "no other outside sources (e.g., external websites) can be used. You are on your honor not to review any outside references during the exam and responses will be scanned for plagiarism; if found, you will be given a 0 score." Thus, any incidence of cheating on an exam will result in a '0' on the entire exam.

Additionally, if a student is retaking the course due to a failing score resulting from violation of the above policies and is again found in violation, this can result in failure of the course.

WNMU Policies

Disability Support Services: The Student Accessibility Services office goal is to provide services and support to ensure that students are able to access and participate in the opportunities available at Western New Mexico University. Students are asked to notify the Student Accessibility Services office as soon as possible to discuss disability-related concerns and needs. Services include but are not limited to alternate text, assistive technology information, campus housing arrangements, campus accessibility and disability parking information, priority registration assistance, new student orientation, testing accommodations, advocacy, or assistance with any other campus disability-related needs. For more information, see their website at https://health.wnmu.edu/accessibility/students/. The office can be found in Juan Chacon (Center for Student Success) and contacted by phone at (575) 538-6014.

Code of Conduct: Western New Mexico University is an academic community. Students have the obligation to conduct themselves as mature and responsible participants in this community. Towards this end, the University has established policies, standards, and guidelines that collectively define the Student Code of Conduct. The Student Code of Conduct includes all policies, standards, and guidelines included in, but not limited to the Western New Mexico University Catalog, the Student Handbook, the Housing Agreement and other housing documents. Students are subject to the Code of Conduct during academic terms for which they are enrolled, during breaks between terms, during university holidays and vacations, and during periods of suspension.

Every student has the right to conditions favorable to learning. Western New Mexico University expects all students to obey the law, to show respect for other members of the university community, to maintain integrity and high standards of individual honor in scholastic work, and to observe standards of conduct appropriate for a community of scholars. Students have the right to pursue an education in an environment that respects differences and is free from discrimination.

Students have the responsibility to conduct themselves, as individuals and in groups, in a manner that promotes an atmosphere conducive to teaching, studying, and learning. Students are expected to uphold academic and personal integrity, to respect the rights of others, to refrain from disruptive, threatening, intimidating, or harassing behavior, or behavior that is harmful to themselves, other persons, or property.

Any student found to have committed the following misconduct or to have violated any other university policy outlined in the Student Handbook or other official university publications (such as the Catalog or Housing Agreement) is subject to disciplinary sanctions. More than one sanction may be imposed for a single violation. A single act may constitute a violation of more than one Standard. Some standards that are commonly associated with classroom conduct are:

- ***CS 6.*** Physical or Mental Abuse or Harm. Intentional or reckless acts that do cause or reasonably could cause physical or mental harm to any person are prohibited. Actions that threaten or reasonably could cause a person to believe that the offender may cause physical or mental harm are also prohibited. Some examples of prohibited behavior are included in the Student Handbook.
- ***CS 7. Discrimination/Hateful Acts.*** Discrimination and other harmful acts based on an individual's actual or perceived race, color, disability, religion, national origin or ancestry, gender, or sexual orientation are offensive to the mission of Western New Mexico University and are prohibited.
- ***CS 8. Disorderly Conduct.*** Conduct which is loud, lewd, obscene, indecent, or which breaches the peace (ex: causing alarm, annoyance, or nuisance) is prohibited. Students who receive three or more noise violations may be adjudicated under this violation.
- ***CS 20. Interfering with, Obstructing, or Disrupting a University Function.*** University functions, on or off campus, are defined to include teaching; research, administration, disciplinary proceedings, athletic events, university activities, public service, learning, or other authorized activity related to the university. This also includes authorized non-university functions when the act occurs on university premises.
- ***CS 22. Irresponsible computing*** includes improper use of the network, security, harassment, and/or copyright.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1361

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	Orlando Griego
Registrar Name	Chris Wright
Registrar Email	wright@nmmi.edu
Department	Math and Science Division
Prefix	GEOL
Number	1120
Suffix	L
Title	Environmental Geology Lab
Number of Credits	0

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	GEOL
Number	1120
Suffix	-
Title	Environmental Geology

New Mexico Common Course information

Prefix	GEOL
Number	1120
Suffix	L
Title	Environmental Geology Lab

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences

☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☒ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

Student Learning Outcomes
1. Apply the scientific method to the field of environmental geology.
2. Identify or describe stream processes and features as part of the hydrologic cycle.
3. Describe, classify, or identify minerals.
4. Describe, classify, or identify igneous, sedimentary, and metamorphic rocks.
5. Identify and discuss the importance of Earth resources.
6. Obtain measurements and make calculations that lead to the graphical display and interpretation of data.
7. Communicate (written and/or oral) interpretations of quantitative and graphical data to evaluate environmental problems.
8. Interpret features on topographic maps.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

Same as common course student learning outcome.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Laboratory exercises will be conducted throughout the semester to develop critical thinking skills related to lecture topics In Environmental Geology 1. Problem Setting: The purpose of each lab exercise will be stated in the introductory and objective sections, where students will be required to use lab equipment, geologic tables and charts to identify environmental issues, mineral, rock specimens and various environmentally related Earth processes such as plate tectonics and human

induced pollution. During data collection, students should be able to answer questions related to processes and phenomenon observed.

2. Evidence Acquisition: Students need to gather the data in the lab section to test, compare and contrast information from selected charts and tables. During the lab section, students should be able to gather information base on the physical properties, observations and available laboratory equipment to support their conclusions.

3. Evidence Evaluation: Evidence will be acquired through data collection based on physical principles and available lab equipment to support their conclusions. Once data collection is complete, students will need to evaluate the validity of their conclusions, accounting for any discrepancies and factors contributing to them.

4. Reasoning/Conclusion: After the conclusion is drawn, Students will then need to validate their conclusions and determine whether their conclusions match available data sets in table and chart format. During the laboratory section, students should develop plans to improve experimental methods to obtain more accurate results.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Laboratory exercises will be conducted throughout the semester to develop quantitative reasoning.

1. Communication/Representation of Quantitative Information: By comparing acquired data and observations to physical representations, students should be able to derive other similar phenomenon. 2. Analysis of Quantitative Arguments: Students should gather and interpret the information given in the question or raised in real life, and reasoning through by providing physical evidence to support the analysis. During the laboratory section, students should analyze the data acquired using the equipment to derive or support their conclusion.

3. Application of Quantitative Models: Students should apply appropriate quantitative models to solve problems using quantitative information gathered with proper analysis and reasoning. During the laboratory section, students should use appropriate geological models to draw conclusions using corresponding quantitative information acquired with scientific reasoning.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Laboratory exercises will be conducted throughout the semester to develop personal and social responsibility.

1. Collaboration skills, teamwork, and value systems: Students will team up during the laboratory section to complete the task using geological concepts. During the two and half hours section, they should collaborate to finish collecting essential data. After collecting the data, students should be able to use appropriate geologic models to analyze the experimental data. During the collaboration, they should team up to contribute their thought and time to draw a solid conclusion using the scientific method.

2. Sustainability and the natural and human worlds: Students should use the appropriate geologic fundamentals and processes to understand the consequence of certain human actions or understand the rules set up by human society to regulate behavior as it relates to the environment and ecology.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/wp-content/uploads/2022/11/ACADEMIC-ASSESSMENT-PLAN.pdf

ENVIRONMENTAL GEOLOGY LAB SYLABUS
GEOL 1120L

Instructor: LTC Kimbler
Office: McClure 003 Phone: 8160
Office hours as posted

Text: Introduction to Environmental Geology by Edward Keller 4th Ed.
Laboratory Manual –Class handouts, Case Studies

Course Description
GEOL 1120L. Environmental Geology Laboratory

Course Description

Environmental Geology Laboratory is the lab component of Environmental Geology. This course is an introduction to geologic materials and processes as applied to the human environment. Included are practical exercises with rocks, minerals, topographic and geologic maps, and water, mineral and energy resources. Hazards associated with natural processes will be evaluated.

Student Learning Outcomes
1. Apply the scientific method to the field of environmental geology.
2. Identify or describe stream processes and features as part of the hydrologic cycle.
3. Describe, classify, or identify minerals.
4. Describe, classify, or identify igneous, sedimentary, and metamorphic rocks.
5. Identify and discuss the importance of Earth resources.
6. Obtain measurements and make calculations that lead to the graphical display and interpretation of data.
7. Communicate (written and/or oral) interpretations of quantitative and graphical data to evaluate environmental problems.
8. Interpret features on topographic maps.

PROCEDURES
Lecture – Attendance is mandatory in accordance with Institute policy. Work missed as a result of an excused absence will be made up the next regular class period. You will be expected to read the text and take notes in class.

Take Note that many of the elements of geology integrate together, so if you miss one part it may directly impact your understanding of another.

Outside Reading Assignments – You will be required to turn in four scientific article analyzes during the semester. See attachment.

Quizzes – Expect 1 quiz per chapter and/or lab session. Quizzes are given at the instructor's discretion and may occur anytime after a chapter is scheduled in the syllabus. Expect lab quizzes!

Tests – Tests will consist of multiple choice, objective and essay questions related to environmental geology processes as outlined in the labs. **Tests that are missed due to an**

excused absence must be made up within one week . An unexcused absence will result in a **ZERO** for that test

Assessment – All students will be required to complete a variety of feedback tools to provide information to instructors on the efficacy of courses. NMMI expects students to provide honest and thoughtful answers to these assessment tools.

Grades

Grades are calculated as follows based on total points

Tests and quizzes, writing assignments, homework, film questions, other class activities Total 100%, and count as 20% of your class grade over all.

Lab schedule.	**Subject to change based on lecture content coverage.**
Order	**Topic**
1	**Human Population, Growth Rates & Doubling Time**
2	**Plate Tectonics the driver for many of our natural disasters**
3	**Minerals & Rocks and the role they play in Natural Hazards**
Exam 1	
4	**Earthquake Studies and the Environment**
5	**Volcanos and the Environment**
6	**Water: Surface, Ground and Pollution Problems Case Studies**
Exam2	
7	**Slope Processes, Landslides, Subsidence Case Studies**
8	**Topographic Maps: Introduction, Interpretation and Use**
	.
9	**Geologic Maps: Introduction, Interpretation and Use for Environmental Studies**
	Exam3
10	**Mineral resources: Ore Minerals, How much do we really have?**
11	**Energy Resources and Environmental Issues of Extraction and Processing**

Click and Learn

The Anthropocene:
Human Impact on the Environment

hhmi | BioInteractive

Student Handout

NAME _____ DATE _____

INTRODUCTION

In this Click and Learn activity by the Howard Hughes Medical Institute, you will learn about how humans are affecting the ecosystem. You will examine the data that scientists use to determine whether we are entering a new geological era called the Anthropocene.

PROCEDURE

1. You will use the Click and Learn activity "The Anthropocene: Human Impact on the Environment." To get to the activity on the BioInteractive website, type in or follow the URL: http://media.hhmi.org/biointeractive/click/anthropocene/.
2. Take a few minutes to explore the Click and Learn. Once you are a more familiar with the information found in the interactive, use the questions in the "Activity Summary Sheet" to guide you through your exploration.

Activity Summary Sheet: "The Anthropocene: Human Impact on Environments"

Summarize what the term "epoch" means in 1–2 sentences.	
The Click and Learn names 3 different epochs. Name the epochs and list the major characteristics of each one.	

Click and Learn

The Anthropocene:

Human Impact on the Environment

hhmi | BioInteractive

Student Handout

Select 4 human impacts you are most interested in learning about. List the following information for how each impact affects ecosystems:

a. Describe how the human impact you selected affects the ecosystem.
b. Summarize some of the quantitative (graph) data that provide evidence of humans' impact on the ecosystem.
c. Describe specific types of evidence people should look for in their own ecosystem to determine whether humans are changing the local environment.
d. How do you think this impact will change over the next 100 years? Make a prediction based on the evidence and data you have seen so far.

Impact 1:	
Impact 2:	
Impact 3:	

Impact 4:	

Compose a paragraph below that outlines recommendations for what people can do to reduce the human impacts you analyzed. Identify recommendations for each of the four impacts you studied. Conduct research online to find these recommendations. Try to find at least two different sources that list similar recommendations.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1362

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	ogriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	cwright@nmmi.edu
Department	Math and Science Division
Prefix	GEOL
Number	2110
Suffix	L
Title	Historical Geology Lab
Number of Credits	0

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	GEOL
Number	2110
Suffix	-
Title	Historical Geology

New Mexico Common Course information

Prefix	GEOL
Number	2110
Suffix	L
Title	Historical Geology Lab

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☒ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

Student Learning Outcomes
1. Explain or discuss geologic time and how the geologic time scale was developed.
2. Recognize or explain how geologic time is measured.
3. Describe and use the basic principles of stratigraphy and explain how stratigraphy can be used to interpret sedimentary environments.
4. Describe and use the basics of paleontology and how fossils can be used to interpret ancient sedimentary environments.
5. Identify fossils in hand samples and explain how organisms are preserved in the fossil record.
6. Identify, explain, or interpret geologic structures on geologic maps.
7. Reconstruct the history of geologic events using geologic maps and cross-sections.
8. Construct cross-sections, fence diagrams, and isopach maps from stratigraphic sections and thickness data.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

Same as common course student learning outcome.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Laboratory exercises will be conducted throughout the semester to develop critical thinking skills related to lecture topics In Historical Geology

1. Problem Setting: The purpose of each lab exercise will be stated in the introductory and objective sections, where students will be required to use lab equipment, geologic tables and charts to identify fossils, mineral, rock specimens and various historical Earth processes such as plate tectonics. During data collection, students should be able to answer questions related to processes and phenomenon observed.
2. Evidence Acquisition: Students need to gather the data in the lab section to test, compare and contrast information from selected charts and tables. During the lab section, students should be able to gather information base on the physical properties, observations and available laboratory equipment to support their conclusions.
3. Evidence Evaluation: Evidence will be acquired through data collection based on physical principles and available lab equipment to support their conclusions. Once data collection is complete, students will need to evaluate the validity of their conclusions, accounting for any discrepancies and factors contributing to them.
4. Reasoning/Conclusion: After the conclusion is drawn, Students will then need to validate their conclusions and determine whether their conclusions match available data sets in table and chart format. During the laboratory section, students should develop plans to improve experimental methods to obtain more accurate results.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Laboratory exercises will be conducted throughout the semester to develop quantitative reasoning.
1. Communication/Representation of Quantitative Information: By comparing acquired data and observations to physical representations, students should be able to derive other similar phenomenon. 2. Analysis of Quantitative Arguments: Students should gather and interpret the information given in the question or raised in real life, and reasoning through by providing physical evidence to support the analysis. During the laboratory section, students should analyze the data acquired using the equipment to derive or support their conclusion.
3. Application of Quantitative Models: Students should apply appropriate quantitative models to solve problems using quantitative information gathered with proper analysis and reasoning. During the laboratory section, students should use appropriate geological models to draw conclusions using corresponding quantitative information acquired with scientific reasoning.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Laboratory exercises will be conducted throughout the semester to develop personal and social responsibility.
1. Collaboration skills, teamwork, and value systems: Students will team up during the laboratory section to complete the task using geological concepts. During the two and half hours section, they should collaborate to finish collecting essential data. After collecting the data, students should be able to use appropriate geologic models to analyze the experimental data. During the collaboration, they should team up to contribute their thought and time to draw a solid conclusion using the scientific method.
2. Sustainability and the natural and human worlds: Students should use the appropriate geologic fundamentals and processes to understand the consequence of certain human actions or understand the rules set up by human society to regulate behavior as it relates to natural resources.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/wp-content/uploads/2022/11/ACADEMIC-ASSESSMENT-PLAN.pdf

HISTORICAL GEOLOGY SYLABUS
GEOL 2110 Lab

Instructor: LTC Frank Kimbler, Office – McClure 003 basement, ph. 8160
e-mail: kimbler@nmmi.edu

COURSE DESCRIPTION

Historical Geology is designed to introduce you to the art and science of interpreting Earth history. We will emphasize the record of sedimentary rocks and the effects of plate tectonic activity throughout Earth's history. We will explore the dynamic changes and evolution of the Earth and its life over the past 4.5 billion years.

TEXTS

Spring 2019: Historical Geology by Wicander and Monroe
Laboratory Manual – Handouts in class

COURSE OBJECTIVES

Historical Geology Laboratory is the laboratory component of Historical Geology. This course applies geologic principles and techniques to reconstruct the history of Earth. Students will explore key concepts of geologic time and stratigraphy, identify fossils and use fossils to make stratigraphic correlations. Students will employ actualism to determine past depositional environments.

Student Learning Outcomes
1. Explain or discuss geologic time and how the geologic time scale was developed.
2. Recognize or explain how geologic time is measured.
3. Describe and use the basic principles of stratigraphy and explain how stratigraphy can be used to interpret sedimentary environments.
4. Describe and use the basics of paleontology and how fossils can be used to interpret ancient sedimentary environments.
5. Identify fossils in hand samples and explain how organisms are preserved in the fossil record.
6. Identify, explain, or interpret geologic structures on geologic maps.
7. Reconstruct the history of geologic events using geologic maps and cross-sections.
8. Construct cross-sections, fence diagrams, and isopach maps from stratigraphic sections and thickness data.

PROCEDURES

Class Format: Lab lectures and discussions, multimedia presentations, lab exercises

Attendance: Mandatory in accordance with Institute policy. Work missed as a result of an excused absence will be made up the next regular class period. You will be expected to **read the text** and take notes in class.

Many of the elements of geology integrate together, so if you miss one part it may directly impact your understanding of another.

Quizes – Expect 1 quiz per or lab session. Quizzes are given at the instructor's discretion and may occur any time after a lab is scheduled in the syllabus.

Tests – Tests will consist of multiple choice, objective and essay questions taken from lab activites **Tests that are missed due to an excused absence must be made up within one week** . An unexcused absence will result in a **ZERO** for that test.

Assessment – All students will be required to complete a variety of feedback tools to provide information to instructors on the efficacy of courses. NMMI expects students to provide honest and thoughtful answers to these assessment tools.

Grades – In calculating the semester grade, the lowest test grade will be dropped. However, a zero due to cheating or unexcused absence will **NOT** be dropped.

Grades are calculated as follows:

Tests , Labs = 20% of your grade for Environmental geology. Based on total point accumulation

Tentative Schedule – The Instructor reserves the right to amend the schedule as necessary.

Order		TOPIC	ACTIVITIES & ASSIGNMENTS
1		Lab 1	Video on Historical geology, take notes on video
2		Lab2	Lab: basic rock and mineral identification with emphasis on sedimentary rocks.
4		**Lab Exam**	
5		Lab 3 Plate tectonics	Lab: Plate tectonics
6		Lab 4 Geologic Time	Lab: Geologic time, Relative & Absolute Dating
7		Lab4	Lab: Present & Ancient Sedimentary Environments and concepts of Stratigraphy
8		Lab5	Lab: Present & Ancient Sedimentary Environments and concepts of Stratigraphy
9		**Lab exam**	**Lab Exam** Stratigraphy concepts and ancient sedimentary environments. Fossils, Recognition, Types, Cleaning and Preservation
10		Lab 6	Fossils, Recognition, Types, Cleaning and Preservation
11		Lab 7	Fossils, Recognition, Types, Cleaning and Preservation
12		Lab 8	Lab: Precambrian fossils (some of Earth's first life forms): Stomatolites, and

			simple Arthropods
13		Lab 9	Lab: Paleozoic Fossils: brachiopods, mollusks, corals, cephalopods, vertebrates and plants
14		Lab **Test**	**Test** Precambrian and Paleozoic fossils ID
15		Lab 10	Mesozoic Fossils (the time of the dinosaurs): echinoderms, forams & plants
16		Lab 11	Cenozoic fossils
17		Lab11 **Test**	**Test**: Mesozoic and Cenozoic fossil identification/video

Name _____ Date _____ Period _____

Relative Dating Activity

Background:
Before absolute dating was developed in the 20th century, geologists had to rely on relative dating. Relative dating places geologic events in order of occurrence. Relative dating assumes that the lower layers in any particular cross-section are older than the upper layers ("principle of superposition") and that an object cannot be older than the materials of which it is composed. Igneous rocks are dated according to whether they caused metamorphism in the surrounding rock (proof that they intruded into the preexisting rock), whether they cross cut existing rocks, or whether sediments were deposited on them after they were formed. The profile from one location is then compared with the profiles from surrounding sites to determine the geologic history of a larger area. If fossils are present in the rocks, they may also be used to correlate rock layers across large distances.

Purpose:
In this activity, you will study the rocks and events in a geologic cross section. You will order the layers and events from oldest to youngest. In order to do your best on this activity, you must understand a few of the basic principles that are applicable to relative dating.

Principle of original horizontality: Sediments are deposited horizontally, or nearly so. Strata (layers) that are not horizontal have been deformed by movements of the Earth's crust (**unconformity**)

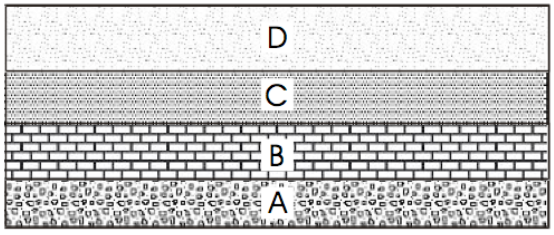
Principle of superposition: The oldest rock layers are located on the bottom of a cross-section and the youngest are on the top.

Principle of faunal succession: Groups of fossil plants and animals occur in the geologic record in a definite and determinable order. A period of geologic time can be recognized by its respective fossils.

Principle of cross-cutting relationships: Geologic features, such as faults, and igneous intrusions are younger than the rocks they cut through.

Principle of inclusion: a rock body that contains inclusions of preexisting rocks is younger that the rocks from which the inclusion came from.

The easiest way to do relative age dating is to work from oldest to youngest. Try to rank the layers in the diagram below from the oldest rock (usually located near the bottom) to the youngest. Your first example is the diagram below.



Name _____ Date _____ Period _____

Review the **principle of original horizontality** and the **principle of superposition.** You will see that the only possible answer to this puzzle is that layer A is the oldest and layer D is the youngest.

Here are some additional hits that will help you with your diagrams:

Sedimentary rocks:

- If rocks are folded, the folding is younger than the youngest rock affected.
- If the rocks are folded into a U-shaped manner, then the youngest rocks are in the core of the fold (Figure B). The opposite is true for a dome-shaped fold.
- Sedimentary rocks that contain fragments of another rock are younger than the rocks that the fragments came from.

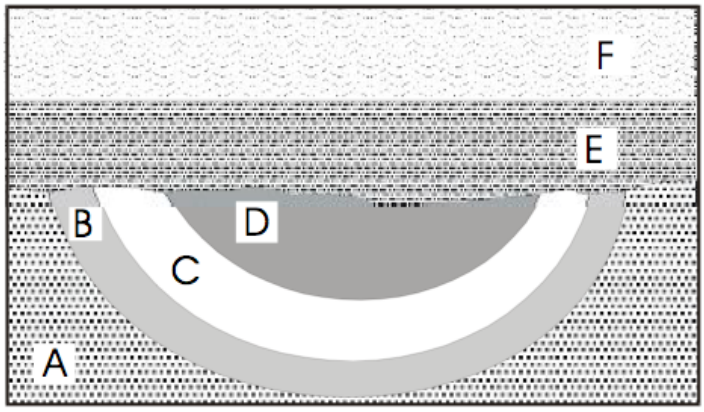


Figure B. Oldest rocks: A, followed by B, C, and D. All four sedimentary layers are folded into a U-shape. Layers E and F were then deposited at a later time and are the youngest.

Igneous rocks are formed by the solidification of a liquid magma. Igneous rocks, therefore, can intrude into preexisting rocks or be poured out onto the surface of the earth.

- If an igneous rock cross-cuts another rock, then the igneous rock is younger than the preexisting rock.
- If an igneous rock contains unmelted inclusions of another rock, then the igneous rock is younger.
- Igneous rocks can intrude into other rocks, even though they may be on the bottom of your geologic diagram. Look carefully for the irregular contacts between the igneous rock and the preexisting rocks.
- The igneous rock may also cause metamorphism in the preexisting rocks.
- Intrusive rocks produce contact-metamorphism (shown as a starred pattern within the preexisting rock) along the interface with the preexisting rocks.
- Lava flows may cause contact-metamorphism with the older rocks they lie upon.

Metamorphic rocks are rocks that have been exposed to high amounts of heat and pressure. These rocks have usually been deformed by large, mountain forming events.

- Metamorphic rocks are older than sedimentary rocks deposited above them or with igneous rocks that may intrude them.

Name _____ Date _____ Period _____

Now, familiarize yourself with the rock patterns that will be used throughout this activity:

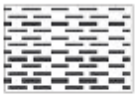
Key to Rock Symbols

Sedimentary Rocks

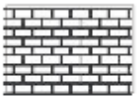

Conglomerate


Sandstone


Siltstone


Shale


Shale


Limestone


Limestone

Igneous Rocks

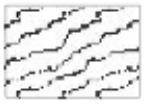

Granite


Granite


Basalt

Metamorphic Rocks


Gneiss


Schist

Special Features:


Contact that is an unconformity (layers on either side of it are of differing ages)

Fault


Zone of contact metamorphism

Name _____ Date _____ Period _____

Directions:

Part 1: Answer the following questions based on your reading.

1. Which of the principles apply to sedimentary rocks?

2. Are only sedimentary rocks used for determining the relative age of a rock? Explain.

3. Explain the relative age relationship of faults to the rocks they cut through.

4. In Figure 1 below, could it be possible to determine the absolute age of these rocks? If yes, explain in detail how you may be able to do this.

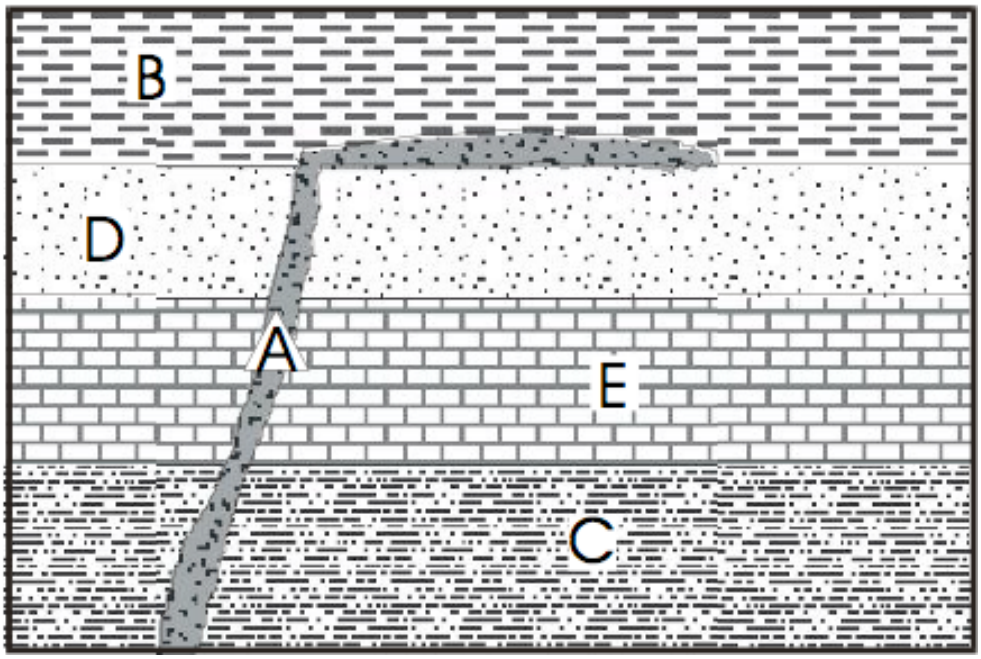
5. In Figure 3 below, could it be possible to determine the absolute age of these rocks? If yes, explain in detail how you may be able to do this.

6. How do you determine the relative ages of igneous rocks? (List the ways).

Part 2: For each of the following cross sections, determine the relative age sequence of the rocks. Place the answers in the spaces on the right. Remember, always start by looking for the oldest rock first, and then work your way from the oldest to the youngest. Don't forget to consider all intrusions and faults. The diagrams go from simplest to hardest to let you progressively improve your skills.

Name _____ Date _____ Period _____

Figure 1:



Youngest _____

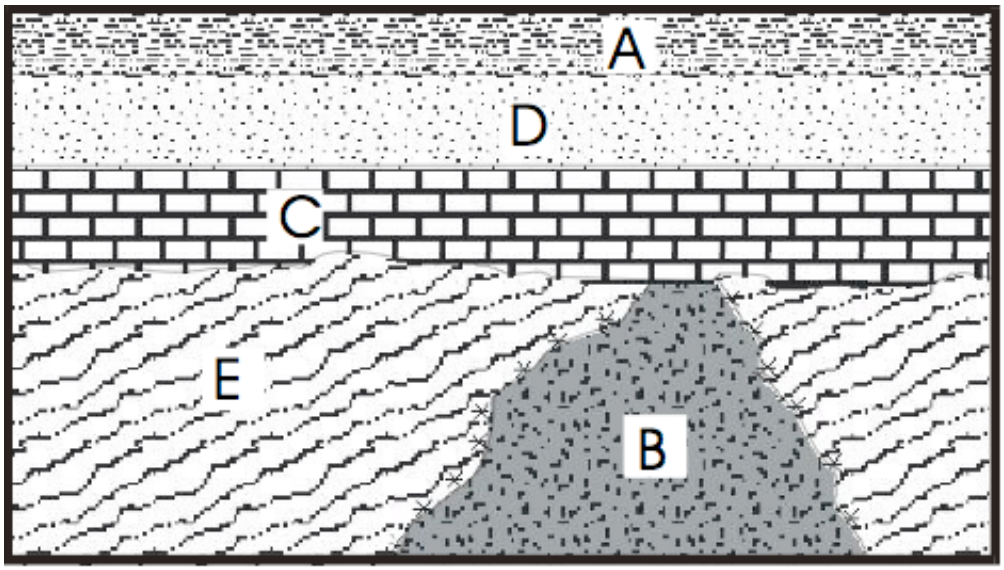
_____

_____

_____

Oldest _____

Figure 2:



Youngest _____

_____

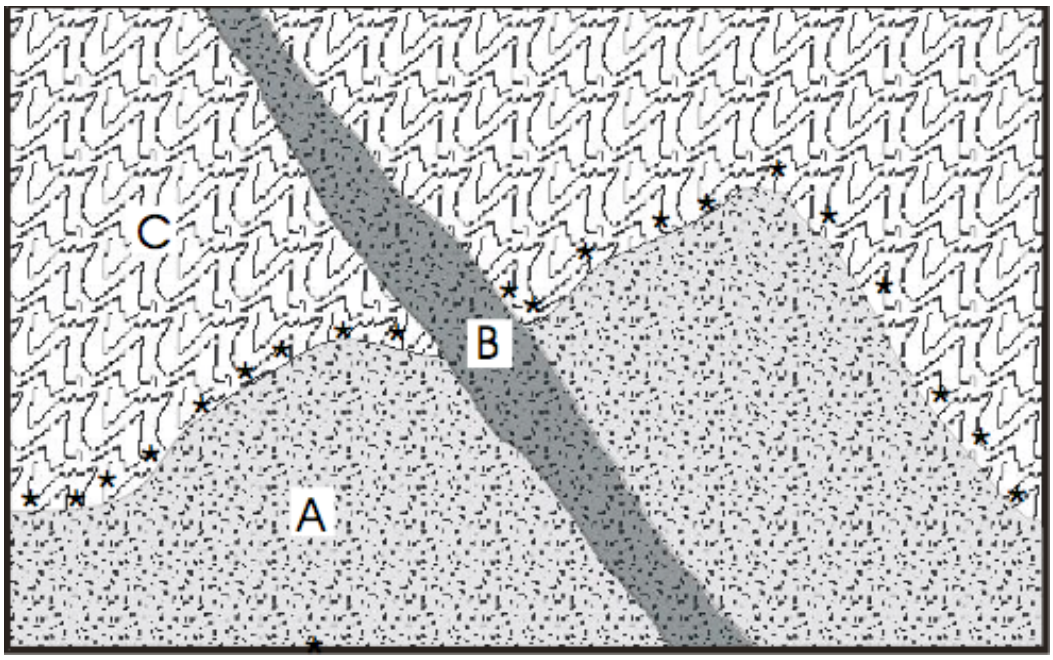
_____

_____

Oldest _____

Name _____ Date _____ Period _____

Figure 3:

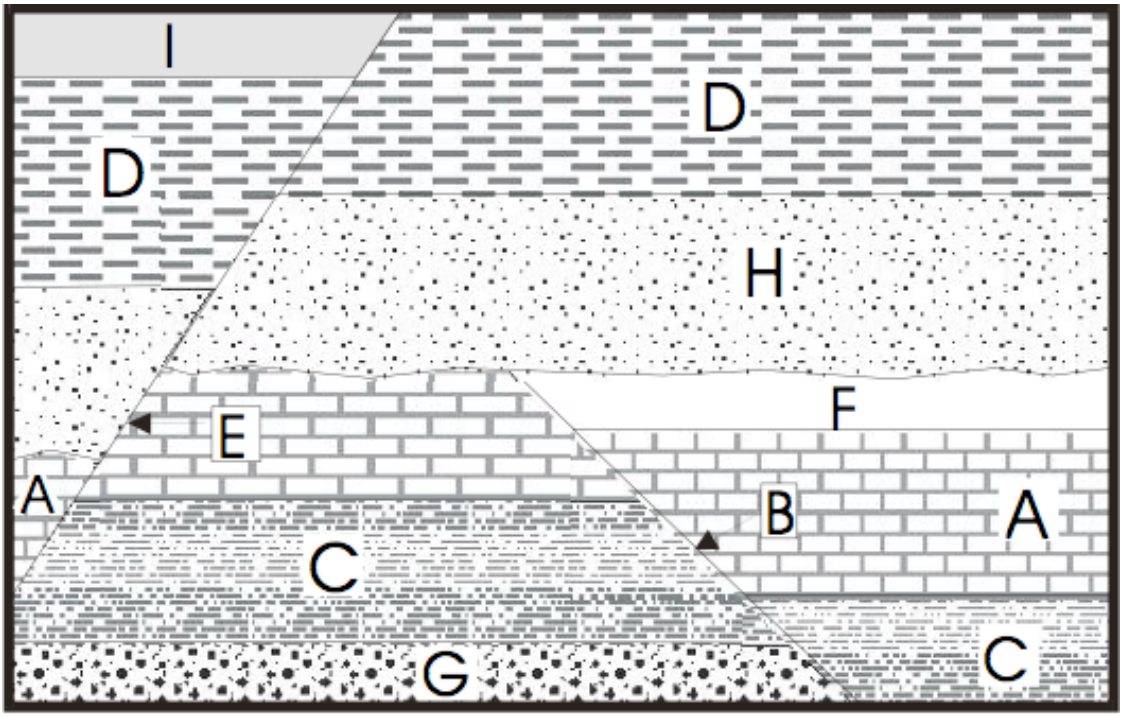


Youngest _____

_____

Oldest _____

Figure 4:



Youngest

_____

_____

_____

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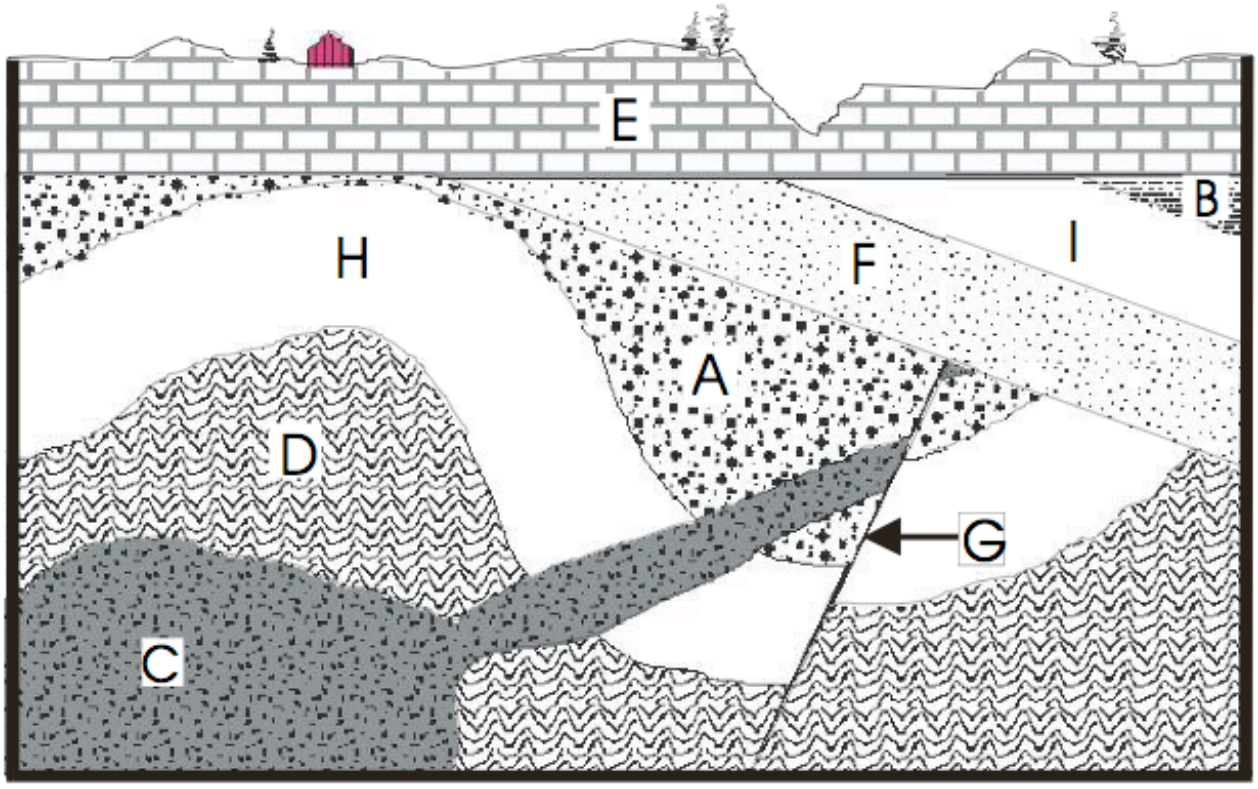
Oldest

Name _____ Date _____ Period _____

Figure 5:

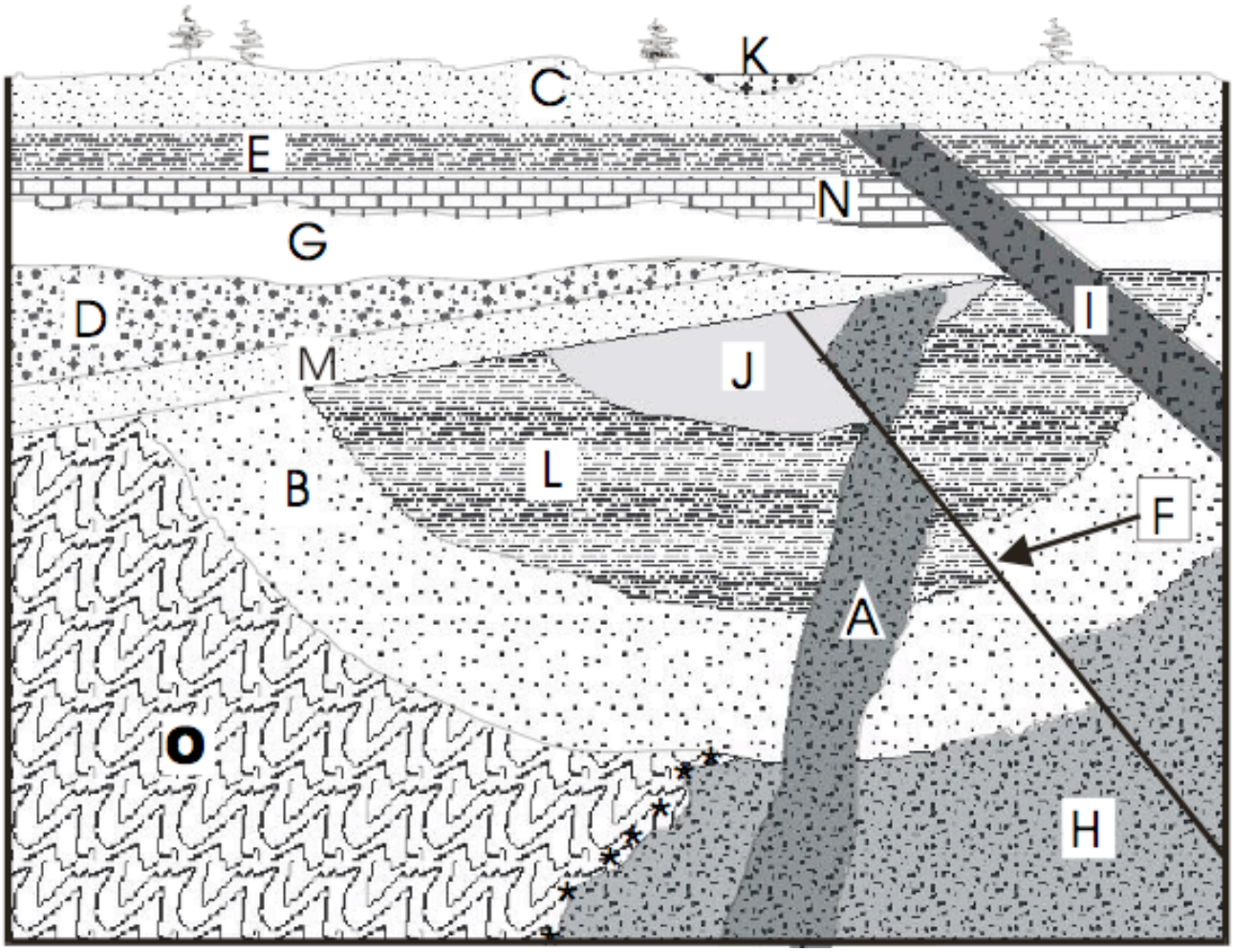


_____, _____, _____, _____, _____, _____, _____, _____, _____

Youngest Oldest

Name _____ Date _____ Period _____

Figure 6:



_____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

Youngest Oldest

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1383

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	OGriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	Wright@NMMI.edu
Department	Math and Science Division
Prefix	GEOL
Number	1110
Suffix	L
Title	Physical Geology lab
Number of Credits	0

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	GEOL
Number	1100
Suffix	-
Title	Physical Geology

New Mexico Common Course information

Prefix	GEOL
Number	1110
Suffix	L
Title	Physical Geology lab

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☐ Critical Thinking ☐ Information & Digital Literacy
☐ Quantitative Reasoning ☐ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Use physical properties to identify mineral specimens.
2. Describe, classify, and identify igneous, sedimentary, and metamorphic rocks and their textures.
3. Utilize the principles of stratigraphy to provide an explanation of the geologic history portrayed in a photograph or cross-section.
4. Explain how contour lines are used to represent topography, use map scales to measure distances on the ground, and construct topographic profiles.
5. Identify landforms from images and topographic maps.
6. Interpret geologic maps and construct geologic cross-sections.
7. Acquire and communicate scientific data, ideas, and interpretations through written, oral, or visual means. Examples may include creating and describing graphs, maps and photos.
8. Apply critical thinking skills such as inductive, deductive, and mathematical reasoning to solve geological problems.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

Same as common course student learning outcome.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Laboratory exercises will be conducted throughout the semester to develop critical thinking skills related to lecture topics In Physical Geology

1. Problem Setting: The purpose of each lab exercise will be stated in the introductory and objective sections, where students will be required to use lab equipment, geologic tables and charts to identify mineral, rock specimens

and various geologic processes as outlined. During data collection, students should be able to answer questions related to processes and phenomenon observed.

2. Evidence Acquisition: Students need to gather the data in the lab section to test, compare and contrast information from selected charts and tables. During the lab section, students should be able to gather information base on the physical properties, observations and available laboratory equipment to support their conclusions.

3. Evidence Evaluation: Evidence will be acquired through data collection based on physical principles and available lab equipment to support their conclusions. Once data collection is complete, students will need to evaluate the validity of their conclusions, accounting for any discrepancies and factors contributing to them.

4. Reasoning/Conclusion: After the conclusion is drawn, Students will then need to validate their conclusions and determine whether their conclusions match available data sets in table and chart format. During the laboratory section, students should develop plans to improve experimental methods to obtain more accurate results.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Laboratory exercises will be conducted throughout the semester to develop quantitative reasoning.

1. Communication/Representation of Quantitative Information: By comparing acquired data and observations to physical representations, students should be able to derive another similar phenomenon.

2. Analysis of Quantitative Arguments: Students should gather and interpret the information given in the question or raised in real life, and reasoning through by providing physical evidence to support the analysis. During the laboratory section, students should analyze the data acquired using the equipment to derive or support their conclusion.

3. Application of Quantitative Models: Students should apply appropriate quantitative models to solve problems using quantitative information gathered with proper analysis and reasoning. During the laboratory section, students should use appropriate geological models to draw conclusions using corresponding quantitative information acquired with scientific reasoning.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Laboratory exercises will be conducted throughout the semester to develop personal and social responsibility.

1. Collaboration skills, teamwork, and value systems: Students will team up during the laboratory section to complete the task using geological concepts. During the two and half hours section, they should collaborate to finish collecting essential data. After collecting the data, students should be able to use appropriate geologic models to analyze the experimental data. During the collaboration, they should team up to contribute their thought and time to draw a solid conclusion using the scientific method.

2. Sustainability and the natural and human worlds: Students should use the appropriate geologic fundamentals and processes to understand the consequence of certain human actions or understand the rules set up by human society to regulate behavior as it relates to natural resources.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/wp-content/uploads/2022/11/ACADEMIC-ASSESSMENT-PLAN.pdf

NMMI Introduction to Applied Physics Lab Syllabus

Semester: Fall **Year**: 2023

Course number: PHYS 1121L

Meeting days, times, and places:
Tuesday 07:50-09:40 McClure 103

Teacher Name: Dr. Aonan Tang (LTC)
Email: tang@nmmi.edu **Phone**:(575)624-8169
Office hours & Location: 13:40-14:30 (MWF), McClure 103

Course Description:
A series of laboratory experiments associated with the material presented in PHYS 1121.
Co-requisite: PHYS 1121 Introduction to Applied Physics.

General scope of the course:
The laboratories are intended to apply physics knowledge in the real life and prove some physical phenomena.

Prerequisites or sequences:
Intro-College Algebra or Higher
Concurrent Enrollment in PHYS 1121

Student Learning Outcomes
Upon completion of this course, the student will be able to:

1. Become familiar with correct laboratory procedures;
2. Be able to identify laboratory apparatus;
3. Use of laboratory safety equipment.
4. Be able to use common laboratory apparatus
5. Become confident in collecting, organizing, and presenting data in a scientific form.
6. Be able to use graphs, units and formulas to analyze data.
7. Be able to use technology for locating scientific literature, gathering data and problem solving.
8. Be capable of recognizing and using sound scientific information for the betterment of the community.

Procedures and Classroom Rules:

- Scientific Calculator, pencil & notebook. **You are required to take notes.**
- **Follow the lab safety rules.**
- Makeup lab, must be completed **in a week after the absence.**

Textbook:
The Lab Manual will be provided to you at the beginning of the semester.

Attendance/Tardiness:

1. Students are expected to attend all scheduled classes. Absences will be reported.
2. If the student has an excused absence, he/she will be responsible for turning in work due the day of absence as well as the current day's assignment on the day returning to class.
3. An unexcused absence, will result in a "0" for lab due on that day.
4. If tardy, see me at the end of class to change the absent report (failure to see me to change the absent report will result in an "absent class stick" that may not be removed. Tardiness may be reported for disciplinary action. Reporting for tardy will not be removed.

Grading Procedures:

Each Lab reports are worth a 100%. The grading scale for each lab reports is:

1) Prelab: 10%.
2) Introduction: 10%
3) Procedure: 10%
4) Data collection: 10%
5) Data analysis: 15%
6) Analysis questions: 15%
7) Post lab questions: 20%
8) Lab report neatness: 5%
9) Others: whether using pen, whether write on lab report book,…5%
10) Lab grade = average of all the lab report grades.

The laboratory grade will be 15% or 10% of your course grade depending on your lecture instructor and will not appear as a separate grade on your report card.

I do **NOT** accept late homework, lab reports, or extra credit except in the case of excused class absence on the day the assignment is due. **If you know that you will miss a lab due to an athletic trip or for some other reason, then before the scheduled lab date you must arrange with me a time to make up the lab. Failure to make prior arrangement will result in a 0 on the lab.** In case of an extended period of absence, you and I will confer on the makeup schedule.

Final Exam Policy:

No final exam for the lab.

Department/Division Policy on Academic Dishonesty:

Cheating, assisting in cheating, or employing other types of academic dishonesty to any degree and in any form automatically results in a grade of ZERO on the entire assignment or test for all parties involved. Further, a grade of 'F' in that class for the semester may be given and the incident will be referred to the Commandant.

Assessment Statement: *This exact statement must be included in the syllabus:*
In fulfilling NMMI's assessment program, all students will be required to complete a variety of feedback tools to provide information to instructors on the efficacy of courses. NMMI expects students to provide honest and thoughtful answers to these assessment tools.

6 NEWTON'S SECOND LAW

6.1 INTRODUCTION

How does a cart change its motion when you push and pull on it? You might think that the harder you push on a cart, the faster it goes. Is the carts velocity related to the force you apply? Or does the force just change the velocity? Also, what does the mass of the cart have to do with how the motion changes? We know that it takes a much harder push to get a heavy cart moving than a lighter one.

A Force Sensor and an Accelerometer will let you measure the force on a cart simultaneously with the carts acceleration. The total mass of the cart is easy to vary by adding masses. Using these tools, you can determine how the net force on the cart, its mass, and its acceleration are related. This relationship is Newtons second law of motion. The experimental setup is shown in Figure 6.1.

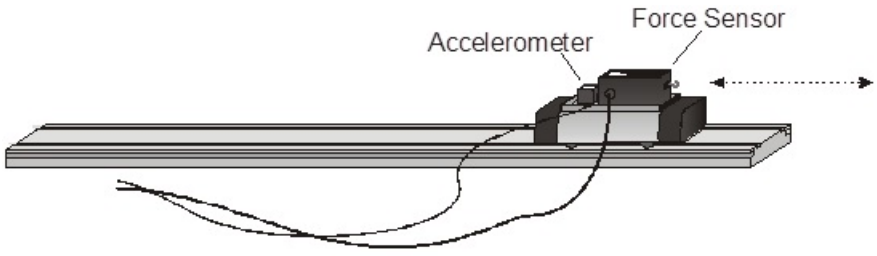


Figure 6.1: Experimental Setup

6.2 OBJECTIVES

- Collect force and acceleration data for a cart as it is moved back and forth.

- Compare force vs. time and acceleration vs. time graphs.
- Analyze a graph of force vs. acceleration.
- Determine the relationship between force, mass, and acceleration.

6.3 MATERIALS

	Manufacturer's Serial #	Student ID
LabQuest		
Vernier Force Sensor		
low-friction dynamics cart		
low-friction dynamics track		
Vernier Low-g Accelerometer		
0.50 *kg* mass or heavy mass		

6.4 PROCEDURE

1. Attach the Force Sensor to a dynamics cart so you can apply a horizontal force to the hook, directed along the sensitive axis of your particular Force Sensor. Next, attach the Accelerometer so the arrow is horizontal and parallel to the direction that the cart will roll. Orient the arrow so that if you pull on the Force Sensor the cart will move in the direction of the arrow. Find the mass of the cart with the Force Sensor and Accelerometer attached. Record the mass in the data table.
2. Set the range switch on the Force Sensor to 10 N. Connect the Force Sensor and the Low-g Accelerometer to LabQuest. Choose New from the File menu. If you have older sensors that do not auto-ID, manually set up the sensors.
3. Next you will zero the sensors. To do this, place the cart on a level surface.
   (a) With the cart stationary and no force applied to the Force Sensor, wait for the acceleration and force readings to stabilize.
   (b) Choose Zero ▶ All Sensors from the Sensors menu. The readings for both sensors should be close to zero.

4. **Trial I**

   (a) You are now ready to collect force and acceleration data. Grasp the Force Sensor hook. Start data collection and take several seconds to gently move the cart back and forth on the table. Vary the motion so that both small and moderate forces are applied. Make sure that your hand is only touching the hook on the Force Sensor and not the Force Sensor itself or the cart body.

   (b) Acceleration and force data are displayed on separate graphs. Save the graphs and Print them out. How are the graphs similar? How are they different?

   (c) One way to see how similar the acceleration and force data are is to make a new plot of force vs. acceleration, with no time axis.

      i. Choose Show Graph ▶ Graph 1 from the Graph menu to view a single graph.

      ii. Choose Graph Options from the Graph menu and **deselect** Point Protectors and Connect Points. This will remove the point protectors and the line connecting the data points on the subsequent graph.

      iii. Select OK.

      iv. Change the x-axis to Acceleration and the y-axis to Force.

   (d) To fit a line to the graph of force vs. acceleration,

      i. Choose Curve Fit from the Analyze menu.

      ii. Select Linear as the Fit Equation. The linear-regression statistics for these two data columns are displayed in the form: $y = mx + b$ where *x* is acceleration, *y* is force, *m* is the slope, and *b* is the y-intercept.

      iii. What does the value of the slope represent?

      iv. Select OK.

      v. Save this graph and print it out.

   (e) Using the regression equation, determine the acceleration of the cart when a force of 1.0 *N* has acted upon it. Record the force and acceleration in the data table.

   (f) Repeat Step 4e using a force of 1.0 *N*.

5. **Trial 2**

   (a) Attach the 0.50 *kg* mass to the cart. Record the mass of the cart, sensors, and additional mass in the data table.

(b) Repeat Steps 4a-4f for the cart with the additional 0.50 *kg* mass.

(c) Answer the Analysis questions.

6.5 DATA SHEET

1. Trial I

   (a) Cut and paste the Acceleration and force vs. time graphs in the spaces provided.

   (b) Cut and paste the *Force vs. Acceleration* graphs in the spaces provided.

(c) The following data need to be collected according to step 4a- 4f.

Mass of system with sensors *(kg)*	
Equation of the Regression line for *force vs. acceleration* graph ($y = mx + b$)	
Slope of the Regression line for force vs. acceleration graph	
Acceleration of the cart when a force of 1.0 *N* has acted upon it	
Acceleration of the cart when a force of -1.0 *N* has acted upon it	

2. Trial II

The following data need to be collected according to step 5a- 5b.

Mass of system with sensors and additional mass *(kg)*	
Equation of the Regression line for *force vs. acceleration* graph ($y = mx + b$)	
Slope of the Regression line for force vs. acceleration graph	
Acceleration of the cart when a force of 1.0 *N* has acted upon it	
Acceleration of the cart when a force of -1.0 *N* has acted upon it	

6.6 DATA ANALYSIS

1. Are the net force on an object and the acceleration of the object directly proportional? Explain, using experimental data to support your answer.

2. What are the units of the slope of the *force vs. acceleration* graph? Simplify the units of the slope to fundamental units (m, kg, s).

3. For each trial compare the slope of the regression line to the mass being accelerated. What does the slope represent?

4. Write a general equation that relates all three variables: force, mass, and acceleration.

6.7 DISCUSSION AND CONCLUSION

Analyze the results of your measurements in relation both to the purpose(s) stated in the introduction and your understanding.

6.8 POST-LABORATORY QUESTIONS

1. If an object is experiencing a net force of 3.0 *N*, what will be the acceleration of the object? Suppose the object has mass of 2.0 *kg*.

2. An object is experiencing 2 forces, one is 4.5 *N* north and the other one is 3.0 *N* east. What will be the magnitude and direction of the acceleration of the object? Suppose the object has mass of 2.0 *kg*.

6.9 PRE-LABORATORY ASSIGNMENT

1. Explain the purpose of using Force Sensor and an Accelerometer?

2. When you are dragging the force sensor, why we have to apply the force parallel to the table surface? If we don't, will it interference the lab results? Think about the free body diagram and the direction of the acceleration.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1384

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	ogriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	wright@nmmi.edu
Department	Math and Science Division
Prefix	CHEM
Number	1120
Suffix	L
Title	Introduction to Chemistry Lab
Number of Credits	0

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	CHEM
Number	1120
Suffix	-
Title	Introduction to Chemistry

New Mexico Common Course information

Prefix	CHEM
Number	1120
Suffix	L
Title	Introduction to Chemistry Lab

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☒ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Practice concepts associated with laboratory safety, including the possible consequences of not adhering to appropriate safety guidelines.
2. Demonstrate the computational skills needed to perform appropriate laboratory related calculations to include, but not be limited to determining the number of significant figures in numerical value, solving problems using values represented in exponential notation, solving dimensional analysis problems, and manipulating mathematical formulas as needed to determine the value of a variable.
3. Perform laboratory observations (both qualitative and quantitative) using sensory experience and appropriate measurement instrumentation (both analog and digital).
4. Record quantitatively measured values to the correct number of significant figures and assign the correct units.
5. Master basic laboratory techniques including, but not limited to weighing samples (liquid and solid), determining sample volumes, measuring the temperature of samples, heating and cooling a sample or reaction mixture, decantation, filtration, and titration.
6. Draw appropriate conclusions based on data and analyses.
7. Present experimental results in laboratory reports of appropriate length, style and depth, or through other modes as required.
8. Determine chemical formulas and classify different types of reactions.
9. Relate laboratory experimental observations, operations, calculations, and findings to theoretical concepts presented in the complementary lecture course.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

same as CCN

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Laboratory experiments will be conducted throughout the semester to develop critical thinking skills related to lecture topics.

1. Problem Setting: The goal of each laboratory experiment will be discussed in the introduction section of each procedure. Students will be required to use and be familiar with the different lab equipment and chemistry principles to test chemistry theories and laws. During the collection of data, the students should be able to answer questions such as which lab equipment should be used in precise measurement of the volume of water and what additional data is needed to determine its density.
2. Evidence Acquisition: Students need to collect data during the experiment to investigate a chemistry theory or laws. During the laboratory procedure, students should be able to gather information based on the chemistry principle and available laboratory equipment to support their conclusion.
3. Evidence Evaluation: Evidence will be attained through data collection based on chemical principles and available laboratory equipment to support their conclusions. Once the gathered data is complete, the students will evaluate the validity of their conclusions. They also need to think analytically to have a valid reason for any discrepancies and factors contributing to them.
4. Reasoning/Conclusion: After drawing the conclusion, students will need to validate their conclusions and determine whether the application is in accordance to chemistry laws. During the experimental procedure, the students should also suggest on how to improve the procedure to obtain more accurate results.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Laboratory experiments will be conducted throughout the semester to develop quantitative reasoning.

1. Communication/Representation of Quantitative Information: By providing numbers to chemical quantities, students should also be able to derive or compute the values of other physical quantities. For example the student can compute for the density of a given liquid of the values of the volume and mass are already acquired. During the laboratory procedure relating to gas laws, students should be able to use modern lab equipment to gather quantitative information relating to molar volume of gas, such as temperature and vapor pressure.
2. Analysis of Quantitative Arguments: Students should analyze and interpret the information given in a question or raised in real life, and analytical reasoning by providing physical evidence to support the analysis. For example, in order to determine the quantity of the final product in a given chemical reaction, the student should determine first the limiting reactant on the given reactants and compute the theoretical quantities of the products through stoichiometry. During the laboratory section, students should analyze the data acquired using the equipment to derive or support their conclusion.
3. Application of Quantitative Models: Students should apply appropriate quantitative models to solve problems that uses quantitative information collected through proper analysis and reasoning. For example, in order to determine the wavelength of light emitted by an electron moving between energy levels of an atom, the student should use the Rydberg formula. Then the student should verify this through the atomic spectra emission experiment procedure. During the laboratory section, students should use appropriate physical models to draw conclusions using corresponding quantitative information acquired with scientific reasoning.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
Laboratory experiments will be conducted throughout the semester to develop personal and social responsibility. 1. Collaboration skills, teamwork, and value systems: Students will work in groups during the laboratory experiments to complete the work using chemistry concepts. During the time allotted for the experiment, the group members shall collaborate with each other to collect data based on their experiments. After collecting, they have to brainstorm to use suitable chemistry concepts to analyze the collected data. The group members should contribute their knowledge and time to make a conclusion using the scientific method. Since this is a team collaboration, the students will be developing an essential skill that can also be used in their future career such as critical thinking and teamwork. 2. Sustainability and the natural and human worlds: Students should apply appropriate chemistry concepts to understand the consequence of certain human actions. For example every time a student strike a match, burn a candle, build a fire, or light a grill, there will be a combustion reaction. The equation of this combustion reaction is also the same on the combustion of propane, found in gas grills and some fireplaces. Human understanding this concept can utilize the energy of chemical compounds released during this reactive process for transportation, to generate electric power, or to provide heat for various applications.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/wp-content/uploads/2022/11/ACADEMIC-ASSESSMENT-PLAN.pdf

2022 Fall CHEM 1120L Introduction to Chemistry Lab MAJ Beaune Villaraza (meets requirements for AA degree lab science, does not meet requirements for AS degree lab science)

Credits: 0
Lab times Th 2hr 50 min (M205)
Professor: MAJ Beaune Villlaraza

Phone: (575) 624-8195
Email: villaraza@nmmi.edu

Office: McClure Hall 006A
Office hours:

	Monday	Tuesday	Wednesday	Thursday	Friday
0700	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A
1st 0750	CHEM 031 McClure 206	CHEM 031 McClure 206	CHEM 031 McClure 206	CHEM 031 McClure 206	CHEM 031 McClure 206
2nd 0850	CHEM 1120 McClure 206	Tutoring Hours McClure 006A	CHEM 1120 McClure 206	Tutoring Hours McClure 006A	CHEM 1120 McClure 206
3rd 0950	BIO 021 McClure 206	BIO 021 McClure 206	BIO 021 McClure 206	BIO 021 McClure 206	BIO 021 McClure 206
4th 1050	BIO 021 McClure 206	BIO 021 McClure 206	BIO 021 McClure 206	BIO 021 McClure 206	BIO 021 McClure 206
lunch 1140					
5th 1240	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	CHEM 1120L McClure 205	Tutoring Hours McClure 006A
6th 13:40	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	CHEM 1120L McClure 205	Tutoring Hours McClure 006A
7th 14:40	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	Tutoring Hours McClure 006A	CHEM 1120L McClure 205	Tutoring Hours McClure 006A

Texts: Laboratory Manual, 7th ed., Charles Corwin/ Academic Skills Manual, NMMI (Blue Book).

Requirements: Scientific Calculator
Concurrent Enrollment in CHM 1120
Signed Safety Agreement

Co-Requisite: CHM 1120

Course Description

Introduction to Chemistry Laboratory is a laboratory course designed to complement the theory and concepts presented in the Introduction to Chemistry lecture component, and will introduce students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment.

Course Outcomes

1. Practice concepts associated with laboratory safety, including the possible consequences of not adhering to appropriate safety guidelines.
2. Demonstrate the computational skills needed to perform appropriate laboratory related calculations to include, but not be limited to determining the number of significant figures in numerical value, solving problems using values represented in exponential notation, solving dimensional analysis problems, and manipulating mathematical formulas as needed to determine the value of a variable.
3. Perform laboratory observations (both qualitative and quantitative) using sensory experience and appropriate measurement instrumentation (both analog and digital).
4. Record quantitatively measured values to the correct number of significant figures and assign the correct units.
5. Master basic laboratory techniques including, but not limited to weighing samples (liquid and solid), determining sample volumes, measuring the temperature of samples, heating and cooling a sample or reaction mixture, decantation, filtration, and titration.
6. Draw appropriate conclusions based on data and analyses.
7. Present experimental results in laboratory reports of appropriate length, style and depth, or through other modes as required.
8. Determine chemical formulas and classify different types of reactions.
9. Relate laboratory experimental observations, operations, calculations, and findings to theoretical concepts presented in the complementary lecture course.

General Scope:

The laboratory component introduces students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment.

Grading

Quiz and lab reports are worth a maximum of 100 points apiece.
Quiz will be given every session, covering pre-lab questions.
Lab grade = sum of lab report grades + test grade + sum of pre-lab grades.

The laboratory grade will be 25% of your course grade and will not appear as a separate grade on your report card.

Academic Dishonesty

Cheating on exams, plagiarism, and copying assignments are serious offenses at NMMI and will not be tolerated. An explanation of what constitutes academic dishonesty is found in the Academic Skills Manual, NMMI (Blue Book). A student guilty of academic dishonesty will be given an "F" for the course and the reasons for the failing grade will be submitted to the Commandant.

It is expected that homework assignments will NOT be copied from the text or another's work. Individual work enhances the following ethical goals:

1. A cadet's positive self-image and moral soundness will be maintained (10).
2. A sense of responsibility is fortified by a cadet's completion of work individually and on time (9).

Policies and Procedures

All absences will be reported.

All physical results must be checked first by the professor before proceeding to the next procedure and/or before submitting the lab reports.

Always wear goggles in laboratory. Failure to do so is a safety violation and will result in a Stick and a zero for the lab.

Classroom Rules:

1. When I am speaking, I should be the only one speaking.
2. No cussing is allowed. This is not acceptable behavior. Any impolite words will not be allowed either. You will drop and give me 20. If the cussing does not stop we will have a meeting and you will be issued a stick.
3. I will give you a certain amount of time to finish notes when they are projected. No Computers will be allowed for note taking.
4. Water is allowed. No food in the classroom.
5. Find your seat. This is your seat for the semester.
6. Stay at your own lab area with assigned partners.
7. Use complete sentences when you hand in any work.
8. Please do not ask if you can listen to music. The answer is no.
9. Leave an item-Free cleaning from you.
10. Lab misconduct will result in dismissal on first offense. Ex: Pushing, chemical mishandling. Do not yell across the room for my attention. I will be around the tables as time allows.
11. Keep your masks on and social distance.
12. No late work is accepted.
13. Cell phone use in the lab is authorized only when approved by the instructor for academic purposes only. UNAUTHORIZED USE OF CELL PHONE IS AUTOMATIC

DISQUALIFICATION IN TAKING YOUR QUIZ FOR THE PARTICULAR CHAPTER OR SECTION.
14. Make-up work is allowed only for excused absences. It is the student's responsibility to meet with me to schedule a make-up lab, homework or tes

Final Exam Policy:
A mandatory comprehensive final exam or final project will be administered on the scheduled date according to the Final Exam Schedule, unless an exception is approved by the Academic Dean, and will be given to all cadets, regardless of their grade in the course.

Assessment Statement:
In fulfilling NMMI's assessment program, all students will be required to complete a variety of feedback tools to provide information to instructors on the efficacy of courses. NMMI expects students to provide honest and thoughtful answers to these assessment tools.

Course Outline- topics may be changed with or without notice

Date	Task
8/18	Orientation/ Laboratory Safety and Ethics lecture plus check-in/ Density Problems
8/25	Experiment 2: Instrumental Measurements
9/1	Experiment 3: Density of Liquids and Solids/ Chapter 4 Lecture
9/8	Experiment 4: Freezing Points and Melting Points
9/15	Naming Inorganic Compounds
9/22	Experiment 5: Physical Properties and Chemical Properties
9/29	Experiment 10: Analysis of a Penny
10/6	Experiment 12: Empirical Formulas of Compounds
10/13	Experiment 14: Decomposing Baking Soda
10/20	Experiment 15: Precipitating Calcium Phosphate
10/27	Experiment 6: "Atomic Fingerprints"
11/3	Experiment 18: Molecular Models
11/8-11/10	Check out and Review

EXPERIMENT

2

Instrumental Measurements

OBJECTIVES

- To obtain measurements of length, mass, volume, and temperature.
- To determine the mass and volume of an unknown rectangular solid.
- To gain proficiency in using the following instruments: metric rulers, balances, graduated cylinder, and thermometer.

DISCUSSION

The **metric system** uses a basic set of units and prefixes. The basic unit of length is the meter, the basic unit of mass is the gram, and the basic unit of volume is the liter. Metric prefixes make these basic units larger or smaller by powers of 10. For example, a kilometer is a thousand times longer than a meter, and a meter is a thousand times longer than a millimeter. In the laboratory, the most common unit of length is **centimeter** (symbol **cm**), the most common unit of mass is **gram** (symbol **g**), and the most common unit of volume is **milliliter** (symbol **mL**).

Scientific instruments have evolved to a high state of sensitivity. However, it is not possible to make an exact measurement. The reason is that all instruments possess a degree of **uncertainty**—no matter how sensitive. The uncertainty is indicated by the significant digits in the measurement. For example, a metric ruler may measure length to the nearest tenth of a centimeter (± 0.1 cm). A different metric ruler may measure length to the nearest five hundredths of a centimeter (± 0.05 cm). The measurement with the least uncertainty (± 0.05 cm) is more precise.

In this experiment, we will use several instruments. We will make measurements of mass with balances having progressively greater sensitivity. A decigram balance is so named because the uncertainty is one-tenth of a gram (± 0.1 g). The uncertainty of a centigram balance is one-hundredth of a gram (± 0.01 g), and the uncertainty of a milligram balance is one-thousandth of a gram (± 0.001 g).

We will make length measurements using two metric rulers that differ in their uncertainty. METRIC RULER A is calibrated in 1-cm divisions and has an uncertainty of ± 0.1 cm. METRIC RULER B has 0.1-cm subdivisions and an uncertainty of ± 0.05 cm. Thus, METRIC RULER B has less uncertainty than METRIC RULER A. The following examples demonstrate measurement of length utilizing the two different metric rulers.

Example Exercise 2.1 • Measuring Length with Metric Ruler A

A copper rod is measured with the metric ruler shown below. What is the length of the rod?

METRIC RULER A *(Estimate to a tenth of a division ±0.1 cm)*

Solution: Each division represents one centimeter. The end of the rod lies between the 12th and 13th divisions. We can estimate to a tenth of a division (± 0.1 cm). Since the end of the rod lies about five-tenths past 12, we can estimate the length as

$$12 \text{ cm} + 0.5 \text{ cm} = 12.5 \text{ cm}$$

Example Exercise 2.2 • Measuring Length with Metric Ruler B

The same copper rod is measured with the metric ruler shown below. What is the length of the rod?

METRIC RULER B *(Estimate to a half of a subdivision ±0.05 cm)*

Solution: Note that this ruler is divided into centimeters that are subdivided into tenths of centimeters. The end of the rod lies between the 12th and 13th divisions and between the 5th and 6th subdivisions. Thus, the length is between 12.5 cm and 12.6 cm.

We can estimate the measurement more precisely. A subdivision is too small to divide into ten parts, but we can estimate to half of a subdivision (± 0.05 cm). The length is 12 cm + 0.5 cm + 0.05 cm = 12.55 cm.

To test your skill in making metric measurements, you will determine the mass and volume of an unknown rectangular solid. The volume of a rectangular solid is calculated from its length, width, and thickness. The following examples will illustrate.

Example Exercise 2.3 • Calculating Volume of a Rectangular Solid

An unknown rectangular solid was measured with METRIC RULER A, which provided the following: 5.0 cm by 2.5 cm by 1.1 cm. What is the volume of the solid?

Solution: The volume of a rectangular solid equals length times width times thickness.

$$5.0\ \text{cm} \times 2.5\ \text{cm} \times 1.1\ \text{cm} = 13.75\ \text{cm}^3 = 14\ \text{cm}^3$$

In this example, each measurement has two significant digits; thus, the volume has two significant digits. Note the unit of volume is cubic centimeter, cm^3.

Example Exercise 2.4 • Calculating Volume of a Rectangular Solid

The unknown rectangular solid was also measured with METRIC RULER B, which gave the following: 5.00 cm by 2.45 cm by 1.15 cm. What is the volume of the solid?

Solution: The volume of a rectangular solid equals length times width times thickness.

$$5.00\ \text{cm} \times 2.45\ \text{cm} \times 1.15\ \text{cm} = 14.0875\ \text{cm}^3 = 14.1\ \text{cm}^3$$

In this example, each measurement has three significant digits; thus, the volume has three significant digits.

We can measure the volume of a liquid using a graduated cylinder. If we carefully examine the 100-mL graduated cylinder shown in Figure 2.1, we notice that it is marked in 10-mL intervals, and each interval has ten subdivisions. Therefore, each subdivision equals one milliliter. If we estimate to half of a subdivision, the uncertainty is ± 0.5 mL.

Figure 2.1 Graduated Cylinder Example readings using proper eye position and recording the bottom of the **meniscus** to half a subdivision (± 0.5 mL).

We can measure temperature using a Celsius thermometer. If we examine the thermometer shown in Figure 2.2, we notice that it is marked in 10 °C intervals that have ten subdivisions. Thus, each subdivision equals one degree Celsius. If we estimate to half of a subdivision, the temperature measurement has an uncertainty of ± 0.5 °C.

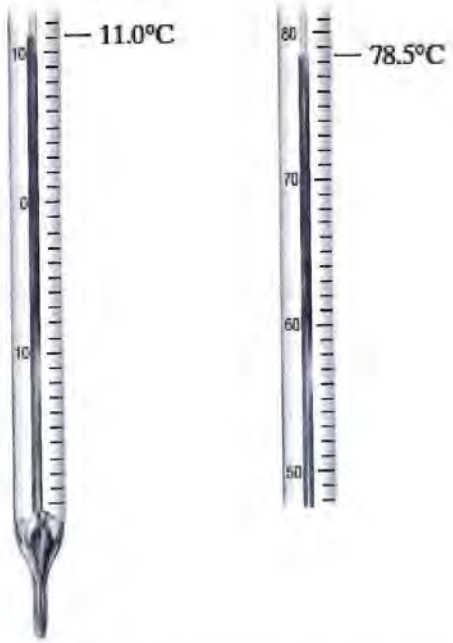


Figure 2.2 Celsius Thermometer Example readings using a Celsius thermometer and recording the top of the liquid to half a subdivision (± 0.5 °C).

EQUIPMENT and CHEMICALS

- 13 x 100 mm test tubes (3)
- watchglass
- evaporating dish
- crucible & cover
- 125-mL Erlenmeyer flask
- 100-mL graduated cylinder
- dropper pipet
- 250-mL beaker with ice
- 150-mL beaker
- 110 °C thermometer
- ring stand & ring
- ring stand & ring
- wire gauze
- decigram balance
- centigram balance
- milligram balance
- unknown rectangular solid

New Mexico General Education Curriculum Course Certification Form

Application Number 1385

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	ogriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	wright@nmmi.edu
Department	Math and Science Division
Prefix	PHYS
Number	1121
Suffix	L
Title	Introduction to Applied Physics Lab
Number of Credits	0

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	PHYS
Number	1121
Suffix	-
Title	Introduction to Applied Physics

New Mexico Common Course information

Prefix	PHYS
Number	1121
Suffix	L
Title	Introduction to Applied Physics Lab

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☒ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Become familiar with correct laboratory procedures;
2. Be able to identify laboratory apparatus;
3. Use of laboratory safety equipment.
4. Be able to use common laboratory apparatus
5. Become confident in collecting, organizing, and presenting data in a scientific form.
6. Be able to use graphs, units and formulas to analyze data.
7. Be able to use technology for locating scientific literature, gathering data and problem solving.
8. Be capable of recognizing and using sound scientific information for the betterment of the community.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

same as CCN

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Laboratory experiments will be conducted throughout the semester to develop critical thinking skills related to lecture topics.

1. Problem Setting: The purpose of each experiment will be stated in the introductory and objective sections, where students will be required to use lab equipment and physics knowledge to test theories or physical laws. For example, when student working on “Newtown’s second Law” experiment, students should be able to answer the following question: “When you are dragging the force sensor, why we have to apply the force parallel to the table surface?” and student should be able to think what If we don’t, will it interference the lab results?

2. Evidence Acquisition: Students need to gather the data in the lab section to test a theory or a physical laws. During the lab section, students should be able to gather information base on the physical principle and available laboratory equipment to support their conclusion. For example, after student collect data for "Newton's second Law" experiment, they should be able to test the direct proportional relationship between Force and acceleration based on Newton's second law.

3. Evidence Evaluation: Evidence will be acquired through data collection based on physical principles and available lab equipment to support their conclusions. Once data collection is complete, students will need to evaluate the validity of their conclusions, accounting for any discrepancies and factors contributing to them. After the newton's second law experiment, they should be able to answer the following question: For each trial compare the slope of the regression line to the mass being accelerated. What does the slope represent?

4. Reasoning/Conclusion: After the conclusion is drawn, Students will then need to validate their conclusions and determine whether the application is feasible according to physics laws. During the laboratory section, students should develop plans to improve experimental methods to obtain more accurate results. After the newton's second law experiment, they should be able to answer the following question: Write a general equation that relates all three variables: force, mass, and acceleration.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Laboratory experiments will be conducted throughout the semester to develop quantitative reasoning.

1. Communication/Representation of Quantitative Information: By giving numbers to physical quantities, students should be able to derive/calculate the values of other physics quantities. For example, in Newton's second law experiment, students should be able to determine what physical quantity they should collect during the experiment in order to test the second law.

2. Analysis of Quantitative Arguments: Students should gather and interpret the information given in the question or raised in real life, and reasoning through by providing physical evidence to support the analysis. For example, Newton's second law experiment will show the students that the force is directly proportional to the acceleration. In such cases, they can relate to real-life problems, such as a sports car usually accelerates faster than a heavier car because of its lighter weight.

3. Application of Quantitative Models: Students should apply appropriate quantitative models to solve problems using quantitative information gathered with proper analysis and reasoning. For example, after each experiment, students will be asked several post-lab questions that they can solve using the physics law/principle they tested during the experiment.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Laboratory experiments will be conducted throughout the semester to develop personal and social responsibility.

1. Collaboration skills, teamwork, and value systems: Students will team up during the laboratory section to complete the task using physics concepts. During the two and half hours section, they should collaborate to finish collecting essential experimental data. After collecting the data, students should be able to use appropriate physics models to analyze the experimental data. During the collaboration, they should team up to contribute their thought and time to draw a solid conclusion using the scientific method.

2. Sustainability and the natural and human worlds: Students should use the appropriate physics laws to understand the consequence of certain human actions or understand the rules set up by human society to regulate behavior. For example, by understanding Newton's three laws, they should know the importance of wearing a seat belt for both the driver and passengers. Also, by understanding the friction coefficient, they should know that they need to drive slowly and pay extra attention when it is raining or snowing.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/wp-content/uploads/2022/11/ACADEMIC-ASSESSMENT-PLAN.pdf

PHYSICAL GEOLOGY LAB SYLABUS
GEOL 1110L

Instructor: LTC Kimbler
Office: McClure 003 Phone: 8160
Office hours as posted

Text: Essentials of Geology by Lutgens & Tarbuck
Laboratory Manual –Class handouts

Course Description
Physical Geology Lab is the laboratory component of Physical Geology. Students will learn to identify rocks and minerals in hand samples, work with topographic maps, geologic maps, and geologic cross-sections, and apply stratigraphic principles to explore geologic time.

Student Learning Outcomes
1. Use physical properties to identify mineral specimens.
2. Describe, classify, and identify igneous, sedimentary, and metamorphic rocks and their textures.
3. Utilize the principles of stratigraphy to provide an explanation of the geologic history portrayed in a photograph or cross-section.
4. Explain how contour lines are used to represent topography, use map scales to measure distances on the ground, and construct topographic profiles.
5. Identify landforms from images and topographic maps.
6. Interpret geologic maps and construct geologic cross-sections.
7. Acquire and communicate scientific data, ideas, and interpretations through written, oral, or visual means. Examples may include creating and describing graphs, maps and photos.
8. Apply critical thinking skills such as inductive, deductive, and mathematical reasoning to solve geological problems.

PROCEDURES

Lecture – Attendance is mandatory in accordance with Institute policy. Work missed as a result of an excused absence will be made up the next regular class period. You will be expected to read the text and take notes in class.

Take Note that many of the elements of geology integrate together, so if you miss one part it may directly impact your understanding of another.

Outside Reading Assignments – You will be required to turn in four scientific article analyzes during the semester. See attachment.

Quizzes – Expect 1 quiz per chapter and/or lab session. Quizzes are given at the instructor's discretion and may occur anytime after a chapter is scheduled in the syllabus. Expect lab quizzes!

Tests – Tests will consist of multiple choice, objective and essay questions related to geology processes as outlined in the labs. **Tests that are missed due to an excused absence must be made up within one week** . An unexcused absence will result in a **ZERO** for that test

Assessment – All students will be required to complete a variety of feedback tools to provide

information to instructors on the efficacy of courses. NMMI expects students to provide honest and thoughtful answers to these assessment tools.

Grades

Grades are calculated as follows based on total points

Tests and quizzes, writing assignments, homework, film questions, other class activities Total 100%, and count as 20% of your class grade over all.

Lab schedule. Subject to change based on content coverage.

WEEK	**TOPIC/MATERIALS DUE (you are to read the sections in your book covered in the lecture topics)**
1	Intro mineral lab
2	Visual Mineral exam ,Rock Cycle, Start igneous rocks
3	Lab film plate tectonics, Ig Rxs visual exam
4	Topographic maps
5	Weathering and soils lab, soil charts
6	Sedimentary Rocks and structures
7	Metamorphic rocks lab
8	Metamorphic rocks Visual ID
9	Earthquakes and Earth's Interior lab
10	Earthquakes and Earth's Interior lab continued
11	Running water ground water lab
12	Glaciers and Glaciation lab

13	Structural geology lab
14	Google Shore line features
15	Geologic time lab
16	Relative dates lab
17	Stenos laws

ATTACHMENT #1

When you read such articles, do it carefully. Take notes. Look for the following features and write a short sentence explaining each:

1. What is the new discovery or theory that the article is about?
2. What is the evidence on which it is based?
3. Does the new development contradict some accepted ideas? If so, what are they?
4. What implications does the new theory or discovery have for the future development of science of for social problems?

In reading articles, do not try to get answers to all these questions at once. Start by reading the article quickly, just once. Do not worry about understanding all of it, but get a general idea of what it is about. Then go back and read it a second time, looking for answers to the specific questions above and writing your answers. Check p 16 of the Academic Skills Handbook for more information.

If you have questions regarding plagiarism, check with the instructor ahead of the due date. I know the difference between what you write and what a journalist or scientist writes.
Follow the Format shown:

Sample of Critical Analysis Paper Format

Joe Cadet
September 10, 2002

Svitial, Kathy A., "The Coming Himalayan Catastrophe", Discover Magazine, pp80-84, July 1995

THESIS STATEMENT This is the purpose of the article. (One or two sentences, single-spaced)

ABSTRACT This is the most important part of the article. The minimum length for this portion is 10 lines double-spaced. The font must be no larger than 12 point. Margins are to be no larger than 1 inch all around. Be sure to use text citations for any ideas or quotes that are not your own. Failure to do so constitutes plagiarism and may result in a failing grade on the assignment.

PERSONAL OPINION This is to be a short paragraph of 2 or 3 sentences which states your response to the article based on the content of the article. Please double space.

QUESTIONS Number and answer the questions below:

1. What is the new discovery or theory that the article is about?
2. What is the evidence on which it is based?
3. Does the new development contradict some accepted ideas? If so, what are they?
4. What implications does the new theory or discovery have for the future development of science of for social problems?

Assigned articles will be handed out in class.

Physical Geology Introductory lab

Name :_____

Mineral Physical Properties (cleavage, fracture, luster, and streak)

Mica family: good cleavage, splits in thin sheets, non-metallic
Gypsum (selenite): good cleavage, white streak, can be white or clear, scratched by your fingernail, no-metallic
Hematite: has fracture, can be fairly hard, color reddish, streak red, non-metallic
Feldspar: cleavage and fracture, white streak, very hard
Pyrite : fracture, metallic, black streak, heavy for its size

Place an X the correct box under each mineral to indicate Cleavage or Fracture, write in streak color and luster (M or NM)

	1	2	3	4	5
Cleavage					
Fracture					
Streak Color					
Luster M/NM					
Mineral name					

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1394

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	ogriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	wright@nmmi.edu
Department	Math and Science Division
Prefix	BIOL
Number	2110
Suffix	-
Title	Principles of Biology: Cellular and Molecular Biology
Number of Credits	3

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	BIOL
Number	2110
Suffix	L
Title	Principles of Biology: Cellular and Molecular Biology lab

New Mexico Common Course information

Prefix	BIOL
Number	2110
Suffix	-
Title	Principles of Biology: Cellular and Molecular Biology

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☒ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Apply the scientific method to develop and evaluate hypotheses and propose an experiment to test a scientific hypothesis related to cell biology and molecular biology.
2. Describe the distinguishing characteristics of various biological molecules (water, carbohydrates, lipids, proteins, and nucleic acids).
3. Compare and contrast the basic features of cells and how prokaryotic cells differ from eukaryotic cells.
4. Understand how organisms maintain homeostasis in a dynamic environment.
5. Describe how biological molecules are acquired and how they are subsequently used to meet the metabolic needs of organisms.
6. Describe membrane structure and function.
7. Describe and analyze the nature of bioenergetic transformations and metabolism within the cell.
8. Describe the processes of cellular respiration and photosynthesis.
9. Analyze with specific detail the processes of DNA replication, transcription, and translation.
10. Analyze with specific detail the types, mechanisms, and regulation of cellular division.
11. Assess important applications of cell and molecular biology to energy use, medicine, and other day-to-day processes.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

same as CCN

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Learning and utilizing the scientific method addresses all components of the problem setting, evidence acquisition, evidence evaluation, and reasoning/conclusions. Various laboratory exercises are utilized in which different components are stressed. In some, the problem is pre-set while in others the student is expected to recognize aspects of a problem. Techniques of accumulating evidence are discussed and decided upon with an emphasis on gathering all data available. Evaluation of the data (evidence) is stressed from the standpoint of utilizing all data points and avoiding bias in all cases. Conclusions and the reasoning behind them evolve from class and individual discussions of data and analysis.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
Students analyze experiments conducted in laboratory exercises and develop quantitative models and arguments to support conclusions. They then use the available literature to compare their data with that of others and address any differences in conclusions due to approach or methodology. They are assessed by the presentation of data in their reports and the assemblage of quantitative information and arguments contained in research papers otherwise assigned. Students will study the application of models across various topics, the compilation of such models, and the absolute necessity of using all available data to construct them in order to avoid any inclusion or exclusion that would introduce bias into the completed model. Research papers, lab reports, and models will be critiqued among peers.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
The personal and social responsibility of science-practicing scientists is addressed in various ways. Sustainability is addressed by a plethora of examples and studies stemming from the professor's experiences and research. Techniques to make the impact of man more conducive to the natural order are considered along with the growing need for production as the human population continues to increase. Diverse methodologies of insect and disease management, crop production, use of GMOs, and other science-based approaches are discussed and reviewed. The controversy of such items of scientific interest as natural versus human-induced climate change is approached from the standpoints of civic discourse and ethical reasoning both. Again the absolute necessity of anyone practicing in any scientific field to remain aware of and include all available data and an examination of the sources of that data is a topic of continuing discussion and assignment.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/wp-content/uploads/2022/11/ACADEMIC-ASSESSMENT-PLAN.pdf

NMMI Syllabus

Semester: Fall **Year**: 2023

Course number:
BIOL 2110 Principles of Biology: Cellular and Molecular Biology

Meeting days, times, and places:
Section 11: Tuesday 0750-9:40 Section 13: 0950-11:40

Willson Hall 017

Teacher Name: MAJ Staci Saiz
Email: staci@nmmi.edu **Phone**: 575-624-8152 ext 8175
Office hours & Location: Willson Hall 007 Open Door Policy

Course Description: This course introduces students to major topics in general biology. This course focuses on the principles of structure and function of living things at the molecular, cellular and organismic levels of organization. Major topics included are introduction to the scientific process, chemistry of cells, organization of cells, cellular respiration, photosynthesis, cell division, DNA replication, transcription, and translation.

General scope of the course: This course satisfies the scientific learning outcomes needed to transfer to any four year college.

Prerequisites or sequences:
None

Student Learning Outcomes:
1. Apply the scientific method to develop and evaluate hypotheses and propose an experiment to test a
scientific hypothesis related to cell biology and molecular biology.
2. Describe the distinguishing characteristics of various biological molecules (water, carbohydrates, lipids,
proteins, and nucleic acids).
3. Compare and contrast the basic features of cells and how prokaryotic cells differ from eukaryotic cells.
4. Understand how organisms maintain homeostasis in a dynamic environment.
5. Describe how biological molecules are acquired and how they are subsequently used to meet the
metabolic needs of organisms.
6. Describe membrane structure and function.

7. Describe and analyze the nature of bioenergetic transformations and metabolism within the cell.
8. Describe the processes of cellular respiration and photosynthesis.
9. Analyze with specific detail the processes of DNA replication, transcription, and translation.
10. Analyze with specific detail the types, mechanisms, and regulation of cellular division.
11. Assess important applications of cell and molecular biology to energy use, medicine, and other day-to-day processes.

Procedures and Classroom Rules:

1. Cadets need to bring their NMMI issued laptop and charger to class every day.
2. Cadets are strongly encouraged to take notes during all lectures.
3. This class should be an open discussion of the material between the instructor and the cadets. Please ask questions at an appropriate time during the lecture.
4. Please use appropriate language at all times.
5. Canvas will be used to post grades, assignments, announcements, and handouts. Please use the Canvas page for all resources.
6. Cell phones should not be used in the classroom unless approved by the instructor.
7. We should maintain a professional environment in the classroom. Please be ready to learn and engage when you enter the classroom.
8. NMMI Early Warning System will be used for all disciplinary actions within the classroom. The system can also be used for positive input as well.
9. All exams will be taken in Canvas at the Willson Hall computer lab.

An explanation of the general format in which the course will be presented, to include: texts and supplementary materials, learning aids or exhibits, format for daily class presentations, labs or field trips, and assignments and out-of-class activities.

Mandatory Text:

The course will cover selected chapters of the textbook, **BIOLOGY: PRINCIPLES AND EXPLORATIONS** (2008, Johnson and Raven). The text will be supplemented by discussions, group exercises, videos, and handouts

Daily Format of the class will include:

- **Each lecture will begin with an assessment of the previous lecture. This will often include a daily quiz or assignment to assess the previously covered material.**
- **A brief recap of the previous lecture will be covered, and a new lecture will begin.**
- **A hands-on laboratory component will be conducted each week of class.**
- **Exams will be given approximately every two weeks.**

Grading Procedures:
Grades are based on a percentage. 100-90 A, 89-80 B, 79-70 C, 69-60 D, 59 – 0 F
Exams = 40%
Quizzes = 25% Expect Daily or Weekly
Lab Reports and other Assignments = 15% As announced
Final Exam = 20% TBD

Final Exam Policy: *this exact statement must be included in the syllabus:*
A mandatory comprehensive final exam or final project will be administered on the scheduled date according to the Final Exam Schedule, unless an exception is approved by the Academic Dean, and will be given to all cadets, regardless of their grade in the course. It will account for no more than 25%, but no less than 15%, of a student's semester grade.
Final Exam = 20%

Late Work – Work not turned in when collected will be recorded as a 0.
Absences – It is your responsibility to attend class and make-up missed quizzes or assessments. If you know that you will miss a class because of a trip or planned absence, **arrange** to make-up the work before the absence or during the absence. There will be no make-up for unexcused absences and work will receive a zero for any assignments missed because of the unexcused absence.

It is your responsibility to arrange with the instructor for make-up work. Exams missed due to extended, unexpected absences must be made up within a week after returning or the grade will become a zero.

Department/Division Policy on Academic Dishonesty: *In keeping with Academic Freedom in the classroom, Division policies may differ; however, all Faculty will handle academic dishonesty cases in accordance with the Academic Honor Review procedure established by the Commandant.*

It is a violation of the Honor Code to discuss questions with a cadet that has taken the quiz or completed work that has been evaluated. It is also a violation to use other students' work from previous semesters.

Cheating, assisting another to cheat, or employing other types of academic dishonesty to any degree and in any form automatically results in a grade of zero on the entire assignment or test for all parties involved. A grade of F for the semester may be given and an incident report will be filed with the Honor Board. Use your academic planner for clarification of academic dishonesty situations.

Course Outline: This is a general outline of the course expressed in appropriate time sequences so the student can understand the overall timing and pace of the course. It will include a breakdown of course segments and the time frame within which they are expected to occur, due dates for major assignments, and timing of major tests.

Academic Week	**Chapter and Learning Outcomes**
Week 1	Ch 1 Intro to Biology and the Scientific Method
Week 2	Ch 2 Basic Chemistry of Life:
Week 3	Ch 3 Chemistry of Organic Molecules (water, lipids, carbs, proteins)
Week 4	Ch 4 Cell Structure and Function (Prokaryotic vs eukaryotic cells)
Week 5	Ch 5 Membrane Structure and Function (Animal and Plant cells)
Week 6	Ch 6 Metabolism Energy and Enzymes
Week 7	Ch 7 Photosynthesis
Week 8	Ch 8 Cellular Respiration
Week 9	Ch 9 Cell Cycle and Cellular Reproduction Mitosis and Cancer
Week 10	Ch 10 Meiosis and Sexual Reproduction
Week 11	Ch 11 Mendelian Inheritance
Week 12	Ch 12 Molecular Biology of the Gene
Week 13	Ch 13 Regulation of Gene Expression
Week 14	Ch 14 Biotechnology and Genomics Cloning and other Technologies Day to day processes in medicine etc
Week 15	Final Exam week

Assessment Statement: *This exact statement must be included in the syllabus:*
In fulfilling NMMI's assessment program, all students will be required to complete a variety of feedback tools to provide information to instructors on the efficacy of courses. NMMI expects students to provide honest and thoughtful answers to these assessment tools.
Click or tap here to enter text.

Microorganisms and Disease

Introduction

Microorganisms are single-celled organisms too small to be seen with the unaided eye. Bacteria, protistans, and a few fungi are included in this group.

Compared with multicellular animals, microorganisms do not appear to be very diverse in size and shape. However, they display a wide range of metabolic activities. Some microorganisms are autotrophic. That is, they can synthesize their own organic compounds using energy from light (photosynthetic) or inorganic chemicals (chemosynthetic). Heterotrophic microorganisms, which acquire their energy by feeding on other organisms, may use decaying material or may be parasitic. Cellular respiration takes a variety of forms in microorganisms. There are at least a dozen types of fermentation pathways as well as aerobic respiration. Because of this diversity, microorganisms are found in many different habitats; in fact, they are found virtually everywhere. To name just a few examples: Some microorganisms are important members of soil and aquatic communities; others inhabit the skin and intestinal tracts of animals, including humans; and still others are plant or animal pathogens, or disease-causing organisms.

In this lab topic, you will focus on microorganisms that are pathogenic in humans.

Outline

EXERCISE 1
General Features of Bacteria

Objectives

After completing this exercise, you should be able to

1. Describe how prokaryotic cells differ from eukaryotic cells.
2. Draw and name the three major morphological types of bacteria.
3. Explain how bacterial colonies arise and how they may be useful in classification.
4. Explain what the exposure test tells us about the presence of bacteria in the environment.

Members of the kingdom Monera, to which bacteria belong, are prokaryotic. All other organisms are eukaryotic, including the protistans and fungi that are also considered microorganisms. **Prokaryotes**, as you may recall from studying cells, are much smaller than eukaryotes and lack their complex organization. Chiefly, they do not have the specialized membrane-bound organelles such as mitochondria or chloroplasts that are found in eukaryotes. Prokaryotes do have ribosomes, which function in protein synthesis. Although they have the same function as eukaryotic ribosomes, the ribosomes of prokaryotes are somewhat different in composition. These differences are useful for developing antibacterial drugs: Prokaryotic ribosomes can be targeted while eukaryotic ribosomes are unharmed.

Most bacteria have a cell wall. Many are also surrounded by some sort of capsule of gelatinous material, which may play a role in pathogenicity. For example, in the pneumonia-causing bacterium, forms that have a capsule have the ability to cause the disease, while those without a capsule do not.

In using drugs to combat pathogens, scientists want to select chemicals that interfere with some process or part of the bacterial cell without harming the host (human) cells. For example, if a drug that inhibits glycolysis were administered to a patient, it would damage his or her own cell function as well as killing the bacteria. Considering the differences between bacteria and animal cells discussed above, what aspects of bacterial structure might be targeted?

Activity B: Colonies

Bacterial form clearly does not provide much information for classification. Much higher magnification would have to be used to see any characteristic other than shape, though sometimes aggregations (the ways that cocci cluster together) can be informative. One way to "magnify" bacteria is to look at many millions of bacteria together rather than looking at a single cell.

Bacteria may divide as often as once every 10 minutes, so a single bacterium that finds itself in a hospitable environment can give rise to a population of millions in 24 hours. While the individual bacterium is not easily seen, the colony, or the population of bacteria derived from one or a few cells, is visible to the unaided eye. The appearance of the colony, such as its color and shape, may be useful in describing the species of bacteria.

Bacteria are found everywhere. Last week, Petri dishes of agar, a gel nutrient medium, were exposed to various sources of microorganisms such as the sole of a shoe and a dog's paw. After exposure, the dishes were kept in a favorable environment, with the result that each dish now contains an array of colonies that arose from the bacteria present in the various sources. Fungal spores, single cells that are capable of germinating and growing into colonies of fungus, are also found everywhere, so the Petri dishes also contain fungal colonies. In general, the colonies that have a fuzzy appearance are fungi, while the rest are bacteria.

In this exercise, you will compare the diversity of microorganisms from various sources.

If bacteria and fungal spores are found everywhere, why don't we see colonies of bacteria and fungi everywhere?

Procedure

1. Get a Petri dish from your instructor and count the number of different types of colonies present. Use a dissecting microscope to examine the colonies more closely. Figure 2 should help you distinguish how many different types there are.

Do not open the Petri dishes. They could be harboring allergenic or pathogenic microorganisms.

Activity B: Antibiotic Sensitivity Test

The human immune system is very effective at checking the growth of pathogenic organisms that invade the body. However, the immune system has its limitations. If a pathogen does manage to reproduce rapidly in the body, it may cause serious illness or death before the immune system can effectively respond. **Antibiotics**, chemicals that either kill or inhibit the growth of bacteria, were developed to assist the immune system. As discussed in Exercise 1, antibiotics should interfere with pathogens without affecting the cells of the body. Thus, their action usually relies on targeting some aspect of cell structure or function that differs between prokaryotes and eukaryotes.

Why would antibacterial agents usually not be effective against fungi?

The antibiotics most familiar to us are antibacterial agents, probably because we are more likely to have had bacterial than fungal diseases. Some of these antibiotics, including erythromycin, tetracyclines, and compounds related to streptomycin (gentamycin, kanamycin, and neomycin) work by binding to bacterial ribosomes. How does this affect bacteria?

Why would eukaryotic organisms not be affected by antibiotics?

Why would antibiotics not be effective against viruses?

Many antibiotics in use today were originally derived from certain types of fungi and bacteria that live in the soil, such as *Penicillium* and *Streptomyces*. Suggest a reason why *Streptomyces* and *Penicillium* might have evolved the ability to produce antibacterial chemicals.

In this exercise you will determine the effectiveness of different antibiotics in inhibiting the growth of bacteria. Two Petri dishes have been prepared with cultures of bacteria, one with a gram-positive species (*Streptococcus aureus*) and one with a gram-negative species (*E. coli*). Small disks soaked in various antibiotics were placed on the dishes. Each disk is coded with the name of the antibiotic; note the key to the antibiotics next to the dishes.

If the bacteria growing on the plate are sensitive to a given antibiotic, their growth will be inhibited and no bacteria will be observed growing near that disk. That is, the antibiotic will cause a zone of inhibition as shown in Figure 4.

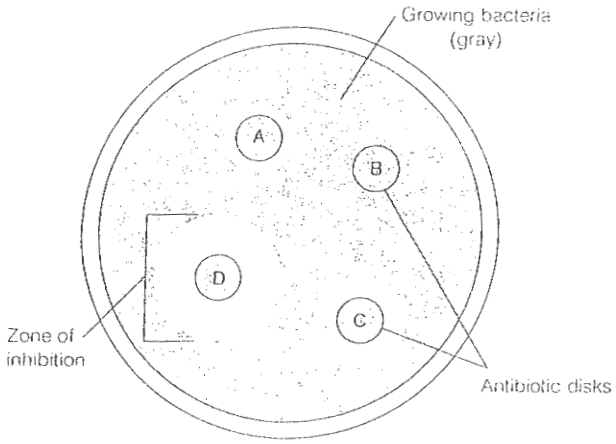


Figure 4.
Antibiotic sensitivity test. In this example, antibiotic D is most effective and antibiotic B is least effective against these bacteria.

Procedure

1. Measure in millimeters the diameter of the zone of inhibition for each antibiotic.

Do not open the Petri dishes because they may have been contaminated by pathogenic or allergenic microorganisms.

2. Record the results in Table 3.

Table 3
Results of Antibiotic Sensitivity Test

Antibiotic	Zone of Inhibition (mm)	
	Gram-Negative Bacteria	Gram-Positive Bacteria

Do gram-positive and gram-negative bacteria react similarly to the same antibiotic? Explain the results you have recorded above.

How might a medical lab use this test?

Activity C: Transmission

Exercise 1 showed that microorganisms are found in many different places, but that some are more likely to be found in one place than in another. Pathogens are most likely to be found on or in the vicinity of their human hosts. Pathogens may be transmitted by direct contact with or by nearness to an infected person, by contaminated objects, or by excretory products and body fluids; a few can be transmitted through animal carriers. In addition, certain diseases can be transmitted from mother to fetus in the uterus or during birth.

Many times when we are ill we have no idea how we contracted the infection. If there is a local outbreak of a disease, though, we are aware that something is "going around" and can often identify "whose" cold we got. For example, small epidemics on college campuses frequently get started at the beginning of the semester or after a vacation. A student returns to school with a cold he got from his little sister and passes it on to his roommate, who transmits it to six people in his biology lab, who take it back to their roommates, and so on.

Epidemics of some diseases are cause for serious concern, and health departments work to identify the transmission routes. This may involve determining common factors among the victims (for example, in an outbreak of food poisoning) or tracing all contacts of the victims (for example, in sexually transmitted diseases). In this exercise, you will simulate transmission of an infection and trace its course through the class.

Procedure

1. Each student has a stock bottle of solution. One student's solution is different from all the rest, but the difference is not visible.
2. Transfer 3 pipetsful of solution from your stock bottle to a clean test tube, using a pasteur pipet. You can think of this as the aerosol droplets from a sneeze or as the exchange of bodily fluids in a sexual contact.
3. Find a person at random in the class and exchange a dropperful of solution with him or her. That is, you put a dropperful of your solution into that person's test tube, who then puts a dropperful of his/her solution into your test tube.
4. Record the name of your contact below.
5. When your instructor says to, repeat steps 3 and 4 twice more, so you have contacted three *different* people.

   List your contacts.

   First contact: _____

   Second contact: _____

   Third contact: _____
6. Put a dropperful of phenol red into your test tube and record the color: _____

   Phenol red is an acid/base indicator: Acidic solutions turn yellow, and basic solutions turn red when phenol red is added. The "infected" solution was basic, and all of the others started out acidic. The solutions in the test tubes of "infected" individuals will now be basic or red.
7. Record in Table 4 the names and contacts of infected individuals in the class.

Table 4
Record of Contacts of "Infected" Persons

Infected Person	Contacts		
	First	Second	Third

Table 31.1 Zones of Inhibition in the Kirby-Bauer Method of Antimicrobic Sensitivity Testing (Cont.)

ANTIBIOTIC	CODE	POTENCY	Zone of Inhibition (mm)		
			RESISTANT	INTERMEDIATE	SENSITIVE
Nalidixic Acid *Enterobacteriaceae*	NA-30	30 μg	≤13	14–18	≥19
Neomycin	N-30	30 μg	≤12	13–16	≥17
Netilmicin *Enterobacteriaceae, P. aeruginosa, Acinetobacter* and staphylococci	NET-30	30 μg	≤12	13–14	≥15
Norfloxacin *Enterobacteriaceae, P. aeruginosa, Acinetobacter,* staphylococci and entercocci	NCR-10	10 μg	≤12	13–16	≥17
Novobiocin	NB-30	30 μg	≤17	18–21	≥22
Oxacillin *Staphylococcus aureus* staphylococcus (coagulase negative)	OX-1	1 μg	≤10 ≤17	11–12 —	≥13 ≥18
Penicillin *Staphylococcus* spp. *Enterococcus* spp. *L. monocytogenes* *N. gonorrhoeae* β-hemolytic streptococci	P-10	10 units	≤28 ≤14 ≤19 ≤26 —	— — 20–27 27–46 —	≥29 ≥15 ≥28 ≥47 ≥24
Piperacillin *Enterobacteriaceae,* and *Acinetobacter* *P. aeruginosa*	PIP-100	100 μg	≤17 ≤17	18–20 —	≥21 ≥18
Polymyxin B	PB-300	300 U	≤8	9–11	≥12
Rifampin *Staphylococcus* spp. *Enterococcus* spp. and *Haemophilis* spp. *S. pneumoniae*	RA-5	5 μg	≤16 ≤16	17–19 17–18	≥20 ≥19
Spectinomycin *N. gonorrhoeae*	SPT-100	100 μg	≤14	15–17	≥18
Streptomycin *Enterobacteriaceae*	S-300	300 μg	≤11	12–14	≥15
Sulfisoxazole *Enterobacteriaceae, P. aeruginosa, Acinetobacter, V. cholerae,* and staphylococci	G-25	25 μg	≤12	13–16	≥17
Tetracycline *Enterobacteriaceae, P. aeruginosa, Acinetobacter, V. cholerae,* staphylococci and enterococci *Haemophilus* spp. *N. gonorrhoeae* *S. pneumoniae* and other streptococci	Te-30	30 μm	≤14 ≤25 ≤30 ≤18	15–18 26–28 31–37 19–22	≥19 ≥29 ≥38 ≥23

Table 31.1 Zones of Inhibition in the Kirby-Bauer Method of Antimicrobic Sensitivity Testing

ANTIBIOTIC	CODE	POTENCY	Zone of Inhibition (mm)		
			RESISTANT	INTERMEDIATE	SENSITIVE
Amikacin	AN-30	30μg			
Enterobacteriaceae			≤14	15–16	≥17
P. aeruginosa, Acinetobactor staphylococci					
Amoxicillin/Clavulinic acid	AmC-30	20/10 μg			
Enterobacteriaceae			≤13	14–17	≥18
Staphylococcus spp.			≤19	—	≥20
Haemophilus spp.			≤19	—	≥20
Ampicillin	AM-10	10 μg			
Enterobacteriaceae			≤13	14–16	≥17
Staphylococcus spp.			≤28	—	≥29
Enterococcus spp.			≤16	—	≥17
Listeria monocytogenes			≤19	—	≥20
Haemophilus spp.			≤18	19–21	≥22
β-hemolytic streptococci			—	—	≥24
Aziocillin	AZ-75	75 μg			
P. aeruginosa			≤17	—	≥18
Bacitracin	B-10	10 units	≤8	9–12	≥13
Carbenicillin	CB-100	100 μg			
Enterobacteriaceae and *Acinetobacter*			≤19	20–22	≥22
P. aeruginosa			≤13	14–16	≥17
Cefaclor	CEC-30	30 μg			
Enterobacteriaceae and staphylococci			≤14	15–17	≥18
Haemophilus spp.			≤16	17–19	≥20
Cefazolin	CZ-30	30 μg			
Enterobacteriaceae and staphylococci			≤14	15–17	≥18
Cephalothin	CF-30	30 μg			
Enterobacteriaceae, and staphylococci			≤14	15–17	≥18
Chloramphenicol	C-30	30 μg			
Enterobacteriaceae, P. aeruginosa, Acinetobactor, staphylococci, enterococci, and *V. cholerae*			≤12	13–17	≥18
Haemophilus spp.			≤25	26–28	≥29
S. pneumoniae			≤20	—	≥21
Streptococci			≤17	18–20	≥21
Ciprofloxacin	CIP-5	5 μg			
Enterobacteriaceae, P. aeruginosa, Acinetobacter, staphylococci and enterococci			≤15	16–20	≥21
Haemophilus spp.			—	—	≥21
N. gonorrhoeae			≤27	28–40	≥41
Clarithromycin	CLR-15	15 μg			
Staphylococcus spp.			≤13	14–17	≥18
Haemophilus spp.			≤10	11–12	≥13
S. pneumoniae and other streptococci			≤16	17–20	≥21

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1395

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	OGriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	Chris Wright
Department	Math and Science Division
Prefix	BIOL
Number	1110
Suffix	-
Title	General Biology
Number of Credits	3

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	BIOL
Number	1110
Suffix	L
Title	General Biology Iab

New Mexico Common Course information

Prefix	BIOL
Number	1110
Suffix	-
Title	General Biology

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☒ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

Student Learning Outcomes
1. Explain the value of the scientific method as a means for understanding the natural world and for formulating testable predictions.
2. Explain how chemical and physical principles apply to biological processes at the cellular level.
3. Understand basic concepts of cell biology.
4. Understand that all organisms share properties of life as a consequence of their common ancestry.
5. Understand fundamental processes of molecular biology.
6. Understand the mechanisms of evolution, including natural selection, genetic drift, mutations, random mating, and gene flow.
7. Understand the criteria for species status and the mechanisms by which new species arise.
8. Understand methods for inferring phylogenetic relationships and the basis for biological classification.
9. Recognize the value of biological diversity (e.g., bacteria, unicellular eukaryotes, fungi, plants, and animals), conservation of species, and the complexity of ecosystems.
10. Explain the importance of the scientific method for addressing important contemporary biological issues.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

Course Outcomes:
1. Demonstrate familiarity with basic content and concepts in each discipline.
2. Identify and use laboratory apparatus and instrumentation to perform demonstrations, carry out experiments, and develop observational skills.
3. Exhibit learning skills necessary to succeed in the sciences as well as other disciplines.
4. Obtain factual information from various sources and be able to present it in a clear, well-organized manner.
5. Show familiarity with current issues in each discipline to include the moral and ethical questions involved.
6. Apply critical thinking skills and a systematic approach to problem-solving using graphs and formulae as needed.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the

essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Learning and utilizing the scientific method addresses all components of the problem setting, evidence acquisition, evidence evaluation, and reasoning/conclusions. Various laboratory exercises are utilized in which different components are stressed. In some, the problem is pre-set while in others the student is expected to recognize aspects of a problem. Techniques of accumulating evidence are discussed and decided upon with an emphasis on gathering all data available. Evaluation of the data (evidence) is stressed from the standpoint of utilizing all data points and avoiding bias in all cases. Conclusions and the reasoning behind them evolve from class and individual discussions of data and analysis.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
Students analyze experiments conducted in laboratory exercises and develop quantitative models and arguments to support conclusions. They then use the available literature to compare their data with that of others and address any differences in conclusions due to approach or methodology. They are assessed by the presentation of data in their reports and the assemblage of quantitative information and arguments contained in research papers otherwise assigned. Students will study the application of models across various topics, the compilation of such models, and the absolute necessity of using all available data to construct them in order to avoid any inclusion or exclusion that would introduce bias into the completed model. Research papers, lab reports, and models will be critiqued among peers.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
Students in the classes work together as teams to carry out lab procedures, learn to use lab equipment, and research current issues regarding the sustainability of natural resources in a changing world with an increasing population. NMMI is very culturally diverse, so the interaction between students is invaluable. Current issues, such as the pros and cons of vaccination, are discussed and classroom simulations of epidemics are carried out. We do another lab that demonstrates population growth and decline by different parental approaches as we study patterns of survival. We also examine how the world has changed to support a much larger population, with greater yields of crops and ways to water those crops along with all the modern methods of food preservation and storage. The approach is to give the students a positive but proactive approach to future issues. Locally, we examine issues such as possible groundwater contamination by dairies and how that industry prevents contamination.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

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BIOL 1110 General Biology NMMI Syllabus

Semester: Spring 2022

Course numbers, times, and places:

BIOL 1110/01 MF 7:50 W 8:20 Room 01 Willson Hall

BIOL 1110/02 MF 8:50 W 9:15 Room 01 Willson Hall

BIOL 1110/03 MF 9:50 W 10:10 Room 01 Willson Hall

BIOL 1110L/13 T 9:50-11:40 Room 26 Willson Hall

BIOL 1110L/15 T 12:40-2:30 Room 26 Willson Hall

BIOL 1110L/33 Th 9:50-11:40 Room 26 Willson Hall

Teacher name: COL M. B. Atwood **Email**: atwood@nmmi.edu **Phone**: 575-624-8140

Required Texts: Biology Today and Tomorrow without Physiology., 5th edition, Starr, Evers, Starr

Office hours and location: As posted Room 04 Willson Hall

Course Description: This course introduces nonscience majors to basic biological concepts including, but not limited to, the properties of life, biochemistry, cell biology, molecular biology, evolution, biodiversity, and ecology.

Biology 1110 serves as a pre-requisite for nursing and other allied-health programs. There is an emphasis on the molecular and cellular levels of biology surrounding the core theme of evolution. Topics include chemistry of cells, cell structure and function, metabolism, genetics, evolution and ecology. Labs emphasize the process of scientific inquiry which includes learning how to propose testable hypotheses and carry out experiments to test them. Students learn the proper use of microscopes and safe handling of lab chemicals and other lab equipment while conducting hands-on experiments. This course serves as a prerequisite for Anatomy and Physiology (BIOL 2210), Microbiology (BIOL 2224), Insects and Man (BIOL 2254), and Environmental Biology (BIOL 2264). It also aligns with content for common healthcare admissions exams.

General Scope of the Course: The goal of this college biology course is to introduce the current concepts of life and the structures and functions of living organisms. For the non-science major, Biology 1154 will provide the basis for understanding some of today's issues: the origin and evolution of life, human genetics and genetic engineering, and conditions and diseases affecting the human population. .

Student Learning Outcomes

1. Explain the value of the scientific method as a means for understanding the natural world and for formulating testable predictions.

2. Explain how chemical and physical principles apply to biological processes at the cellular level.

3. Understand basic concepts of cell biology.

4. Understand that all organisms share properties of life as a consequence of their common ancestry.

5. Understand fundamental processes of molecular biology.

6. Understand the mechanisms of evolution, including natural selection, genetic drift, mutations, random mating, and gene flow.

7. Understand the criteria for species status and the mechanisms by which new species arise.

8. Understand methods for inferring phylogenetic relationships and the basis for biological classification.

9. Recognize the value of biological diversity (e.g., bacteria, unicellular eukaryotes, fungi, plants, and animals), conservation of species, and the complexity of ecosystems.

10. Explain the importance of the scientific method for addressing important contemporary biological issues.

Course Outcomes:

1. Demonstrate familiarity with basic content and concepts in each discipline.
2. Identify and use laboratory apparatus and instrumentation to perform demonstrations, carry out experiments and develop observational skills.
3. Exhibit learning skills necessary to succeed in the sciences as well as other disciplines.
4. Obtain factual information from various sources and be able to present it in a clear, well-organized manner.
5. Show familiarity with current issues in each discipline to include the moral and ethical questions involved.
6. Apply critical thinking skills and a systematic approach to problem solving using graphs and formulae as needed.

Procedures and Classroom Rules: Be on time for lecture and lab. Bring a notebook and writing materials to class. Absolutely no laptops or cell phones allowed in class. Talking and disruptive behavior will result in a “stick” and dismissal from the classroom.

General Format:
Biology 1110 is presented as a combined lecture and laboratory course. Concepts will be presented by lectures, reading assignments, and canvas assignments. The course consists of three hours of lecture and one lab section per week. Biology lab must be taken in conjunction with the class. Lab materials will be provided. You need not purchase a lab kit or a lab manual.

Grading Procedures: Grades are based on a percentage. Lecture and lab grades are combined. 100-90 A 80-89 B 70-79 C 60-69 D Less than a 60 will result in an F for the class.

Final Exam Policy: A mandatory comprehensive final exam or final project will be administered on the scheduled date according to the Final Exam Schedule, unless an exception is approved

by the Academic Dean, and will be given to all cadets regardless of their grade in the course. It will account for no more than 25%, but no less than 15%, of a student's semester grade.

Academic Dishonesty: Cheating, assisting another to cheat, or employing other types of academic dishonesty to any degree and in any form automatically results in a grade of **zero** on the entire assignment or test for all parties involved. A grade of **F** for the semester may be given and the incident will be referred to the Commandant of Cadets. Cheating on extra credit will result in no further extra credit possible for that student.

Class absences: Class absence and tardiness will be reported. It is your responsibility to attend lab and take the lab quizzes. If you know that you will miss a lab because of a trip or excused absence, make arrangements to attend another lab section during the same week or pick up the materials from the instructor. You are still responsible for the lab quiz, even when you miss the lab. There will be no make-up for unexcused absences and you will receive a zero for that lab or test.

Course Outline:

Week	Lecture	Lab
Jan 11-13	Ch 1 Invitation to Biology. Ch 2 Molecules of life	No lab
Jan 16-20	**No class Monday Jan 16** Finish Ch 2 **Test Ch 1,2**	Enzymes
Jan 23-27	Ch 3 Cells Ch 4 Energy and Metabolism	Microscope/cells
Jan 30-Feb 3	Ch 5 Capturing and Releasing Energy	Sugar fermentation
Feb 6-10	**Test Ch 3,4,5** Ch 6 DNA Structure and Function	Genetics video
Feb 13-17	Ch 6 DNA structure and function Ch 7 Gene expression	Mitosis and karyotypes
Feb 20-24	**No class Monday Feb 20** Ch 8 Mitosis, Meiosis	Human phenotypes

	Test Ch 6,7,8	
Feb 27-Mar 3	Ch 9 Patterns of Inheritance	Pedigree analysis
Mar 6-10	Ch 10 Biotechnology Ch 11 Evidence of Evolution	TBA Evolution video
Mar 13-17	Ch 12 Processes of Evolution **Test Ch 9, 10, 11, 12**	Timeline
Mar 20-24	**Spring break**	
Mar 21-25	Ch 13 Viruses, Bacteria, Protists	Human epidemic, Protists
Mar 27-31	**Test Ch 13** Ch 14 Plants and Fungi	Plants and fungi
Apr 3-7	Ch 14 Plants and Fungi Ch15 Animals **No Class Friday Apr 7**	Animal Kingdom Invertebrates
Apr10-14	**No class Monday Apr 10** Ch 15 Animals **Test Ch 14, 15**	Animal Kingdom Chordates
Apr 24-28	Ch 16, Population Ecology Ch 17 Communities and Ecosystem	Survivorship curves
May 1-3	Ch 18 Humans and the Biosphere **Quiz Ch 16, 17, 18**	Producers/consumers
May 6-10	**Final exams**	

Assessment Statement: In fulfilling NMMI's assessment program, students in this class will be required to complete a variety of feedback tools to provide information on the efficacy of courses and the achievement of target goals. NMMI expects students to provide honest and thoughtful answers to these assessment tools.

BIOLOGY LAB. Patterns of Survival. Plotting Survivorship Curves.

Each species, including us, has a Life History Pattern: a pattern of reproduction, survival and life expectancy of the population. One component of a life history pattern is the *age-specific survivorship schedule*, which the number of individuals that reach a certain age. (Sometimes the inverse, *age-specific death schedule*, is used.)
As you have observed, each species has a characteristic life span, but few individuals live until the maximum age possible. Some species have an *age-specific pattern* that is characterized by most individuals dying shortly after hatching (or birth or production of the next generation) and only a few living to "old age". At the other extreme, the *age-specific pattern* is characterized by most individuals surviving until some age.

A "COHORT" is a group of individuals born (hatched etc.) during the same year, (or other time interval). from the time of birth. A Life Table is created by tracking a cohort through time until the last individual dies and listing the number of survivors by age categories (percentage surviving may be used instead of numbers).

A species' "Survivorship Curve" can be then be drawn from the data contained within the Life Table. A "Survivorship Curve" is a graph line plotted from a cohort's age-specific survivorship. These curves reveal differences between species or even populations within a species.

In today's lab exercise, you will (1) determine the life table of a cohort of 50 dice and then plot the survivorship curve on a semi-log graph and (2) gather data for the life tables of three species of bubbles and then plot the survivorship curves of each species.

Work in groups of three of four (depending on class size).

Population 1.
Start with a cohort of 50 dice. Roll the dice on the table. All the dice that come up "1" during that time interval (generation) have died of a heart attack and are removed from the cohort. The number of survivors is plotted on the Life Table and these remaining survivors are then rolled on the table. Again, all the dice that come up "1" died and are removed and the number of survivors is recorded on the Life Table. The surviving dice are rolled again, the "1"s are removed, and the number of survivors is recorded. The process is repeated until there no more survivors.

Are the Survivorship Curves Type I, Type II, or Type III? _____

What does this tell you about the death rate of the dice populations?

_____

_____

2. SURVIVORSHIP OF THREE SPECIES OF SOAP BUBBLES.

In this exercise, you will create cohorts of 50 bubbles (or 100 bubbles depending on the number of groups in the lab) representing three species.

All of you are individually responsible for recording the data placed on the board by the other groups in the lab.

FOR ALL:

Prepare a Life Table for EACH SPECIES.

To determine the number surviving at each age, subtract the number dying at each age from the number surviving at the previous age.

For example, if 5 bubbles die at age 1 second, then 50 – 5 = 45 survive at least 1 second.

If 10 more bubbles die at age two seconds, then 45 – 10 = 35 survive at least 2 seconds.

If 7 more bubbles die at age 3 seconds, then 35 – 7 = 28 survive at least 3 seconds, and so forth.

Percentages are calculated by: $\frac{\text{number surviving at age}}{50} \times 100\%$

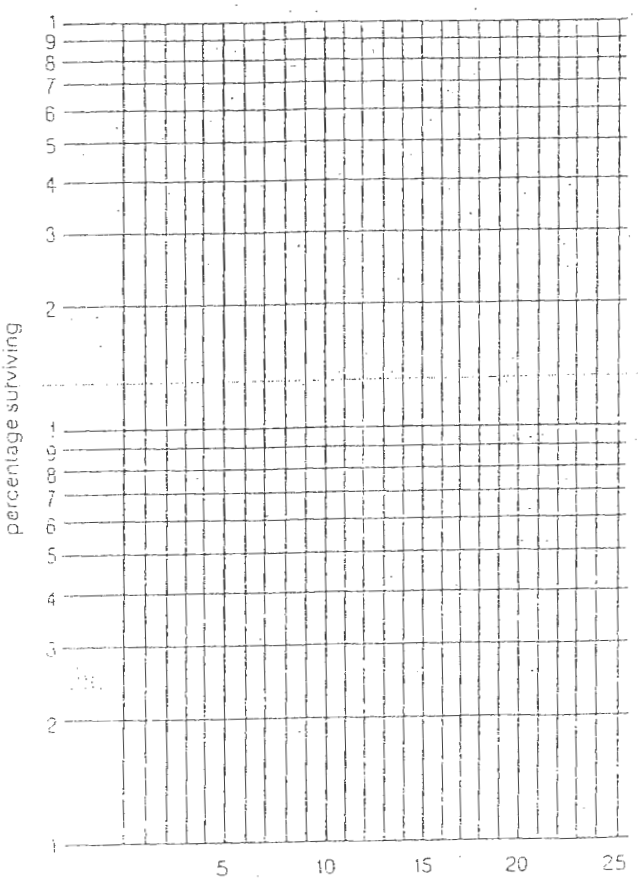
Or, because the cohort was 50, simply multiply the number of survivors by 2 to get the percentage.

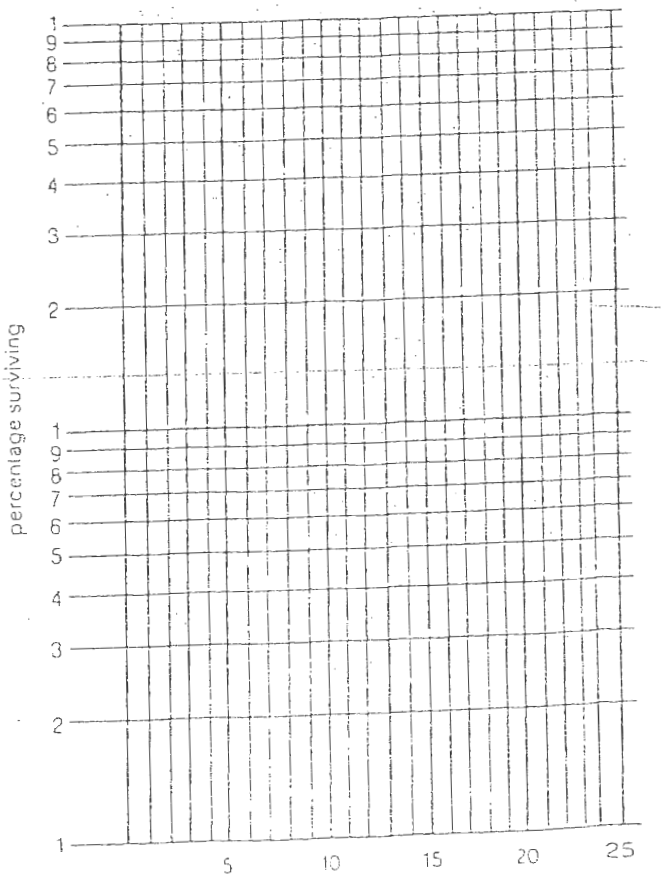
THEN, PLOT THE SURVIVORSHIP CURVE FOR EACH SPECIES ON THE SEMI-LOG
GRAPHS.

Generation	Population 1 (heart disease only)		Population 2 (cancer & heart disease)	
	Number Surviving	Percentage Surviving	Number Surviving	Percentage Surviving
0	50	100%	50	100%
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

To generate the Survivorship Curve, the percentage surviving at each age interval (generation) is plotted on the semi-log graph.

Repeat with Population 2 in which "1"s are deaths from heart attacks and "6"s are deaths from cancer.





Species 1.

Requires 5 individuals.

One member of your group will blow a SINGLE bubble.

A time-keeper (the person in your group with a watch that shows time in seconds) will determine the age at death (the bubble pops) in seconds.

A recorder will keep track of the number dying at each age.

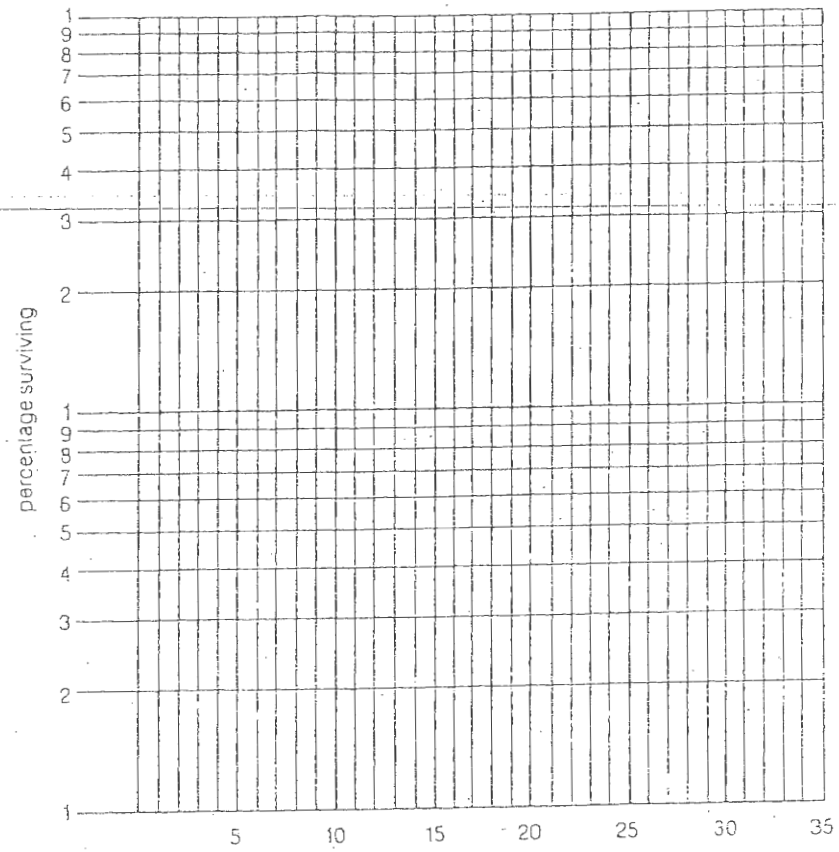
The other two members will try to keep the bubble alive for as long as possible by blowing, wafting, etc.

After 50 bubbles have been timed, the Total Number Dying At Each Age (in seconds) will be recorded on the board for the rest of the class to copy.

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
0			50	100%
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30+				

SOAP BUBBLE SPECIES 1



Species 1 showed which type of survivorship curve? _____

What does this tell you about the life history pattern of this species? _____

_____

_____

Species 2.

Requires 3 individuals.

One member of your group will blow a SINGLE bubble.

A time-keeper will determine the age at death in seconds.

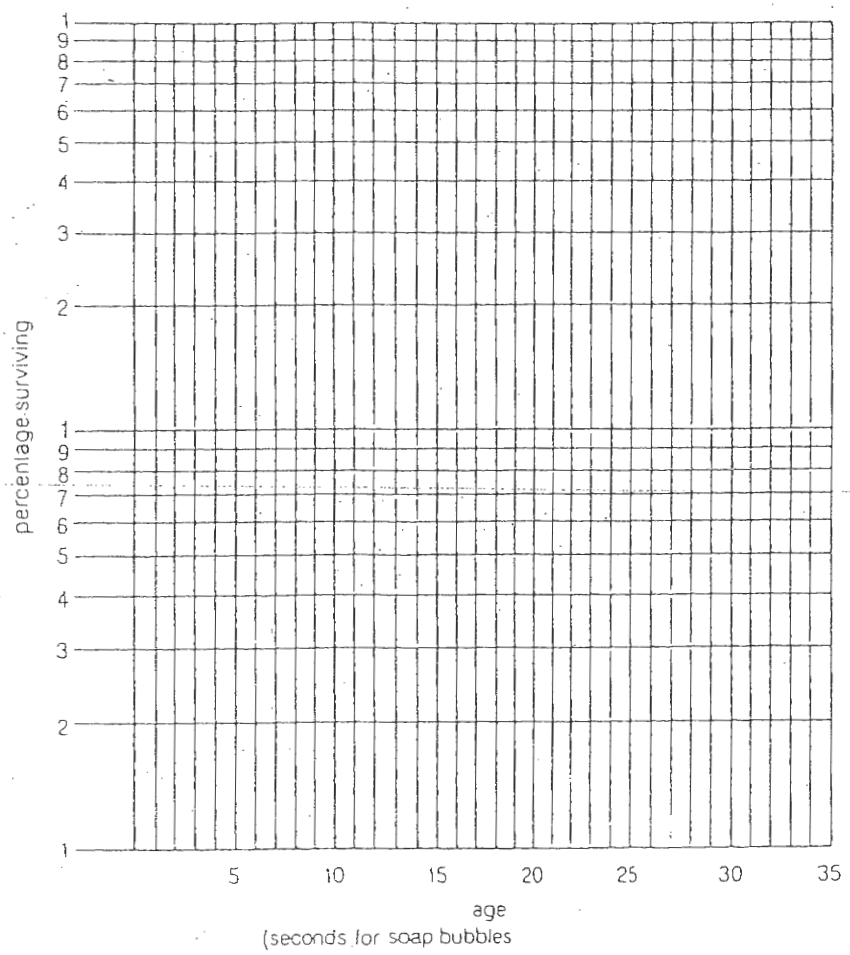
No effort will be made to keep the bubble "alive".

The recorded will record the time at death in seconds

After 50 bubbles have been timed, the Total Number Dying at Each Age (in seconds) will be recorded on the board for the rest of the class to copy.

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
0			50	100%
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30 +				



Species 2 showed which type of survivorship curve? _____

What does this tell you about the life history pattern of this species? _____

_____

_____

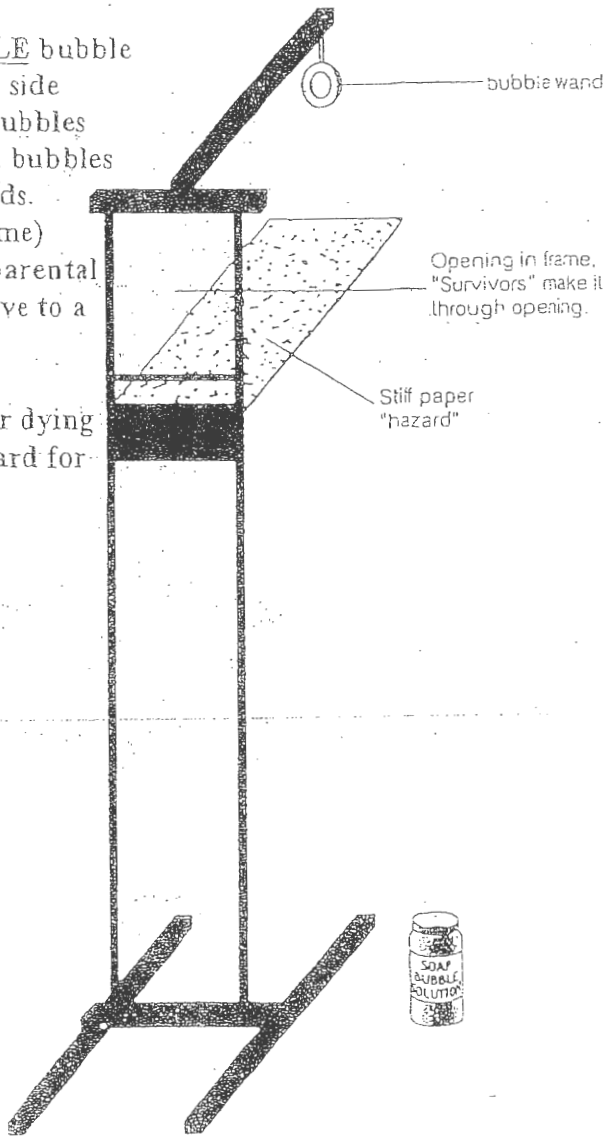
_____

Species III.

Requires 4 individuals (a bubble blower, a time-keeper, a recorder, and one to keep the survivors alive) and a Frame.

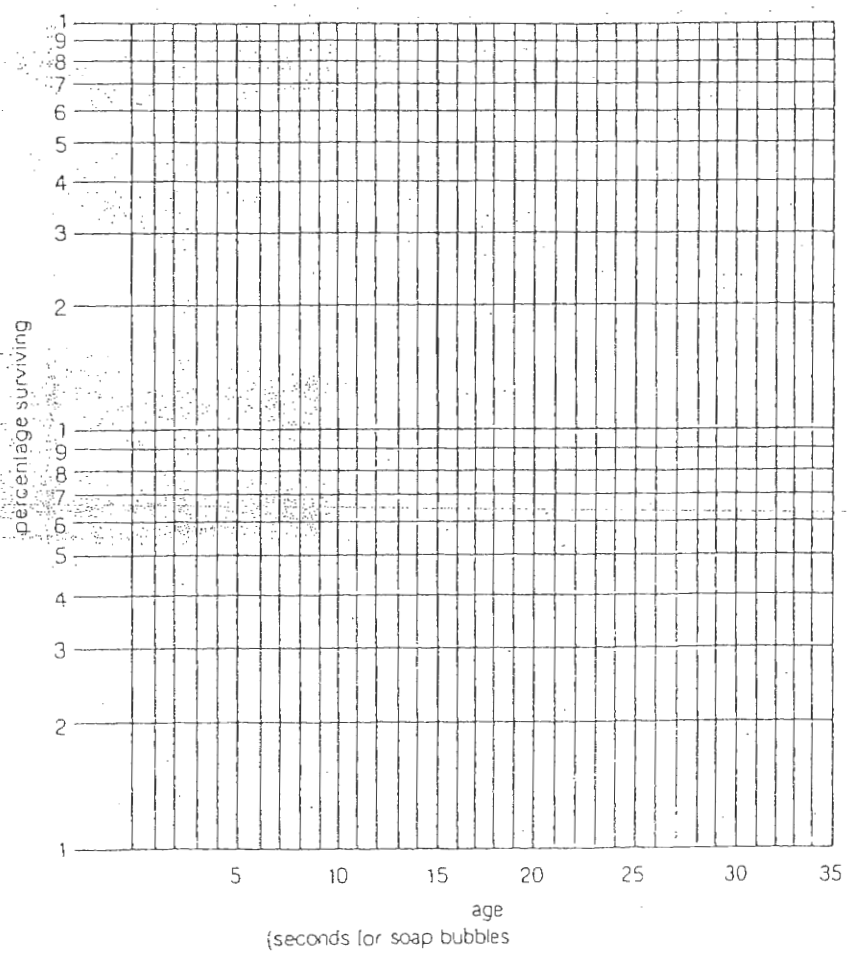
The "bubble blower" will attempt to blow a SINGLE bubble through the opening. Bubbles that move off to one side before reaching the paper or frame are ignored. Bubbles that break on the paper are scored as 1 second and bubbles that break against the frame are scored as 2 seconds. Surviving bubbles (those that pass through the frame) are kept alive as long as possible (note: this is not parental care but simply reflects the ability of a few to survive to a relatively long age.)

After 50 bubbles have been timed, the total number dying at each age (in seconds) will be recorded on the board for the rest of the class to copy.



Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
0			50	100%
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30 +				



Species 3 showed which type of survivorship curve? _____

What does this tell you about the life history pattern of this species? _____

_____

_____

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1420

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	COL Orlando Griego
Chief Academic Officer Email	ogriego@nmmi.edu
Registrar Name	LTC Chris Wright
Registrar Email	wright@nmmi.edu
Department	Leadership
Prefix	HUMN
Number	1211
Suffix	-
Title	Leadership Development Studies: A Humanities Approach
Number of Credits	3

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	HUMN
Number	1211
Suffix	-
Title	Leadership Development Studies: A Humanities Approach

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences

☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

Course Objectives (Short-term) Cadets will be able to:
1. Develop a fundamental understanding of leadership and the skills manifest in effective leaders
2. Identify their personal leadership assumptions and philosophies and enhance self-awareness for improvement and leadership capabilities
3. Demonstrate effective techniques and strategies for articulating a vision
4. Understand the steps involved in setting goals and applying them to personal, professional, and educational situations
5. Discuss the complexities inherent in ethical leadership
6. Employ the processes involved in effective decision-making
7. Recognize the different types of conflict and appreciate the role a leader can plan in managing conflict
8. Learn team-building strategies, identify team dysfunctions and engage in team-building activities
9. Comprehend the concept of empowerment and the techniques of effective leaders to empower others
10. Express the methods leaders can use to initiate change and help others adjust to change
11. Expand their awareness of leadership to include the concept of servant leadership
(Long-term) Cadets will be able to:
12. Articulate their personal leadership values and build lives of leadership based on those values
13. Put short-term course outcomes into long-term practice through use and analysis
14. Apply ethical considerations to multiple aspects of their lives

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

Course Objectives (Short-term) Cadets will be able to:
1. Develop a fundamental understanding of leadership and the skills manifest in effective leaders
2. Identify their personal leadership assumptions and philosophies and enhance self-awareness for improvement and leadership capabilities
3. Demonstrate effective techniques and strategies for articulating a vision
4. Understand the steps involved in setting goals and applying them to personal, professional, and educational situations
5. Discuss the complexities inherent in ethical leadership
6. Employ the processes involved in effective decision-making
7. Recognize the different types of conflict and appreciate the role a leader can plan in managing conflict
8. Learn team-building strategies, identify team dysfunctions and engage in team-building activities
9. Comprehend the concept of empowerment and the techniques of effective leaders to empower others
10. Express the methods leaders can use to initiate change and help others adjust to change
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(Long-term) Cadets will be able to:
12. Articulate their personal leadership values and build lives of leadership based on those values

13. Put short-term course outcomes into long-term practice through use and analysis
14. Apply ethical considerations to multiple aspects of their lives

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Problem Setting—Delineate a problem or question: Critical thinking is addressed throughout the semester in multiple mediums, to include oral presentations and class discussions, written assignments, and case studies conducted in class where teams are formed for cooperative and comparative work.

Students are given leadership scenarios carefully scripted and designed by the instructor and presented in formal writings where students must analyze leader behaviors and possible outcomes. For instance, a leader is faced with a controversy of ethical leadership and decision making. Students analyze and direct the problem through discussion and research, then apply reasoned solutions that incorporate standards of ethical behavior presented in class and examined through reading assignments also analyzed, contrasted and compared in class.

Evidence Acquisition: Reading is assigned and videos reviewed on the background and life of historical figures for analysis and discussion regarding the subject's approaches to leadership and behaviors and critical thinking process relative the decisions they faced. Scenarios are designed to highlight specific problem areas confronting the subject leaders to include ethics, creating a vision, servant leadership, leading through conflict, and managing change. The leadership problem and scenario facing an identified historical figure is examined and the issues confronting leaders are specified, listed, and prioritized by the class. The class breaks into teams to analyze, decipher, and develop problem solving approaches.

Evidence Evaluation: Students are introduced and utilize an approach to a critical thinking methodology to dissect problem solving results while considering how alternative decisions might have affected history. Students are presented formal lessons on Critical Thinking and Decision Making utilizing a four pillar approach explaining and comparing the interaction and reliance of Communications, Collaboration, Critical Thinking, and Decision Making, then explaining the tie-in and reliance with time as a determinant of results. This is presented in lecture format followed by applications through class team assignments that are discussed and analyzed. Transactional communications models are presented and analyzed, as are models for individual and group interactions. An assertive statement process is demonstrated for critical thinking. Critical thinking is defined and demonstrated through class

exercises that expose the students to cognitive biases and the impact they have on critical thinking and decision making. Finally, Decision Action Processes are presented to students after which they break into teams to demonstrate utilization and understanding of the methods and effects on critical thinking. Throughout, lessons and teaching refer back to leadership and developing understanding of how to apply critical thinking to leader actions and decision making. Students must individually demonstrate their understanding of this progression through written assignments and oral presentations.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Intercultural reasoning and competence are examined from multiple perspectives through readings, class activities and teamwork, videos are analyzed and discussed, and students are given written assignments with required research. Students examine views of leadership and explore the foundation for developing a personal leadership philosophy. Excerpts are presented from the letters of Abolitionists, Protestors for Women's Suffrage, U.S. Senators and Congressmen involved in the Civil Rights Movement and the safeguarding and expansion of other freedoms in America, and the viewpoint of intellectuals are viewed through video presentations. The focus is examining individual and unique philosophies of leadership and their respective development. Objectives include identifying personal leadership philosophies of real world leaders and establishing a foundation for one's own personal leadership philosophy based on an enhanced understanding of self, and social and cultural variables and perspectives. Leadership is also examined by exploring how public leaders demonstrate leadership techniques and considerations through serving others while taking into account issues of social justice, cultural diversity, and other perspectives that may be underlining issues of society. Servant leadership is examined through written assignments, readings and research and oral examinations while maintaining focus on societal issues and cultural changes and diversity and how to properly and successfully incorporate this into a leadership philosophy.

A full unit is devoted to Ethical Leadership. In addition, ethical decision making and ethics in leadership is a constant common denominator of this humanities leadership course. Students are tasked with analyzing ethical considerations while engaged in other unit subjects in the course. Students are introduced to the concepts of personal and institutional social responsibility and social responsiveness. Students also are exposed to methods that are explained through surveying the process of ethical reasoning and applicable tools. Examples presented to students include notable historical figures and fictional characters facing critical ethical dilemmas. Students read the writings of famous philosophers and examine ethical leadership from their perspectives. Videos of intellectuals and persons with leadership experience who faced significant ethical decisions are presented and analyzed, each presenting a unique situation and therefore highlight different aspects of ethical leadership. At the conclusion of the course, students are expected to be able to identify characteristics of ethical leadership; recognize the impact ethical behavior has on effective leadership; define the elements of ethical leadership and; describe the contributions made by historical and modern leaders through reading and discussion in understanding ethical leadership.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*
Authority and Value of Information: Students are presented with accepted forms and methods of research and knowledge design, which is demonstrated through distributed resources. This is silhouetted against forms of illegitimate research methods often discovered in submitted work that reveals cheating, in particular the exemplars of plagiarism. The consequences for plagiarism are discussed, which includes demonstration of plagiarism that include direct plagiarism, the word-for-word transcription of someone else's work without attribution, self-plagiarism, mosaic plagiarism, and accidental plagiarism. The seriousness of plagiarism is demonstrated and students are informed of its consequences and the origins and evolution of the term. Students are made aware of the punishments for plagiarism at this institute, which ranges from receiving no credit and a "zero" for an assignment up to expulsion from school based on circumstances and the level of the infraction. The instructor demonstrates how to avoid plagiarism and account for sources, and offers instructional sources for the proper citing of materials and information. In addition to the proper mechanics of research, students are engaged in discussion of the ethics of proper research and the value in the academic community of original work. This is tied into ethical behavior standards of leadership and is the first concept for examination in the course. Students are engaged in discussion about the value and achievement of producing original work; examining how true success stems from original academic work and the self-examination that must be explored when considering using the words and work of another to pass it on as your own. Information Structures—Select, use, produce, organize, and share information employing appropriate information formats, collections, systems, and applications. This is closely tied to #1, above, "Authority and Value of Information—Recognize the interdependent nature of the authority and value of information and use this knowledge ethically when selecting, using, and creating information". Students are taken though an exercise of how to properly conduct research using different formats and sources, and are then shown how to properly cite information obtained to avoid any appearance of cheating – specifically plagiarism. Papers submitted by students are posted through the school system which screens work using "Turnitin Plagiarism Check". Students are required to use the Modern Language Association, or MLA writing style for written work. An MLA go-by and demonstration compilation is distributed to students as well as online sources for how to utilize the MLA format, and a sample paper is reviewed. Research as Inquiry—Engage in an iterative process of inquiry that defines a problem or poses a question and through research generates a reasonable solution or answer. During the course, students are assigned several research projects requiring knowledge and familiarity with research tools. These assignments focus on concepts introduced in class involving one of the semester's 10 primary units of study. One such assignment tasks students to research methods and examples of how to develop a leadership philosophy using persons in history as examples of behavior through their respective personal growth and development. Students are then asked to outline their individual goals and method for a leadership philosophy. They are required to substantiate their developmental pattern outlines, possible cause-and-effect expectations, and conclusions by citing peer reviewed documentation using multiple sources. Conclusions and the logical discussions leading up to it must be reasonable but thorough, demonstrating concise and precise writing skills using sufficient use of research techniques and sources. This research is then presented in class for open discussion, which also requires students to substantiate opinions and statements using cited sources.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/assessment-plans/

Proposed Rubric for Individual Accomplishment Humanities Curriculum Certification

Rubric

Proposed Rubric for Individual Accomplishment Humanities Curriculum Certification

Proposed Rubric for Individual Accomplishment Humanities Curriculum Certification

Criteria	Ratings				Pts
This criterion is linked to a Learning OutcomeBalanced Decision-Making Critical Thinking Exercise Balancing reasoning and emotions to make a valid critical decision with limited time and little information in selecting new world leadership following a significant event.	**4 pts** **Full Marks** Clear and extensive substantiation of conclusions and problem-solving techniques utilizing proper research and incorporation of class lectures and prescribed processes that validate credibility and reliability of decisions and conclusions.	**3 pts** **Competent** Provides some but not sufficient research and partially explained reasoning for decisions and conclusions; cannot properly identify all techniques utilized in the decision-making process.	**2 pts** **Limited** Draws conclusions yet unable to justify through proper research or application of class lectures and processes; much growth required.	**1 pts** **Unsatisfactory** Unable to reach a conclusion or fully explain or justify a decision using research and/or supportive class lecture information; demonstrates no understanding of the decision-making process.	4 pts

Proposed Rubric for Individual Accomplishment Humanities Curriculum Certification

Criteria	Ratings				Pts
This criterion is linked to a Learning OutcomeAnalyze Analyze Context and Content (Demonstrate Critical Thinking)	**4 pts** **Full Marks** Identifies most important elements of the situation (visually, symbolically, numerically, verbally, physically), making relevant connections between ideas and applications.	**3 pts** **Competent** Identifies main elements of the situation (visually, symbolically, numerically, verbally, physically) & recognizes relevant connections between ideas and applications.	**2 pts** **Limited** Identifies some elements of the situation (visually, numerically, etc.); is aware of relevant connections between ideas and applications; much room for growth.	**1 pts** **Unsatisfactory** Unable to identify any element of the situation nor make connections	4 pts

Proposed Rubric for Individual Accomplishment Humanities Curriculum Certification

Criteria	Ratings				Pts
This criterion is linked to a Learning OutcomeCommunicating Communicating (Demonstrate Leading and Working with Others)	**4 pts** **Full Marks** Clearly and positively articulates expectations; recognizes good performance and poor performance; provides rationale and timely communication to facilitate group actions.	**3 pts** **Competent** Adequately defines expectations. Acknowledges good and poor performance; takes some action accordingly; provides rationale timely communication to facilitate group action.	**2 pts** **Limited** Inadequately defines expectations. Rarely acknowledges good or poor performance; therefore, cannot take action; struggles to provide rationale; fails to provide timely communication to facilitate group action.	**1 pts** **Unsatisfactory** Cannot or will not define expectations. Focuses on poor performance; rarely acknowledges good performance; does not have reasons for doing things and are often surprised by events.	4 pts
Total Points: 12					

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1461

Institution and Course Information

Name of Institution	Mesalands Community College
Chief Academic Officer Name	Joel Kiser
Chief Academic Officer Email	joelk@mesalands.edu
Registrar Name	Brian Bailey
Registrar Email	brianb@mesalands.edu
Department	Academic Affairs
Prefix	HIST
Number	2050
Suffix	
Title	American History through Film
Number of Credits	

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	
Number	
Suffix	
Title	

New Mexico Common Course information

Prefix	
Number	
Suffix	
Title	

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences

☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

Upon completion of the course, the student will be able to:

1. Understand the links between media and historical memory.
2. Describe and analyze historical memory and its effects on collective memory and identity.
3. Evaluate written evaluation of historical films and film interpretation.
4. Evaluate a motion picture based on its historic and artistic merits.
5. Discuss how race, ethnicity, gender, and violence factored into American history.
6. Develop, draft, revise, and present an original thesis-based argument in the form of a research paper.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Students exercise using historical resources (in this case films which represent historical memory) for critical thinking by evaluating that evidence, the setting in which the films were created, and reaching conclusions based on those sources and the historical context provided by the films, contextual readings, and lectures. Using these primary and secondary sources, students will consider the motivations and efficacy of films as tools of historical memory, the perception of films as conveyors of historical memory, and the role of revisionism in history. Students will also critically evaluate the films based on their historical merit in order to evaluate the utility of using film to convey historical subject matter.

The students will then summarize these evaluations in the form of film reviews of no less than four of the films studied during the course of the semester. Students will cite the films evaluated according to MLA guidelines and compose their reviews according to the attached rubric (See Fig. 1).
The Critical Thinking Essential Skills are addressed by the attached quizzes and essay sample assignments.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Students will have to wrestle with questions and issues relative to the relationship between film, the government, civilians, and marginalized populations. These issues pertaining to American expansion, racial and social dynamics, diplomacy, politics, economic, and the modern security state will prepare students to draw personal and socially responsible and ethical conclusions regarding the dynamics between those with power and those without. Through the self-reflection in the film review, essay, and readings, students will experience examples of ethical and unethical behavior, how the film industry strives to portray history, and how that portrayal is received by American audiences. Students will also be expected to evaluate cultural and social justice issues described and portrayed in the films as they relate to the audience's perspectives.
Personal and Social Responsibility Essential Skills are measured by each of the attached sample assignments.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

Students will access, read, evaluate, and interpret primary and secondary source materials from digital archives in order to complete their research and other assignments. Students will learn to evaluate films based on their artistic, social, and academic merits. Students will also evaluate how films have helped shape popular American historical memory and perception and provide examples from the digital realm. Students will learn how to find information from digital archives and learn how to cite sources, create works cited pages, cite in-text sources accurately and completely, and how to find answers to their own questions using available online research, writing, and citation aids. These tools will carry over into any other college course or professional environment with a writing or research component. Students will also learn through the process of crafting an original argument and research paper how to interpret sources and data in their historical context, which resources are more reliable and which ones are less likely to be reliable.
Student mastery of the Information and Digital Literacy and its Essential Skills are evaluated by the essay assignment sample.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.mesalands.edu/academic-programs/assessment/

HIST 2050 Sample Assessments

Sample Assessment #1: Sample Reading Quizzes

These assignments help fulfill Student Learning Outcomes 1, 2, and 5. They also meet the requirements for Information and Digital Literacy, Critical Thinking, and Personal and Social Responsibility.

Introduction Quiz

The Introduction quiz helps students meet the Information and Digital Literacy requirement for Humanities gen ed courses by ensuring that they understand in a digital environment, use, produce, and share information employing appropriate information formats and applications. It also helps them engage in the process of inquiry that defines a problem or poses a question and generates a reasonable solution or answer.

Read the Introduction to The History on Film Reader "History on film: theory, production, reception" by Marnie Hughes-Warrington and answer the following questions. Responses to each question should be between 150 and 300 words. Responses will be scored based on the thoroughness of the answers provided, their use of the evidence, and the provided General Education Writing Rubric.

1. What challenges face historians who evaluate historical films? Why can film be a difficult medium for professional historians to evaluate?

2. Why is written history considered "the standard by which other forms of history…are to be judged?" What flaws are there with this assumption? What strengths are there to support this assumption?

3. How does the author view the utility of film to historians and students of history? Do you agree with her assessment? Why or why not?

Pocahontas Quiz

The Pocahontas quiz helps students delineate a problem or question, state problems appropriate to the context, identify information necessary to address those questions, evaluate evidence for credibility and relevance, and develop conclusions to those questions that reflect an informed, well-reasoned evaluation. It also helps students explain a range of personal, social, and cultural issues as they relate to their or others' perspectives as well as helps them describe shared ethical responsibilities or moral norms, explain ethical issues, and propose solutions to those issues.

Read "Does Disney's Pocahontas Do More Harm Than Good?" by Chris Bodenner and "True Story of Pocahontas" by Jackie Mansky and answer the following questions. Responses to each question should be between 150 and 300 words. Responses will be scored based on the thoroughness of the answers provided, their use of the evidence, and the provided General Education Writing Rubric.

1. Based on what you have read, did Disney successfully attain cultural recognition and inclusivity with Pocahontas, or is it more "corporate 'inclusivity'" as mentioned in the Bodenner article?

2. How does the film's portrayal of European-Native American relations reflect public memory of that relationship? Based on what you have read, is this depicted relationship conciliatory or an example of historical "whitewashing?"

3. From the variety of commentary you have read, is Pocahontas' role as a minority female protagonist sufficient to compensate for the other issues raised by critics of the film?

Sample Assessment #2: Sample Film Review Instructions and Rubric (see Fig. 1)

This assignment helps fulfill Student Learning Outcomes 2, 3, 4, and 5.

This assignment assesses Personal and Social Responsibility (Intercultural reasoning and Ethical reasoning)

How to Write a (Good) Film Review

An effective film review is a critical analysis of a film's themes, and for this course in particular, it

is a critical analysis of the film's depiction of wartime and/or military gender roles. It is not a summary of

the film's subject, a listing of the film's historical accuracies or inaccuracies, nor an extensive recounting of the reasons you did or did not like the film. Instead, a good film review (one that receives high marks) will clearly and briefly explain the film's plot, state what you believe is the central message of the film about martial gender roles, personal, cultural, and social justice issues, explain how the film establishes these themes, and connect those themes to the historical and cultural matters explored in the class.

All reviews should be four double-spaced pages long. Set your margins at one inch on all sides and use twelve-point Times New Roman font. Include your name, the course number, and the date at the top of the page (do not submit a cover page), then number the following pages. Before the review, include the bibliographic citation for the film. The format is as follows:

Gone with the Wind. DVD. Directed by Victor Fleming. Burbank, CA: Warner Home Video, 2005.

Title. Format on which you viewed the film. Director. Distribution city: Distributor, year distributed [not original release date].

To write a good review, it is critical that you watch the film. While that statement seems obvious,

viewing a film critically involves more than a comfy chair and popcorn. It will be nearly impossible for

you to simply watch the film and then write a good review from memory. You should take notes on what

you see, paying careful attention to important scenes that illustrate the film's depiction of gender roles.

Then write your review based on the notes you made while watching. Be sure to organize your thoughts in a clear manner.

The first paragraph of your review should introduce the film's subject. This paragraph should not be more than a few sentences but should give readers a general idea of what the film is about. Then explain the ways that the film uses the plot to illustrates ideas about martial gender roles. Remember that the film will not have a helpful introduction that outlines these themes: you must interpret the film in light of what you have learned in class about the evolution of gender roles during wartime and in the military. Think about what our readings and discussions have suggested about gender during the time period depicted in the film. Think, too, about when the film was produced. A film produced in the 1960s about the Civil

War, for example, might have a very different perspective on gender than a film produced in the 1940s

about the same subject. Consider the film's overall tone and how that might shape the ways it characterizes gender. Is the film a celebration of a particular war, or a criticism of it? End your introductory paragraph with a clear thesis statement that outlines the argument you will make about gender in the film. In the next several paragraphs, analyze how the film establishes the themes you have outlined.

How do the characters in the film suggest particular types of gender roles? How do scenes suggest the historical themes? How do the films explain a range of cultural or social justice issues? Be sure to explain how these themes relate to the materials you have read in the course and to organize your supporting paragraphs in a logical manner that clearly supports your thesis statement.

Everyone must reference at least one of the readings from the course syllabus in her/his analysis. In the

final paragraph, offer your own brief evaluation of the film, in light of the course. How does the film

supplement what you have learned in the class? Does it suggest new light on a particular theme? If you

quote from the film, be sure to identify the character you are quoting and cite the chapter of the segment from which the quote comes on the DVD. However, quotes should be used sparingly and only to illustrate a point that you cannot express in your own words.

Everyone will then present their findings to the class on the day your review is due. Your review should briefly describe the film's plot and then clearly present your argument and the evidence you explain to support that thesis. You may use clips from the film to augment your presentation, but you may not include more than five minutes of film in your fifteen-minute presentation. Your presentation will be considered in your score for the review, so be sure to treat your review with all seriousness.

Sample Assessment #3: Term Essay and Rubric (see Fig. 1)

This assignment helps fulfill Student Learning Outcomes 1, 2, 3, and 5.

This assignment addressed all of the Component Skills for Critical Thinking; Intercultural Reasoning and competence, Ethical Reasoning, and Civic Discourse, civic knowledge and engagement from Personal and Social Responsibility; and all of the Component Skills for Information and Digital Literacy.

In each of these assignments, your grade will be determined by how well you follow the instructions for the particular task, how clearly you convey your ideas, and how thoroughly you respond to my feedback.

Proposal (25 points) Your proposal will describe the research project you are conducting and the work you have completed so far. The proposal should describe the topic you seek to investigate, the questions you will ask, and the sources you will use to answer your questions. The majority of your research should be based on primary sources, so you will need to find at least six primary sources for your paper. Explain how these sources help you answer the questions you are asking. You must also include at least two monographs (books by historians about your topic) and describe how they help you contextualize your research. Your final paragraph should explain the significance of your research. Why should historians want to know the answer to the questions you are asking?

First Draft (50 points) Your first draft must be a complete draft of your research paper, be free of spelling and grammatical errors, include correct footnotes for all reference, and include a complete bibliography. Incomplete drafts will be graded accordingly. In the first paragraph of your paper, begin by describing the historical topic your paper investigates. The reader should be able to understand all of the important information very early in your work. You should also then clearly explain the thesis of your research. You need to do much more than tell a story—you need to answer a specific historical question with a thesis statement that derives from your evidence. The majority of your work will consist of your evaluation of the primary and secondary sources. Organize the material in a clear manner so that the reader can see the links you are making between evidence and conclusions and so that the reader has a clear understanding of the organization of the paper. End the paper with a brief summary of the evidence and thesis, as well as a justification for your work. Why does your research matter? How does your research fit into the larger story of the history of popular American historical memory, and how people perceive its peoples, government, and culture? Do historians or laypeople learn something new about popular memory because of your work?

Final Paper (100 points) Your final paper will be evaluated based on how clearly and effectively you argue your thesis. Your thesis should be clear and logical, and the body of your paper must demonstrate how the evidence you use proves your argument. I will also grade the paper according to how completely you have responded to my comments in the first draft, as well as how carefully you have followed the given instructions. Simply resubmitting an unrevised first draft will result in a significantly lower grade than you received on the draft. You must submit the first draft with my comments and your progress report along with your final paper.

General Education Competency
Communication – Writing
Rubric

Criteria	Excellent (4)	Proficient (3)	Adequate (2)	Inadequate (1)
Provides a clear, concise thesis statement.	• Statement is clear and concise • Statement is well reasoned • Statement leads to plentiful additional discussion	• Statement is generally clear and concise • Statement is mostly well reasoned • Statement leads to enough additional discussion	• Statement is recognized by the reader • Statement has some elements of reason • Statement leads to some additional discussion	• Statement is not recognized by the reader • Statement is not reasoned • Statement does not lead to additional discussion
Provides supporting paragraphs which relate to the thesis.	• Supporting paragraphs are well reasoned • Supporting paragraphs clearly relate to the thesis • Supporting paragraphs are cohesive and logically developed.	• Supporting paragraphs contain mostly well reasoned content • Supporting paragraphs often but not always relate to the thesis • Supporting paragraphs demonstrate some cohesion and development.	• Supporting paragraphs contain some well reasoned content • Supporting paragraphs relate to the thesis in some way • Supporting paragraphs demonstrate a few elements of cohesion and development.	• Supporting paragraphs do not contain reasoned content • Supporting paragraphs do not relate to the thesis • Supporting paragraphs are neither cohesive nor unified

New Mexico General Education Curriculum Course Certification Form

Application Number 1480

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	ogriego@nmmi.edi
Registrar Name	Chris Wright
Registrar Email	wright@nmmi.edu
Department	Communications
Prefix	COMM
Number	2230
Suffix	-
Title	Digital Photography
Number of Credits	3

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	COMM
Number	2230
Suffix	-
Title	Digital Photography

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☒ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☒ Communication ☒ Critical Thinking ☒ Information & Digital Literacy

☐ Quantitative Reasoning ☐ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

This course provides instruction in digital photography, emphasizing the relationship between new digital imaging processes and color photographic techniques. Assigned reading and class discussion will address contemporary issues in art and digital photography. Examination of the functions of light and color, crucial elements in the context of image capture, will be central to the course. Assignments will require the generation and alteration of digital photographs, with some emphasis on montage techniques. The course includes instruction in camera operation, scanning processes, lighting, image editing software, digital workflow, and output for print.

Student Learning Outcomes

1. Students will create digital images, applying concepts relating to digital photographic processes, color theory, and the history and process of photomontage.
2. Students will assess and evaluate the creative work of their peers through both written and verbal critique.
3. Students will research and analyze the creative work of a contemporary artist and write a scholarly paper.
4. Students will choose and develop proposals for two photography portfolios, which they will create, one as a group, and individually.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

5. Students will attend school events and take picture for the school yearbook.
6. Students will interview staff, students, faculty, administration, and athletes to create a spotlight section for the yearbook.
7. Students will create headlines for each picture for the yearbook.
8. Students will edit and make corrections to their classmates work.
9. Students are required to create 20 spreads for the yearbook.
10. Students will learn the importance of camera etiquette.
11. Students will strategically learn time management and the significance of meeting deadlines.
12. Students will work together as a team, and collaborate efficiently at all times.
13. After completing this course, students will help to produce the yearbook publication for each school year.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Genre and Medium Awareness, Application, and Versatility—Identify and communicate in various genres and mediums (oral, written, and digital) using strategies appropriate for the rhetorical situations (i.e., attending to audience, purpose, and context)

This course is designed to allow students to step out of their comfort zone and discover not only their strengths, but their weaknesses as well. When taking Digital Photography, students walked into the unknown of not realizing their true gifts and talents for photography. Students completed multiple assignments, attended many events, such as: Athletic Events, School Clubs, Leadership Ceremonies, and a Speech and Debate Contest to capture the most inspiring moments, so students, staff, and faculty would have memories for a lifetime. Students set up interviews with staff, athletes, faculty, other students, and administration to interview them and take their picture for the yearbook. Students applied their expertise of editing to their pictures, and then uploaded the pictures to the website for the instruction to proof and make more edits if needed. Students gained the skills of communicating orally, written, and digitally. Students completed their assigned section of the yearbook and were given a copy after publication from the company. This class was designed to allow students the opportunity to have a voice in designing and implementing change each year to the yearbook. Each year students use their innovative ideas, mesh together, become a unit, and design a dynamic yearbook for all to enjoy for years to come.

Strategies for Understanding and Evaluating Messages—Apply strategies such as reading for main points; seeking key arguments, counterarguments, rebuttals; locating supportive documentation for arguments; reading with specific stakeholder lens; applying a theoretical lens (e.g., cultural, political, economic) to understand and evaluate messages in terms of the rhetorical situation (audience, purpose, and context).

Students learned the importance of meeting deadlines when publishing the yearbook, staying on task, and being confident as writers and editors. Students learned how to communicate with different cultures, create a strategic plan when setting deadlines and interviewing individuals. Students learned how to prepare and organize for an interview. Students created a timeline to meet deadlines within the class, so they did not get behind. Students learned how to upload pictures, edit documents and pictures, and create schedule of events to take pictures. Students took on several duties and were in charge of communicating with each other in regards to photography. Students looked at other yearbooks for ideas. Students learned how to research and write academic journals for publication. Students created a photography portfolio, students collaborated as a team, prepared and created articles for publication.

Evaluation and Production of Arguments—Evaluate the authority of sources in their won arguments and those of others; distinguish among supported claims, unsupported claims, facts, inferences, and opinions. In arguments, integrate support for their own claims with information from sources that are used and cited ethically and appropriately (using a major citation system such as MLA and APA).

After successful completing the Digital Photography course, students gained the knowledge of what it took to produce a yearbook. The importance of setting deadlines, using their time wisely, and staying on task. In the end, students produced a yearbook of 265 pages in length that was distributed to the student body, faculty, staff, and alumni/sponsors. Students gained expertise of which will they will take with them as they continue in their academic careers, in their career path of which they have chosen, and in everyday life.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Problem Setting—Delineate a problem or question. Students state problem/question appropriate to the context.
Several problems gave about when doing the yearbook and uploading pictures. Students did not always mark the pictures and upload them in the correct files, so students had to collaborate together and find the correct picture to place on the spread. Students did not always meet the deadlines, so students had to put in extra time on certain days to make up the time missed on assignments.

Evidence Acquisition—Identify and gather the information/data necessary to address the problem or question.
The evidence was the pictures were not in the correct location to upload for the publication. Students had to dig deep to find the pictures, then place them in the correct folder. This added extra stress and time on the team, of which could have been avoided.

Evidence Evaluation—Evaluate evidence/data for credibility (e.g. bias, reliability, and validity), probable truth, and relevance to a situation.
Students learned the importance of being organized, being credible with publishing material, and giving credit where credit was due. Students learned if certain photos were taken by the Athletic Department, then students needed to give credit to them, and not take credit for pictures they did not do. The same goes for students work. Students gave credit to their classmates, if they took pictures for an article, and they did not take the pictures; they could not receive credit.

Reasoning/Conclusion—Develop conclusions, solutions, and outcomes that reflect an informed, well-reasoned evaluation.
Digital Photography is designed to allow students to be innovative, capture the moments, but to tell the story without verbal communication. Digital Photography is a sign of nonverbal communication, for each picture tells a story. Digital Photography allowed students to problem solve, while working together as a team. Students learned to edit and review not only their work, but the work of their classmates. Students excelled and wanted to be successful. Students learned that their work was going to be distributed across the campus, and wanted to do it well. Students realized problems would come up, but they quickly learned how to resolved and come up with a solution. Students gained a skillset of which they can take with them for the rest of their lives.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

In this box, provide a narrative that explains how the proposed course addresses the outcomes of the essential skills. At least 400 words.

ADDRESS 2 OF 5:

Intercultural reasoning and intercultural competence—Explain a range of personal, social, cultural, or social justice issues as they relate to one's own or others' perspectives.

Students engaged in a wide range of intercultural reasoning and intercultural competence. Students were required to attend athletic events, social events, ceremonies, and school clubs to obtain photographs for the yearbook. Students had to participate in activities and be actively engaged personally, socially, and culturally to hone their expertise while obtaining the correct information needed for their portion of the yearbook. Students realized the significance of understanding how to communicate effectively with their audience, and gained confidence when interviewing subjects for the yearbook. Students gained innovative ideas by stepping out of their comfort zone and discovering their strengths when doing digital photography. Students used their personal innovative ideas to design and implement changes to pictures. Students had to understand the culture to be aware of how to communicate effectively with each subject matter. Socially students engaged in all activities, to put their own twist and ideas to capture the moment to tell a story.

Sustainability and the natural and human worlds—Examine the relationship among environmental, socio-cultural, political, and economic systems as they interact with and affect the sustainability of the natural and human worlds.

Ethical Reasoning—Describe shared ethical responsibilities or moral norms among members of a group. Explain ethical issues or propose solutions based on ethical perspectives or theories.

Collaboration skills, teamwork, and value systems—Demonstrate effective and ethical collaboration in support of meeting identified group goals. (Accountability is implied with "ethical.")

This course would not be successful if students were not able to collaborate and work together as a team. When taking Digital Photography it is significant students work together as a team, come together to collaborate, and understand the value of ethical work. Students learned to steal classmates work. Students learned to collaborate, work together as a team to meet deadlines. Students learned to help each other, to trust each other, and to keep each other accountable and to make sure your work is ethical. Students challenged their classmates to do the best work, as it was representing them as a class, their instructor, and New Mexico Military Institute. Students demonstrated effective and ethical work for publication. Students maintained and set new goals each week. Students stayed on task. Students attended activities and worked together as a team to make success happen in and out of the classroom. Students assessed and evaluated the creative work of their peers through both written and verbal critique. Students chose and developed proposals for their team collaboration portfolio for publication.

Civic discourse, civic knowledge, and engagement: local and global—Explain and support one's own position on specific local or global issues while recognizing that there may be multiple valid perspectives.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/assessment-plans/

NEW MEXICO MILITARY INSTITUTE

101 West College Boulevard

Roswell, New Mexico 88201-5173

(575) 624-8200

MAJ McKinney Wright

Intercultural Communication

Digital Photography/Photojournalism

Assignment

You will need to pick up your assigned camera for this assignment and sign it out.

You will need to take 10 different pictures of around campus, then upload them to the desktop, and put them in Photoshop. You then will need to edit each picture and put a headline or title for each picture.

This assignment is worth 100 points. 10 points for each photo edited and uploaded.

Please take pictures of the following:
1. Someone playing basketball in the gym.
2. A group of students at lunch.
3. Faculty or Staff Member.
4. Squirrel
5. Something unique on campus
6. New Mexico Military Institute sign
7. A classroom
8. Cadet's Marching
9. Cadet Store
10. Athletic Practice (Football, Soccer, Volleyball, etc.)
Rubric
10Points -For each photo taken and edited with Headline/Title.

New Mexico General Education Curriculum Course Certification Form

Application Number 1495

Institution and Course Information

Name of Institution	Northern New Mexico College
Chief Academic Officer Name	Ivan Lopez
Chief Academic Officer Email	ilopez@nnmc.edu
Registrar Name	Janice Baca
Registrar Email	janice.baca@nnmc.edu
Department	Arts & Human Sciences
Prefix	HIST
Number	1150
Suffix	-
Title	Western Civilization I
Number of Credits	3

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	ENGL
Number	109
Suffix	N
Title	Basic Composition II

New Mexico Common Course information

Prefix	HIST
Number	1150
Suffix	-
Title	Western Civilization I

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences
☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Students will be able to EXPLAIN in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of the western world from ancient times to the early modern era.
Bloom Taxonomy's Cognitive Process: REMEMBER AND UNDERSTAND
2. Students will DISTINGUISH between primary and secondary sources, IDENTIFY and EVALUATE evidence and EMPATHIZE with people in their historical context.
Bloom Taxonomy's Cognitive Process: ANALYZE, REMEMBER, EVALUATE, CREATE
3. Students will SUMMARIZE and APPRAISE different historical interpretations and evidence in order to CONSTRUCT past events.
Bloom Taxonomy's Cognitive Process: UNDERSTAND, EVALUATE, APPLY
4. Students will IDENTIFY historical arguments in a variety of sources and EXPLAIN how they were constructed, EVALUATING credibility, perspective, and relevance.
Bloom Taxonomy's Cognitive Process: REMEMBER, UNDERSTAND, EVALUATE
5. Students will CREATE well-supported historical arguments and narratives that demonstrate an awareness of audience.
Bloom Taxonomy's Cognitive Process: CREATE, APPLY
6. Students will APPLY historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present."
Bloom Taxonomy's Cognitive Process: APPLY, ANALYZE

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

Critical Thinking
Information & Digital Literacy
Personal & Social Responsibility
Communication
Quantitative & Qualitative Reasoning

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
The course will help students distinguish fact from opinion, recognize cause & effect relationships, defend conclusions based on sound reasoning and logic, and differentiate between the value and credibility of various sources. Students will recognize the difference between fact and opinion and appropriately cites supporting material. Students will recognize cause and effect relationships and employs appropriate skills when seeking a solution or predicting an outcome. Students will defend conclusions based on sound reasoning and logic. Students will differentiate between the value and credibility of various sources.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
This course will help students cultivate an awareness of peoples' cultures, examine social norms and power relations, apply ethical and moral reasoning, and recognize that complex identities are a source of individual and social strength with the ultimate goal of positively contributing to society through diversity, inclusion, and equity. Students will demonstrate sophisticated understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices. Students will articulate a complex understanding of cultural differences in verbal and nonverbal communication (e.g., demonstrates understanding of the degree to which people use physical contact while communicating in different cultures or use direct/indirect and explicit/implicit meanings) and is able to skillfully negotiate a shared understanding based on those differences. Students will articulate insights into own cultural rules and biases (e.g. seeking complexity; aware of how her/his experiences have shaped these rules, and how to recognize and respond to cultural biases, resulting in a shift in self-description.) Students will ask complex questions about other cultures, seek out and articulate answers to these questions that reflect multiple cultural perspectives. Suspend judgment about cultural differences. Students will interpret intercultural experience from the perspectives of own and more than one worldview and demonstrate ability to act in a supportive manner that recognizes the feelings of another cultural group.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*
This course will help students reflectively locate, organize, analyze, and evaluate information across multiple platforms or media in order to apply that information to a defined question or problem. Students will establish criteria to evaluate information, formats, and sources and to differentiate between reliable and convenient information. Students will create new work (e.g. synthesize or summarize and create new knowledge) without compromising intellectual property rights/maintaining academic integrity in their own work and the works of others. Students will demonstrate fluency using common digital education and social communication platforms; design effective digital media; demonstrate fluency in using current computational tools including identifying errors, understanding platform limitations, or recognizing misleading information.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://nnmc.edu/home/academics/office-of-the-provost/office-of-institutional-research/student-outcomes-data/student-learning-outcomes/

Information & Digital Literacy

DEFINITION

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Component Skill	Emerging	Developing	Proficient
Authority of Information: Recognize authoratiative information in context.	Students do not consistently recognize information is produced by individuals and communities who may or may not be reliable and who may have a particular point of view.	Students partially establish criteria to evaluate information, formats, and sources and to differentiate between reliable and convenient information.	Students establish criteria to evaluate information, formats, and sources and to differentiate between reliable and convenient information.
Value of Information: Recognize the value of information and use this knowledge ethically when selecting, using, and creating information.	Students demonstrate consistent or repeated incidents of unintentional plagiarism/ misuse of works of others showing little understanding of academic integrity.	Students demonstrate isolated incidents of unintentional plagiarism/ misuse of works of others due to misunderstanding of a single concept (e.g. misunderstanding citing, summarizing, paraphrasing, quoting, etc.,)	Students create new work (e.g. synthesize or summarize and create new knowledge) without compromising intellectual property rights/maintaining academic integrity in their own work and the works of others.

Digital Literacy: Communicate, compute, create, and design in digital environments.	Students demonstrate limited use of some appropriate applications to communicate and create, including common digital education and social communication platforms.	Students select and use some appropriate applications to create and effectively communicate including common digital education and social communication platforms and current computational tools.	Students demonstrate fluency using common digital education and social communication platforms; design effective digital media; demonstrate fluency in using current computational tools including identifying errors, understanding platform limitations, or recognizing misleading information.			

Personal & Social Responsibility: Cultural Awareness

DEFINITION

Cultivate an awareness of peoples' cultures, examine social norms and power relations, apply ethical and moral reasoning, and recognize that complex identities are a source of individual and social strength with the ultimate goal of positively contributing to society through diversity, inclusion, and equity.

During the data collection period, faculty evaluated student work products with a program outcome assessment rubric that utilized a three-point scale, where 3 = Proficient, 2 = Developing, and 1 = Emerging.

Component Skill	Emerging	Developing	Proficient
Awareness of peoples' cultures	Students demonstrate partial understanding of the complexity of	Students demonstrate adequate understanding of	Students demonstrate sophisticated understanding of the complexity of elements

	elements important to members of another culture in relation to its history, values, politics, communication, economy, or beliefs and practices.	the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.	important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.			
Intercultural communication	Students identify some cultural differences in verbal and nonverbal communication and is aware that misunderstandings can occur based on those differences but is still unable to negotiate a shared understanding.	Students recognizes and participate in cultural differences in verbal and nonverbal communication and begins to negotiate a shared understanding based on those differences.	Students articulate a complex understanding of cultural differences in verbal and nonverbal communication (e.g., demonstrates understanding of the degree to which people use physical contact while communicating in different cultures or use direct/indirect and explicit/implicit meanings) and is able to skillfully negotiate a shared understanding based on those differences.			
Personal biases	Students identify their own cultural rules and biases (e.g. with a strong preference for those rules shared with own cultural group and seeks the same in others.)	Students recognize new perspectives about own cultural rules and biases (e.g. not looking for sameness; comfortable with the complexities that new perspectives offer.)	Students articulate insights into own cultural rules and biases (e.g. seeking complexity; aware of how her/his experiences have shaped these rules, and how to recognize and respond to cultural biases, resulting in a shift in self-description.)			
Cultural Differences	Students ask simple or surface questions about other cultures.	Students ask deeper questions about other cultures and	Students ask complex questions about other cultures, seek out and			

	Have difficulty suspending any judgment in cultural differences.	seek out answers to these questions. Begin to suspend judgment in cultural differences.	articulate answers to these questions that reflect multiple cultural perspectives. Suspend judgment about cultural differences.			
Empathy	Students identify components of other cultural perspectives but respond in all situations with own worldview.	Students recognize intellectual and emotional dimensions of more than one worldview and sometimes use more than one worldview in interactions.	Students interpret intercultural experience from the perspectives of own and more than one worldview and demonstrate ability to act in a supportive manner that recognizes the feelings of another cultural group.			

Student Learning Outcome: Critical Thought					
Goal: performance at (1-2) in 100/200 level courses					
Goal: perform at (2-3) in 300/400 level courses					
	0	1	2	3	4
The Student…	Does not meet minimum expectations	Beginning	Developing	Accomplished	Exemplary
Distinguishing fact from opinion	Does not recognize the difference between fact and opinion.	Recognizes the difference between fact and opinion.	Recognizes the difference between fact and opinion and applies techniques to distinguish between the two.	Recognizes the difference between fact and opinion and compares methods for distinguishing between the two.	Recognizes the difference between fact and opinion and appropriately cites supporting material.

Cause and effect	Does not recognize cause and effect relationships.	Recognizes cause and effect relationships.	Recognizes cause and effect relationships and explains how they are connected.	Recognizes cause and effect relationships and incorporates supporting knowledge to explain their relationship.	Recognizes cause and effect relationships and employs appropriate skills when seeking a solution or predicting an outcome.
Reasoning and deduction	Does not understand the meaning of reasoning and deduction	Draws conclusions without applying basic reasoning	Draws conclusions on basic reasoning	Analyzes soundness of conclusions based on relevant sources and reasoning	Defends conclusions based on sound reasoning and logic
Sources of information	Does not know how to find appropriate sources of information	Uses sources	Uses multiple sources and prepares correct citation	Uses multiple and appropriate sources and prepares correct citations	Differentiates between the value and credibility of various sources

New Mexico General Education Curriculum Course Certification Form

Application Number 1496

Institution and Course Information

Name of Institution	Northern New Mexico College
Chief Academic Officer Name	Ivan Lopez
Chief Academic Officer Email	ilopez@nnmc.edu
Registrar Name	Janice Baca
Registrar Email	janice.baca@nnmc.edu
Department	Arts & Human Sciences
Prefix	HIST
Number	1160
Suffix	-
Title	Western Civilization II
Number of Credits	3

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	HIST
Number	1150
Suffix	-
Title	Western Civilization I

New Mexico Common Course information

Prefix	HIST
Number	1160
Suffix	-
Title	Western Civilization II

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences
☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Students will be able to EXPLAIN in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of the western world from the early modern era to the present.
Bloom Taxonomy's Cognitive Process: REMEMBER AND UNDERSTAND
2. Students will DISTINGUISH between primary and secondary sources, IDENTIFY and EVALUATE evidence and EMPATHIZE with people in their historical context.
Bloom Taxonomy's Cognitive Process: ANALYZE, REMEMBER, EVALUATE, CREATE
3. Students will SUMMARIZE and APPRAISE different historical interpretations and evidence in order to CONSTRUCT past events.
Bloom Taxonomy's Cognitive Process: UNDERSTAND, EVALUATE, APPLY
4. Students will IDENTIFY historical arguments in a variety of sources and EXPLAIN how they were constructed, EVALUATING credibility, perspective, and relevance.
Bloom Taxonomy's Cognitive Process: REMEMBER, UNDERSTAND, EVALUATE
5. Students will CREATE well-supported historical arguments and narratives that demonstrate an awareness of audience.
Bloom Taxonomy's Cognitive Process: CREATE, APPLY
6. Students will APPLY historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present."
Bloom Taxonomy's Cognitive Process: APPLY, ANALYZE

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

Critical Thinking
Information & Digital Literacy
Personal & Social Responsibility
Communication
Quantitative & Qualitative Reasoning

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
The course will help students distinguish fact from opinion, recognize cause & effect relationships, defend conclusions based on sound reasoning and logic, and differentiate between the value and credibility of various sources. Students will recognize the difference between fact and opinion and appropriately cites supporting material. Students will recognize cause and effect relationships and employs appropriate skills when seeking a solution or predicting an outcome. Students will defend conclusions based on sound reasoning and logic. Students will differentiate between the value and credibility of various sources.

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WORLD ARCHITECTURE II

Spring 2022 **Aaron Cayer, PhD**
ARCH 2125

RESEARCH PAPER: HOUSE HISTORIES[1]

This semester, students will write a research paper that analyzes a single structure of dwelling from their own family—one in which they may have lived, or one in which their ancestors may have lived decades or centuries ago. The ultimate goal of this project is to investigate the ways in which spaces of dwelling reveal social and materials stories about who we are as individuals and the role that architecture plays in shaping us and our practices over time. The challenge to students will be: how far back can you research, and how globally can you construct your own history through architecture? The "house" can be understood broadly: it may include a hogan, shelter, apartment, farmhouse, single-family home, dorm room, etc., and it may be located anywhere in the world—in a city, rural community, or anywhere in between. It should somehow describe and resonate with "you." The guiding questions to consider for this project are: in what ways is/was this house specific, unique, and meaningful to you and your family (hint: try to find the "extraordinary" even in the "ordinary")? How does it reflect/reinforce/produce family rituals, beliefs, cultures, and traditions? In what ways does it demonstrate how architecture (and your life) is shaped by global histories?

The grade of your paper will be determined by the rubric below. Your paper must include both **primary sources** (drawings, maps, photographs, oral history interviews) and **secondary sources**. Diaries, notes, letters, or oral histories with family members may constitute primary sources, while article from a scholarly journal, books, or many assigned readings from class constitute secondary sources. When recording an oral history, be sure to include quotes from your interview in your paper, *and* to analyze what the experiences mean to people who have lived in ("inhabited") the house.

Websites or web-based databases are often useful to guide your research, but many do not count as research sources. Your research should concern itself with primary and secondary print sources. [Note: an online database used to find an article or book does not constitute a "website."]

Possible factors of influence to consider for your research (you may select one or more, or find others):

-colonialism or post-colonialism
-nation-building
-migration, immigration, or displacement
-new technologies, materials, and/or industrialization
-regionalism
-urban growth or development
-domesticity (eg: patriarchy, gender roles, etc.)
-politics or specific events
-economic systems/capitalism
-religion and/or systems of belief

[1] This assignment was adapted from Marta Gutman, Professor of Architecture at City College of New York.

PARTS OF THE PAPER

Part 1: INTRODUCE (one paragraph):
This should include a brief overview of your paper and a thesis statement.
It should include, at minimum: 1) a brief overview of the house you selected, its basic information (date, location, etc.); 2) a brief explanation of why you selected it and the factors of influence you found to be most important to you/your family's house (ie: why is it unique/meaningful to you?): 3) a clear thesis statement that describes THREE detailed features of the house that you will describe in the paper. These features can be as small as a piece of art on the wall, a particular room, the organization of the rooms, a particular materiality, a unique design feature, etc. For example: "*The 11th century dwelling I selected, Acoma Pueblo, was where my great ancestors resided, and its features represent many traditions I continue to practice today. More specifically, the paper will describe how the architecture reveals a struggle to maintain Indigenous traditions over time, including: 1) beliefs connecting to the land through its materiality; 2) community values of togetherness through its organization; and 3) the protection of our people through its siting.*

Part 2: CONTEXT: Historical Imagination (one paragraph)
This should include a brief description about the house you selected in relationship to the time period in which it was constructed. Why, where, and when was it built and what events or circumstances in the region/world were important to its construction? Be sure to briefly introduce the theme from the class through which you will analyze the house, and how it relates to the emergence of your house (eg: My Great Great Grandfather's Virginia plantation was constructed during the 17th century and it was influenced by settler colonization. According to X,Y,Z, architecture was used as a tool for settler colonization in the United States. Three key features were….).

Part 3: DESCRIBE: Physical Construction (3 features- one or more paragraphs)
Describe the house in detail, including answers to: where, who, what, when, why. Try to describe your house carefully, and then offer background information about how the house got to be that way. If there are specific aspects or small details of the house that tell stories, it is fine to focus on them with greater precision.

Required primary sources:

- Site plan (a careful hand drawing is fine)
- Floor plan, elevation, section, (a careful hand drawing is fine)
- Historical and contemporary photos, as available
- Historical map, if available
- Any print source that puts your house and/or its designer in historical context (if available)

Required information:

- Architect, if known
- Construction method and materials
- Style or period date built
- Owner (and financing method used, if available)
- Historical reason for or condition prompting the construction of your building
- Make note of revisions, renovations, remodeling or previous uses

Part 4: ANALYZE: Social construction (connect to 3 features- one or more paragraphs)
Based on conversations, oral history interviews, traditions, etc; analyze the dwelling in terms of its social use and meaning: what does it mean, how are the spaces used, and how does it compare/contrast with the space in which you live now?

Required primary sources:

- Conduct AT LEAST one oral history with a relative (your siblings, parents, grandparents, aunts, uncles) that explains where you come from (ie: your global roots) and the history of the house. Where did your family come from, prior to the United States? How did this influence their house selection? What type of house did they live in before the US? Is it similar or different? Why did your family choose to settle in New Mexico? You are welcome to quote from the interview in your paper using the language of the speaker (Spanish, Russian, Mandarin, etc., without translation). **IMPORTANT:** record the interview and use quotes in your paper! Feel free to use quotes in the original language of the speaker (Spanish, Russian, Mandarin, etc.).
- Collect photos or drawings that illustrate the histories described by your relative(s)

Part 4: CONCLUDE: Relationship to architecture history (one paragraph)
Reiterate how the building and its three primary features relates to one of the themes in our class. Does your house precisely demonstrate one of the themes, or many? What might this "intersectionality" imply? Conclude by describing why the house is potential significant to you *and* to the idea of a "global" history. (Note: by the conclusion, you should be summarizing your key points that reflect the same arguments of your introduction. This is not the space to introduce new ideas or citations; those should be introduced earlier).

USEFUL RESOURCES

Local archival material (historical maps, photos, drawings, etc.):
-The Center for Southwest Research (maps, drawings, photos): https://elibrary.unm.edu/cswr/
-Albuquerque Modernism: http://albuquerquemodernism.unm.edu
-City of Albuquerque (historical maps, especially): https://www.cabq.gov/planning/boards-commissions/landmarks-commission/historic-preservation
-Sanborn maps: https://www.loc.gov/collections/sanborn-maps
-Artstor: https://library.artstor.org/#/
-Historical newspapers:
https://www.proquest.com/cv_1885456/advanced?accountid=14613&parentSessionId=NZthqUQqeVAPAobiTQK1FvLsZ5PiVXezE%2F7%2BwAWGrt8%3D

How to conduct oral histories:
Smithsonian Institution Archives, "How to do an Oral history,"
https://siarchives.si.edu/history/how-do-oral-history
Oral history association, "Best Practices," https://www.oralhistory.org/best-practices/

How to write an abstract:
In no more than 4-6 sentences, describe the specific case study and corresponding theme that you are interested in exploring further. Abstracts should be a single paragraph, and they should include the following components:

1. An objective
    a. This should succinctly describe, in 1-2 sentences, what the case study is that you wish to write about, the three possible features you'd like to describe, and how these relate to a theme of our class
2. A question

    a. What is the primary question you'd like to learn more about? (Eg: what specifically about the house and your family's past do you hope to uncover?). (Tip: you might write: "This research asks: in what was does this house reveal X, Y, Z?")
3. A method
    a. How will you go about answering your question? Which types of documents (primary and secondary) might you have access to? Who might you be able to interview?
4. Implications
    a. What do you hope to uncover? How does this draw on, add to, or challenge the ideas or themes from our class?

Final papers requirements:

- 6-8 written pages
- must include illustrations, captions, and citations (footnotes or endnotes, and a bibliography)
- at least 3-5 scholarly sources (no websites); 6-8 sources for graduate students
- 12 pt. font
- Double-spaced
- All papers must be proof-read and spell-checked; no exceptions

Schedule

Wed. Feb 2: Introduction to "House Histories" project
Wed. Feb 9: Beginning research (oral histories and archives)
Wed. Feb 21: Abstract due, with primary and secondary sources identified
Wed. March 9: Part 3 "DESCRIBE" section of papers due.
Wed. April 13: In-class formatting: using InDesign
Mon. April 25: Full drafts due; in-class peer workshop
Wed. April 27: Individual meetings with professors
Wed. May 6: Final papers due on Learn

RUBRIC (20 points)

Organization (5 pts):

5 points = each section of the paper is complete, and it follows a logical order
4 points = most sections of the paper are complete, and it mostly follows a logical order
3 points = some sections of the paper are complete, and it sometimes follows a logical order
2 points = two or less sections of the paper are complete, and it does not follow a logical order
1 point = none of the sections of the paper are complete, and the paper does not follow a logical order

Evidence (5 pts):

5 points = the paper includes all required primary sources and at least five scholarly secondary sources
4 points = the paper includes most of the required primary sources and at least four scholarly secondary sources
3 points = the paper includes some of the required primary sources and at least three scholarly secondary sources

2 points = the paper includes a few of the required primary sources and at least two scholarly secondary sources
1 point = the paper includes almost none of the required primary sources and one or less scholarly secondary sources

Process (5 pts)
5 points: submitted all five drafts on time (Abstract; PechaKucha, "Describe" draft; Oral history; full draft)
4 points: submitted four drafts on time (or all five but some were late)
3 points: submitted three drafts on time (or four but some were late)
2 points: submitted two drafts on time (or three but some were late)
1 point: submitted one draft on time (or two but some were late)

Clarity (5 pts)
5 points = the paper is well-written, without significant grammatical or typographical errors, and the ideas are very clear
4 points = the paper is mostly well-written, and the paper has only minor grammatical or typographical errors; the ideas are mostly clear
3 points = the paper is unevenly written, and has grammatical or typographical errors; some of the ideas are clear
2 points = the paper is not very well written, and has many grammatical or typographical errors; the ideas are present but not clear
1 point = the paper is not legible due to substantial grammatical or typographical errors; the ideas are not clear

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1504

Institution and Course Information

Name of Institution	University of New Mexico – Main
Chief Academic Officer Name	Pamela Cheek
Chief Academic Officer Email	pcheek@unm.edu
Registrar Name	Michael Raine
Registrar Email	mraine@unm.edu
Department	Registrar
Prefix	ARCH
Number	2125
Suffix	-
Title	World Architecture II
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	ARCH
Number	2125
Suffix	-
Title	World Architecture II

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences

☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1) Identify key characteristics of the built environment from different time periods (post-1700) and explain the events that influenced them.
2) Describe how architectural ideas, materials, and labor circulate globally.
3) Understand how one's own life compares/contrasts with those of others around the globe at different time periods
4) Identify how architects and architecture participate within broader social, cultural, and economic systems.
5) Differentiate between claims backed by research and those not backed by research.
6) Conduct original architectural research using historical methods.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

NA

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Component skill addressed by SLO 1 and 6
Problem setting- Delineate a problem or question. Students state problem/question appropriate to the context.
Through lectures, readings, and course discussions, student learn how to develop research questions. They then practice developing their own questions in an independent research assignment and refining them through in-class peer reviews.

Evidence Acquisition- Identify and gather the information/data necessary to address the problem or question.
Through lectures, readings, and course discussions, student learn about various historical methods for gathering information in response to their own questions. They then practice these methods by acquiring information through independent research, search databases, and/or archives.
Evidence Evaluation- Evaluate evidence/data for credibility (e.g. bias, reliability, and validity), probable truth, and relevance to a situation.
Through lectures, readings, and course discussions, student learn how to assess and evaluate various historical evidence. They then practice assessing and evaluating information in small class assignments and on their own as they assess the findings of their independent research (see sample assignment).
Reasoning/Conclusion- Evaluate evidence/data for credibility (e.g. bias, reliability, and validity), probable truth, and relevance to a situation.
Through lectures, readings, and course discussions, student learn about how to draw conclusions from historical research and writing. They then practice developing their own conclusions in a writing assessment in which they draw conclusions and produce an argument (see sample assignment).

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Intercultural reasoning and intercultural competence; Explain a range of personal, social, cultural, or social justice issues as they relate to one's own or others' perspectives.
Through lectures, readings, and course discussions, students explore a range of viewpoints from around the world and at different moments in time. They study and are quizzed on these various viewpoints, and they then practice relating them to their own histories in independent research projects about their own families.
Civic discourse, civic knowledge and engagement – local and global - Explain and support one's own position on specific local or global issues while recognizing that there may be multiple valid perspectives.
After learning about local and global knowledge through courses lectures and readings, students engage in discussion with their peers and practice sharing and learning about the multiple perspectives possible within history.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

Authority and Value of Information- Recognize the interdependent nature of the authority and value of information and use this knowledge ethically when selecting, using, and creating information.
Students engage in independent research projects for which annotated bibliographies are required. They then receive feedback and consider each text's value and its relationships to their own work. This helps students to recognize the value of information and how to use it ethically in creating new knowledge.
Information structures- Select, use, produce, organize, and share information employing appropriate information formats, collections, systems, and applications.
Students are prompted with texts about the production and organization of information that are then summarized and discussed in class. Through their readings and discussions, students are learning
Research as Inquiry- Engage in an iterative process of inquiry that defines a problem or poses a question and through research generates a reasonable solution or answer.
Students engage in research independently. Their work is scaffolded and they produce a series of drafts in which they move through a research process sequentially (see sample assignment). They receive feedback from the instructor and their peers on their drafts and learn how iterative processes of inquiry generate arguments.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	http://assessment.unm.edu/

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1509

Institution and Course Information

Name of Institution	Eastern New Mexico University - Ruidoso
Chief Academic Officer Name	Coda Omness
Chief Academic Officer Email	coda.omness@enmu.edu
Registrar Name	RaLynne Stanbrough
Registrar Email	ralynne.stanbrough@enmu.edu
Department	Research & Records
Prefix	ARTS
Number	1530
Suffix	-
Title	Digital Media II
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	ARTS
Number	1530
Suffix	-
Title	Digital Media II

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences
☐ Humanities ☒ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☒ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Demonstrate an understanding of the software
2. Gain knowledge in the main features of the software and how to apply them for different styles of documents
3. Demonstrate an understanding of what constitutes a press-ready document

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

N/A

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

This course functions as a graphic design studio course for which students learn Adobe InDesign. Students complete regular in-class quizzes on common graphic design principles, concepts, and genre conventions. Quizzes likewise cover rhetorical purposes of specific graphic design and publication techniques and concepts such as font types, color schemes, visual principles, page design, etc. Students complete a major semester-long InDesign project—partnering with a local organization or business for whom students create a publicity or informational publication—for which they must apply their understanding of genre conventions while also demonstrating rhetorical purpose. As a part of this process, the course includes regular in-class peer critiques of student drafts of work, which focus on technique along with genre and rhetorical awareness. This feedback process likewise requires them to practice rhetorical awareness in crafting constructive feedback for an audience of peers. In-class, students review a variety of sample published magazine and publicity works, seeking evidence from these samples in order to analyze the message and the effectiveness of the works. Later, students complete the same process for their own development as graphic designers, through a series of "Skills Assessment" assignments: students must bring to class a work they've created that puts into practice a key InDesign technique or process, and both the student creator and classmates analyze the message and effectiveness of this work. Students, as part of their semester-long InDesign project, must produce text for their publication; they must interview their local organizational/business partner and also find credible sources online, then use this researched information to develop conclusions and solutions as a part of their publication text.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
For the semester-long InDesign publication project described above, students are in essence delineating a problem—how best to promote the services of a local organization/business?—and then answering that question via research and their final publication project. As students build towards this final project, they complete smaller assignments producing a part of the final publication while also practicing smaller graphic design, InDesign, and publication skills. In essence, for each of these smaller assignments, they must set out a question of how to complete a specific component of the magazine publication process, and then answer these questions by applying techniques and graphic design principles studied. In this analysis, and in peer-feedback critique sessions in class, students must evaluate evidence within graphic design works and then provide their reasoning using this evidence. Throughout these smaller assignments and also for the larger final project, students are required to accumulate "evidence" such as information, photographs, archival materials, etc., from a variety of primary and secondary sources, and then they must evaluate how to incorporate this "evidence" in order to solve the problem of producing an effective publication that satisfies the needs of the student's local organizational/business partner.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
Throughout the semester students are required to demonstrate intercultural reasoning and intercultural competence by studying a wide range of graphic design and magazine samples across a variety of genres and from a variety of artists and publishers. Oftentimes students demonstrate this reasoning and competence during discussions for which they must produce evidence from the graphic design samples. Students also demonstrate this competence, along with collaborative skills, by identifying, contacting, and then working with a real organizational or business partner within the community. Students share their final projects with these partners, and they also share them with the larger campus community as a part of a campus event showcasing student artwork. The students are present to discuss their graphic design projects with campus and community members attending the event. Students are required to demonstrate collaborative skills, teamwork, and shared values as a part of peer feedback critiques of one another's graphic design projects.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	Assessment Plan is in progress

Instructor: Dolores.Chacon@enmu.edu
Class: 1530 Digital Media II Spring 2023

ARTS1530 Final Project: Brochure

Final Due Date
(Beginning of class)
Digital File Uploaded
Print copy submitted
Wednesday, May 10

Project Grading Criteria

Interesting, creative concept; Researched topic; Obtained many, good quality images
50

Demonstrate accurate use of InDesign tools, Productive techniques. Created a professional publication worthy of distribution to the public
135

Effort, organization, followed directions, presentation
10

Project submission, craft & effort
5

Total Points Possible
200

Objective

This assignment is a comprehensive, professional-grade project that will take you all semester to complete. It is a 12-page booklet that utilizes multiple Master Pages, nested styles and many features found in the Effects Panel, including transparency, drop shadow and blending modes. You will apply paragraph, character and table styles. After printing, it will be folded, trimmed and stapled for the final piece.

Creative Process

1. Research tourist brochures and booklets by looking at actual printed samples. The Chamber of Commerce is a good resource.
2. See p.3 for a list of possible project locations. Choose one of these or choose your own (with instructor's permission).
3. Create an outline of the topics you want to include for the destination. Use the *Voyage Galapagos* booklet from the textbook as a guideline to create your own booklet.
4. Keep project notes as you work on this assignment.

Project Development

It is imperative to be organized on a project of this scope.

1. Create a paper "dummy" with pen/pencil showing placement of major elements.
2. Create a **folder** on your external drive named "Booklet Project YourName" and within that folder create more folders as follows: Research, Photos, Text, Fonts, & Working Booklet.
3. After your project has been approved, go to the actual location. Speak to the manager, if possible, and begin taking lots of photos. Go during different times of day.
4. Follow the instructions to create Folders in One Drive into which you will put your text (Word docs and all photos you take.
5. In Photoshop, adjust the Levels so you have an image with good contrast. Save the images to your flash drive and the Cloud.
6. Write all the text for the booklet in Word documents. All text should be a common font like Arial, about 12-points, and do not use any formatting other than paragraph breaks. Make a separate Word doc for each text area for your booklet. This should be your own writing, not just copied from an existing brochure or website.
7. Create a new InDesign document as follows: select Print (not Web); 12 pages; Facing Pages; Page size 7.5"x9"; Portrait orientation, Margins .75 in. all around; Bleed .125" all around.

Required Elements

The following must be included or utilized in your booklet.

1. Color Swatches for different colors used in your booklet
2. Paragraph and Character Styles
3. Table
4. Bulleted List
5. Several Master Pages
6. All photos must have captions
7. Must use page numbers (folios)
8. Include a copyright statement
9. Include one or more maps, creating by you in Illustrator
10. Table of contents with leaders
11. Mailer information
12. Logo of the business and other "bugs" like Facebook, etc.
13. Use Preflight to identify errors in the document
14. Use the Package function to create the PDF.
15. Print at school on Tabloid paper (11″x17″)

Presentation & Critique

1. Save a pdf version (small file size) of your working indd document to upload to Canvas.
2. Upload your indd file AND pdf document to One Drive.
3. Be prepared to explain your research and which InDesign tools and techniques you used. Tell your favorite part of the project and why.
4. After the critique, make revisions based on comments made and submit your final project pdf to Canvas. Use FLast Final.pdf e.g.
5. Print the booklet in class, fold, trim and staple each copy. Print at least 4 copies: 1 for the instructor, 1 for the department chair and others for your own portfolio or to share with others.

See semester schedule in syllabus for due dates of various portions of the project.

Chapters 12 and 13 in our textbook *Exploring InDesign Creative Cloud* by Terry Rydberg, contains lots of information you'll need to create your booklet with regards to moving pages, working with Master (Parent) Pages and more. In particular, read everything pertaining to the "Voyage Galapagos" project.

Ruidoso Area Activities and Attractions

1. Pillow's Funtrackers
   101 Carrizo Canyon Rd., Ruidoso, NM 88345 funtrackers-ruidoso.net

2. Ruidoso Winter Park
   121 Ski Run Rd., Alto, NM 88312 ruidosowinterpark.com

3. Horseback Riding
4. Hiking Trails
5. Golfing
6. Fishing
7. Camping
8. Ruidoso Downs Racetrack & Casino
9. Dog Parks
10. White Mountain Recreation Complex
11. Ski Apache
12. Off-Road Adventures
13. Midtown Shopping or galleries or restaurants
14. Mountain Lakes
15. Historical sites
16. Spencer Theater
17. Fort Stanton
18. Ranger Stations
19. Billy the Kid Museum
20. Casinos

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1510

Institution and Course Information

Name of Institution	Eastern New Mexico University - Ruidoso
Chief Academic Officer Name	Coda Omness
Chief Academic Officer Email	coda.omness@enmu.edu
Registrar Name	RaLynne Stanbrough
Registrar Email	ralynne.stanbrough@enmu.edu
Department	Research & Records
Prefix	ARTS
Number	1520
Suffix	-
Title	Digital Media I
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	ARTS
Number	1520
Suffix	-
Title	Digital Media I

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences
☐ Humanities ☒ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☒ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Demonstrate appropriate skills in configuring and navigating computer systems software applications as appropriate to digital image making needs including organization of files using keywords and running batch processes.
2. Exhibit an understanding of a layer based bitmap editing program, through photo retouching, precise use of selection tools, and color adjustment techniques.
3. Create imagery using a vector based illustration program which demonstrates an understanding of vector based drawing tools.
4. Integrate the use of bitmap and vector images using bitmap and vector based image making applications to demonstrate a basic understanding of composition, color, and appropriate image size and resolution.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

N/A

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

This course functions as a graphic design studio course for which students learn Adobe Illustrator and Adobe Photoshop. Students complete regular in-class quizzes on common graphic design principles, concepts, and genre conventions. Quizzes likewise cover rhetorical purposes of specific graphic design techniques and concepts such as masking, font types, color schemes, photo manipulation, etc. Students complete four major graphic design projects—visual patterns, portraiture, photo restoration, and postcards—for which they must apply their understanding of genre conventions while also demonstrating rhetorical purpose. As a part of this process, the course includes regular in-class peer critiques of student drafts of work, which focus on technique along with genre and rhetorical awareness. This feedback process likewise requires them to practice rhetorical awareness in crafting constructive feedback for an audience of peers. In-class, students review a variety of sample published graphic design works, seeking evidence from these samples in order to analyze the message and the effectiveness of the works. Later, students complete the same process for their own development as graphic designers, through a series of “Skills Assessment” assignments:

students must bring to class a work they've created that puts into practice a key graphic design technique, process, or genre, and both the student creator and classmates analyze the message and effectiveness of this work. Students complete an assignment on typeface and fonts for which they must research a specific font, finding credible sources online, and then complete a short writing assignment using this evidence to argue for the effectiveness (or ineffectiveness) of the font. Students must also write a 2-3 page paper for which they must find a piece of artwork and apply an arts-focused framework of evaluation (Describe, Analyze, Interpret, Judge) in their graphic design-based critique of this artwork.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

For the short artwork critique paper described above, students are in essence delineating a problem—what makes this piece of artwork good?—and then answering that question using graphic design concepts and evidence from the artwork. Students also, in their four major graphic design projects, must set out a question of how to craft a specific type or genre of graphic design and then answer that question by applying techniques and graphic design principles studied. In this analysis, and in peer-feedback critique sessions in class, students must evaluate evidence within graphic design works and then provide their reasoning using this evidence. One particular graphic design project, the Photo Restoration assignment, requires students to demonstrate critical thinking skills. For this project, they must digitally restore a damaged photograph; as part of this process, they must identify and evaluate the "evidence" of this damage before determining how best to solve the problem using a variety of digital Adobe Illustrator and Photoshop tools and techniques in order to restore the photo.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Throughout the semester students are required to demonstrate intercultural reasoning and intercultural competence by studying a wide range of graphic design and artwork pieces, genres, and artists/publishers. Oftentimes students demonstrate this reasoning and competence during discussions for which they must produce evidence from the graphic design pieces. Students also demonstrate this competence and reasoning during the artwork critique paper assignment, as they are required to select and evaluate works by famous artists from a variety of time periods, art movements, and countries. Students also demonstrate this competence by attending required campus events focused on the arts. For example, during the past academic spring semester, graphic design students attended and participated in an event showcasing student artwork. The students were present to discuss their graphic design projects with campus and community members attending the event. Students are required to demonstrate collaborative skills, teamwork, and shared values as a part of peer feedback critiques of one another's graphic design projects.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	Assessment Plan is in progress

ARTS 1520 Digital Media I
Written Critique

***Directions*:** Develop a written critical analysis of a work of art or design. Use the four-step process of critique that includes Describe, Analyze, Interpret and Judge (Evaluate). Utilize class handouts as reference for complete description of the process. Include a color image of the art you chose to critique. Also include a sentence about why you chose this piece. You can either find a piece of famous artwork, preferably a painting, on your own, or you can choose from the artists/images below.

This is to be your original writing and analysis. You should not copy someone else's critical analysis. The only citations needed would be references that you make to another artwork for purposes of comparison only.

***Size*:** Two to three pages, 12-point type, double line spacing.

***Medium*:** Microsoft Word in color.

***Artist/Image Choices*:**

The *Starry Night*, Vincent Van Gogh	*The Unmasked Universe*, René Magritte
The Bullfight, Francisco Goya	*Three Women*, Fernand Léger
Trio, Steve Magada	*The Persistence of Memory*, Salvador Dali
Day and Night, M.C. Escher	*Under the Wave off Kanagawa*, Katsushika Hokusai
Dora Maar au Chat, Pablo Picasso	*White Branches, Mono Lake*, Ansel Adams
The Toast, Andres Zorn	*Young Girl in the Lap of Death*, Kathe Kollwitz
Brooklyn Bridge, Andy Warhol	*Adele Bloch-Bauer I*, Gustav Klimt

***Presentation*:** Include in the heading

your name	date
class and section	title : "Written Critique of *(Title)* by (Artist Name)"

***Craftsmanship*:** Neatness and organization of your thoughts is important. Effort and completeness are also considered here.

***Grading*:** 100 points total based on completion of each aspect listed above. See rubric

***Due*:** .

****** See next page!***

Your report MUST include the following:

Describe

You must include the artist's name, the full title of the piece, the date, the dimensions (if known), and the medium. The medium may be: oil paint, acrylic paint, watercolor, tempera, fresco, etching, photography, pencil, ink, charcoal, engraving, silkscreen, lithograph or other. The support (the material it is done on) could be canvas, wood, paper, wall, or other. What is the subject matter? It could be religious, mythological, portrait, still life, landscape, historical, daily life (genre), or nonrepresentational.

Analyze

Consider the formal design elements and principles. Ask how it relates to the subject matter. How is line used in the work? Does it seem to regulate or give order to the composition? Does it fragment the work? Is it consistent with traditional laws of perspective or does it violate them? What is the relation of shape to space in the work? Is there a great deal of tonal (value) contrast or is it held to a minimum? What is the predominant color scheme of the work? Are complementary or analogous colors employed? What other elements seem important? Is your attention drawn to the work's texture? Does time or motion seem an important factor in your experience of the work?

What principles of design are used to organize the composition? What is the focal point (emphasis)? Is there significant use of visual rhythm and repetition of elements? How is the composition balanced? Symmetrically? Asymmetrically? Do the work's various elements seem proportional, and how does the question of scale affect your perception? Does the composition seem unified or not?

Is the Rule of Thirds evident as a compositional tool? How do the elements relate to the format? How would the piece be affected if the format (landscape or portrait) were switched?

Consider the title. Does it help you interpret what you see? Can you imagine different treatments of the same subject matter that would change the way you "read" the work? What feelings does the piece evoke?

Has the artist's choice of medium played a role in the presentation of the various elements and their organization or design? Are effects achieved that are realizable only in this particular medium? If more than one medium is involved, what is their relation?

Interpret

What is the meaning of the work? What is the content, as opposed to the subject matter? What are the artist's intentions? How do these intentions manifest themselves in the composition? Are there other feelings or attitudes that the composition seems to evoke, and what specific elements or design choices account for those feelings? Are there symbolic meanings in the work? Does the work seem to have personal meaning to the artist? That is, is it biographical? Is the work a political or social commentary? Is there some larger philosophical, historical or social context that informs the work? Is there a historical style the work would fall under? If so, how does that affect the intended message?

Judge (Evaluate)

What does the work mean to you? Do you think the artist was successful in communicating the feeling or message that they intended?

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1527

Institution and Course Information

Name of Institution	Eastern New Mexico University – Ruidoso
Chief Academic Officer Name	Coda Omness
Chief Academic Officer Email	coda.omness@enmu.edu
Registrar Name	RaLynne Stanbrough
Registrar Email	ralynne.stanbrough@enmu.edu
Department	Records and Research
Prefix	FDMA
Number	1525
Suffix	-
Title	Introduction to Filmmaking
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	FDMA
Number	1525
Suffix	-
Title	Introduction to Filmmaking

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences
☐ Humanities ☒ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☒ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Students will learn the basic elements of film.
2. Students will learn how to effectively use HD cameras and consumer-level filmmaking software applications to demonstrate a basic comprehension of those elements.
3. Students will learn how to better conceive, create and distribute short film projects.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

N/A

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Students demonstrate genre and rhetorical awareness by: completing regular online discussions and assignments that analyze specific genres of film along with film techniques; completing a unit on filmmakers and filmmaking roles, including an imitation assignment that mimics a popular filmmaker; and by producing a final short film that incorporates genre techniques studied throughout the semester. Students also, throughout the semester, view and discuss excerpts from films as a part of studying genre and the rhetoric of films and filmmakers. In many of these discussion and analysis assignments, students are required to evaluate the meaning and effectiveness of films while producing their own analysis arguments about the films. Students, in a unit studying the film production process, must find and present on a film example that does not follow the "typical" genre production processes, thereby also demonstrating an awareness of the rhetorical conventions of particular film genres. This assignment, too, requires students to produce an argument about the film upon which they're presenting. Throughout the semester, as students conceive of, pitch, and then create a short film, they are required to complete shorter reflection assignments that argue how their project will fit within certain genre and filmmaking frameworks. In "pitching" their assignment they must demonstrate rhetorical awareness in order to have their project idea approved by an instructor. Students also provide constructive feedback on one another's film projects; this requires them to understand and verbalize genre awareness while also practicing rhetorical awareness in crafting constructive feedback for an audience of peers.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Throughout the semester, students create short analysis videos in which they describe their understanding of key filmmaking techniques and concepts. Doing so requires them to question and delineate the main features of these techniques and their effect on film audiences. Students are also required to complete several "micro-film" assignments throughout the semester, which are brief creative film projects incorporating or demonstrating a specific technique; this requires students to set the problem of how to put into action and capture an intellectual concept. And for their final short film project, students must create a line of questioning as to what content they wish to cover in their creative project, along with how various filmmaking techniques and production methods will help them achieve this project. For most of these filmmaking assignments, students are required to also include a reflective statement that explains their aims, along with examples—or evidence—from the films that show this achievement. Throughout the semester, students complete film and film technique analysis discussions, which require them to evaluate evidence from film scenes. Particularly when discussing specific film genres and filmmaking techniques, students must show the relevance of this evidence to the specific genre or technique being discussed. Students complete several "Video Analysis" assignments, which are short writing assignments requiring students to seek evidence of a certain film style or technique in a sample film of the students' choosing; this requires them to develop conclusions about these films and, in their writing, share well-reasoned evaluations along with applications of key concepts and terms. For the final in this course, students have an option of taking a final written exam, which includes a number of written short-answer questions that require students to develop conclusions and evaluations based upon the exam prompts.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
Throughout the semester students are required to demonstrate intercultural reasoning and intercultural competence by studying a wide range of film styles, periods, genres, and filmmakers. Oftentimes students demonstrate this reasoning and competence during discussions and analysis assignments for which they must produce evidence from film scenes. Students also demonstrate this competence by attending required campus events focused on film and the arts. For example, during the past academic spring semester, filmmaking students attended a talk on a cult classic Western by a film scholar, as well as an event showcasing student artwork (including films produced by the filmmaking students). Students are required to demonstrate collaborative skills, teamwork, and shared values as a part of the final short film project, for which they can work with classmates; a part of this process requires students to assign filmmaking and acting "roles" in a preproduction reflective writing assignment. Throughout the semester, students also collaborate during discussions on the learning management system, and towards the end of the semester they collaborate via in-class peer feedback on one another's film projects. Lastly, students have multiple opportunities to take part in civic discourse and engagement, including the aforementioned student artwork event. They also, for their final, and in place of a written exam, can take part in the film crew for the campus's graduation ceremony, which is recorded and also streamed live online for community members.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	Assessment plan is currently a work in progress

Mise-en-Scene Short Student Film Project
(Instructions copied from Canvas assignment)

READING/VIEWING PREPARATION FOR PROJECT

Read:

- Chapter 6: Art Direction and Clothes (pages 96-104) of Sidney Lumet's *Making Movies*.

Watch:

- Master Class on Mise-en-Scene,
    - Pay particular note to the 10 components of Mise-en-Scene discussed in the Master Class video, as we'll discuss these in our online discussion

Watch:

- EveryFrameAPainting's *Memories of Murder (2003)* - Ensemble Staging (6:46)
- EveryFrameAPainting's In Praise of Chairs (5:18)
    - Think: how will you use furniture and items to *say something* in your scene?
- EveryFrameAPainting's *Drive (2011)* - The Quadrant System (3:33)
- EveryFrameAPainting's Akira Kurosawa - Composing Movement (8:24)

Watch:

- *Citizen Kane (1941)* - Boyhood
    - Be ready to describe in our online discussion how the director controls Mise-en-Scene within this sample from *Citizen Cane*

YOUR SHORT FILM PROJECT

Using what you learned about Mise-en-Scene during this module, plan your own single scene which demonstrates some aspects of Mise-en-scene well.

Specific Requirements

- Should be at least 30 seconds in length.
- Use at least one character/subject and at least one symbolic item (your choice).
- The scene does not need to make sense (no need for full narrative arc). It just needs to demonstrate depth, movement (subject(s) and/or camera), blocking, etc. I suggest you write your ideas and rehearse a few times to ensure the scene is demonstrating the things you wish it to.
- Include a video or audio or textual description of the mise-en-scene aspects you intended to capture in your scene.

Points
Video scene demonstrating at least 3 strong mise-en-scene examples - 30 points
Video constitutes a scene (concise location, subject(s), etc.) - 10 points
Your description of the mise-en-scene aspects you intended - 10 points

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1533

Institution and Course Information

Name of Institution	New Mexico Junior College
Chief Academic Officer Name	Jeff McCool
Chief Academic Officer Email	jmccool@nmjc.edu
Registrar Name	Joseph Flotte
Registrar Email	jflotte@nmjc.edu
Department	Humanities
Prefix	-
Number	-
Suffix	-
Title	-
Number of Credits	-

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	ENGL
Number	2520
Suffix	-
Title	Film as Literature

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences
☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Develop an understanding of the cultural, historical, and technical contexts for various films.
2. Identify, define, and analyze basic film techniques used in different genres and time periods.
3. Analyze how film uses literature by studying different sources of adaptation.
4. Demonstrate an understanding of film in its various aspects by writing film analysis, reviews, and/or other projects.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

N/A

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Problem Setting:
Instructors provide instruction on critical thinking skills related to reading, writing, and research throughout the course. Students analyze a variety of horror literature by applying a range of interpretive strategies. With guidance from the instructor, learners engage in dialogue to interpret the readings while also discussing the cultural and historical significance of the texts.

Evidence Evaluation:
Instructors demonstrate how to gather professional evidence from peer reviewed sources and emphasize use of materials from a library over use of popular sources gathered through a search engine. Students use secondary

sources as evidence in analyzing primary sources (works of horror literature) in writing assignments and a centerpiece research paper.

Reasoning/Conclusion:
Students use support and evidence from primary and secondary sources to defend a thesis statement while avoiding common logical fallacies. Students also practice critical analysis by commenting on each other's rough drafts for essays and the research paper.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Sustainability and the natural and human worlds:
Students analyze natural elements, including weather, climate, and season in fictional works to consider how these natural elements convey meaning. Students identify and analyze personal and social justice issues in a variety of texts, including a diversity of natural, social, and cultural contexts.

Ethical reasoning:
Students analyze texts for ethical thought and action, including individual actions of characters and separating individual character thought and action from the commentary and thematic implications offered by the text as a whole. Students discuss literature as a social activity that reflects, promotes, and critiques values while comparing and contrasting these perspectives with belief systems currently operating in the world.

Collaboration skills, teamwork and value systems:
Throughout the course, students have opportunities to interact with the instructor and each other through social assignments and small group activities. Examples of typical teamwork include online discussions, in class group work, social annotation assignments of stories, and peer review of rough drafts for writing assignments.

Civic discourse, civic knowledge and engagement –local and global:
Students analyze works of literature to determine the cultural, racial, economic, or political factors present in the work. They diplomatically engage in dialogue concerning these topics, recognizing the factors that shape literary production as well as analysis of literature itself.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

Authority and Value of Information:

The research paper in this course is the centerpiece assignment and is worth a minimum of 30% in all sections. Instructors present students with lessons on finding, evaluating, and citing sources in analytical and argumentative writing. Avoiding plagiarism through ethical use of sources and citation is a key topic. Instructors require the use of professional sources from reputable publishers and peer reviewed journals. Student work is evaluated for ethical use of sources with Turnitin. Instructors offer guidance on interpreting Turnitin reports to help students responsibly and ethically cite sources.

Digital Literacy:
Classes discuss the value of using library databases over search engines like Google for academic research. Students submit several scaffolding assignments as they prepare their reports, including a topic proposal, an annotated bibliography, a bibliography, and a rough draft. Students use digital tools, including word processors, email clients, the internet, and the Canvas LMS to complete assignments and communicate with their instructor and peers. Students receive feedback from the instructor and their peers on the rough draft before submitting the final draft of the research paper.

Information Structure:
Students practice paraphrasing and summarizing information from professional secondary sources. Students integrate multiple primary and secondary sources into a research paper structured around a developed thesis statement and topic sentences in MLA format.

Research as Inquiry:
Students practice formulating research questions and suspending judgment until professional and credible sources have provided adequate evidence for analysis of the literary work in question.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmjc.edu/about/institutional_effectiveness/assessment_student.aspx

Research Paper: Good Times, Right!?

This SoftChalk assignment presents and quizzes the instructions for the research paper. The final draft is due later-- after several lessons and prewriting assignments. Check Canvas to see due dates.

Assignment:

You will write a research paper that analyzes a primary source in a minimum of 1,500 words and no more than 2,000 words (including formatting and Works Cited) in MLA format.

This assignment is likely similar to the research paper you wrote for your Composition II class, so you have done this successfully before. Ready to do it again? Here we go! Here is what you will need to do from start to finish

1.Choose any film that from the approved films list (on Canvas). It does *not have to be a film we have studied for this class*, but it *cannot* be the story you wrote about for your first paper, and you *cannot* recycle work from previous classes. This paper needs to be fresh and new!
2.Submit the title and year released of the film you choose to me for approval. You must get approval, so we can make sure the film you pick is from the approved list.
3.Formulate a thesis and matching topic sentences about the primary source (the film you pick) and **submit for approval** in Canvas. **You cannot proceed without approval.**
4.Write a preliminary draft to flesh out your ideas.
5.Research ideas and sources related to your film and thesis in the NMJC library.
6.Integrate and cite the secondary sources, completing the prewriting assignments in Canvas as you go.
7.Submit a rough draft.
8.Give and receive critiques to and from other students.
9.Revise and edit your paper.
10.Submit your final draft (worth 30% of your grade in this course).
11.Celebrate with a nap or your favorite restaurant -- or both!

Warning!
Failure to follow instructions about topic selection, length requirements, and use and citation of sources on this paper will result in a grade of zero for the paper. Since this paper is worth 30% of your grade, be prepared to spend a significant amount of time and effort researching and writing on this assignment. Read the instructions carefully, and read them more than once. Do not procrastinate. When you have any questions, please let me know.

Primary Source Selection:

The Thesis:

Once you have selected your film and begun to watch, re-watch, and maybe re-watch again, you want to start considering what you want to say about the film. That is, you want to begin developing a thesis.
Remember that many essays can use an enthymeme as a thesis: **Claim because A, B, and C.**
You can write an *analysis for main idea* like we did for our first paper by showing how three specific and concrete details in the primary source contribute to the primary source's main idea (thesis or theme): A, B, and C develop Main Idea in Film.
Once you pick a story, you can focus your thesis on the soundtrack, the setting, a major character, or a symbol, that seems significant to you. The goal is to pick some important features of the story and analyze the meaning of the features in relation to the story as a whole.
Whatever your specific film and topic, always ask why "it" is significant, how it works, and why it is important. Ask yourself what it means (whether "it" is a character, a setting, an idea, a symbol, a reference to another literary work, a sentence, a piece of architecture, a monument, or whatever). Your goal is to show evidence that what you say about the story is true.
Write your thesis and topic sentences to make analytical points. When you submit your thesis and topic sentences, I will approve or ask for revisions. **You must receive approval to submit a final draft.**
Most folks revise several times before getting their thesis and topic sentences approved, so don't be alarmed or discouraged if I ask you to revise. I am picky because a good start on the topic produces good papers, and I want all of you to do well. When your topic is approved, I will post the full points for the assignment. If you need to revise your prospectus, I post a zero for the grade. This does not mean you get a zero for the assignment. It does mean that you need to revise the topic and submit the assignment again.
The paper must:
have a clear focus on the story; make your thesis and topic sentences directly and clearly relate to the story
present a critical analysis of the story that explores meaning or significance
synthesize ideas from multiple secondary sources in each body paragraph
avoid excessive summary of any source
avoid lengthy background about the author (this is an analysis, not a movie review)
receive approval for the thesis and topic sentences.

Primary Versus Secondary

Once you have a thesis and topic sentences, you should ask yourself what you know about the story, and what you need to find out. The best way to do this is to write a rough draft as if your paper were an essay. After that, you are ready to do some preliminary research. Again, the p***rimary source is*** the work that you are analyzing; the primary source is the topic and focus of your paper. *Secondary sources* are materials that you research to help you make your analysis. For example, if you were to write a paper on *The Color Purple* then *The Color Purple* is your primary source, and anything you use other than *The Color Purple* is a **secondary source**. *You will need a minimum of six, but no more than eight secondary sources,* and one of those secondary sources must be our textbook – *An Introduction to Film Genres.*
Let's break that down into a list:
Primary Source: The film you pick and get approved by me
Secondary Source 1: *Required source from the NMJC library*
Secondary Source 2: Required source from the NMJC library
Secondary Source 3: Required source from the NMJC library
Secondary Source 4: Required source from the NMJC library
Secondary Source 5: Required source from the NMJC library
Secondary Source 6: Required source from the NMJC library
Secondary Source 7: Additional optional source from the NMJC library
Secondary Source 8: Additional optional source from the NMJC library

What should I Research?

As you draft, use your research as a source of evidence to help you prove that your thesis is true. Blend and synthesize information from multiple sources in each body paragraph to support the topic sentence. The easiest way to do this is to look up the title and author of the primary source you are writing about. That is the quickest way to find sources to use in your paper, and a later lesson will show you how to get your sources from online databases from the NMJC library.
In addition to using at least a few sources directly about your particular primary sources, you might also look up *a topic* related to the primary source. For instance, you might look up sources about alcoholism if you were doing a character analysis of an alcoholic character. If you were writing about *The Color Purple* you might look up information slavery and Civil Rights.
Remember to keep the focus of the paper on the primary source at all times, especially in the thesis and topic sentences. Do not write a paper about slavery; rather, you can use information about slavery to help understand a character. Do not write a paper about the Salem Witch Trials, but you can use information about Salem to provide context for *The Crucible*. Be sure to relate all research back to the primary source and the topic sentence for that paragraph.
To research, look up:
sources about your primary source.
historical or cultural information relevant to understanding the primary source.
psychological / scientific/ sociological information that can help analyze the primary source.

Sources and Documentation

As you know from your Composition classes, you need to document your sources with in text citations and works Cited entries. Cite all of the sources you use, and only cite sources that you use. If you cannot figure out how to cite a source, ask me for help!
The primary source (the story) may be quoted, but secondary sources should be summarized and paraphrased. Cite all summaries, quotations, and paraphrases from all sources. You are not only citing the words; you cite the information and ideas. Changing the wording and grammar does not relieve you of the need to document the source. All sources must be cited in the text and on the Works Cited page.

The required number and kinds of sources must be used and cited with both in text citations and Works Cited entries in

MLA format to earn a grade on this paper. If you do not use and cite the required sources both in the text and on the Works Cited, I will not be able to assign a grade to your paper.

Structure:

Your paper should be presented in MLA format and should also consist of:
a title
an introduction with a thesis statement
a body that starts each paragraph with a topic sentence that connects to the thesis
a conclusion
a works cited page.

Reminders:

1.This is not a book report. Do not simply summarize the contents of your sources. Your purpose is to *analyze*. You should present an idea about the topic's importance, meaning, affect, or function in each topic sentence, using multiple sources to provide evidence and justification for your idea.
2.Your essay must have a title, an introduction that ends in a thesis, a body, and a conclusion with a minimum of 1,500 words.
3.Ask yourself what each paragraph and sentence adds to your thesis.
4.Make sure each paragraph has a topic sentence that focuses directly on the primary source.
5.Do not use abbreviations or contractions. This is a formal essay.
6.Do not use phrases such as "I believe," "in my opinion," "it seems to me," etc. These phrases only take up space. This is your paper, and if you don't believe it, then you shouldn't write it.
7.Find the least amount of words possible to communicate the maximum amount of ideas.
8.Use MLA format.
9.For every quotation and/or paraphrase, cite the author and page number.
10.Write in present tense when referring to a work of literature such as a poem, essay, or story.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1534

Institution and Course Information

Name of Institution	New Mexico Junior College
Chief Academic Officer Name	Jeff McCool
Chief Academic Officer Email	jmccool@nmjc.edu
Registrar Name	Joseph Flotte
Registrar Email	jflotte@nmjc.edu
Department	Humanities
Prefix	-
Number	-
Suffix	-
Title	-
Number of Credits	-

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	ENGL
Number	2230
Suffix	-
Title	Introduction to Popular Culture

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences

☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Understand the way popular culture texts reflect larger cultural issues, fears, and desires.
2. Apply the techniques of literary analysis and cultural analysis to a wide variety of popular texts.
3. Discuss the development and evolution of popular culture genres.
4. Practice critically speaking and writing about popular culture.
5. Explore the full range and complexity of popular culture.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

N/A

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Problem Setting:
Students demonstrate critical thinking skills related to reading, writing, and research throughout the course. Students analyze a variety of popular culture texts by applying a range of interpretive strategies. Learners interpret the readings for literary, historical, and cultural significance via written Canvas discussions and social annotation assignments in Perusall. Major assignments in the course consist of an analytical essay of a single primary source, a larger research paper requiring synthesis of primary and secondary courses, a researched presentation, and essay-based midterm and final exams.

Evidence Evaluation:

In both the research paper and researched presentation, students demonstrate research skills by gathering professional evidence from peer reviewed sources from the college library. Students synthesize secondary sources as evidence in analyzing primary sources (works of science fiction literature) in an analytic essay, centerpiece research paper, and presentation.

Reasoning/Conclusion:
Students use support and evidence from primary and secondary sources to defend a thesis statement in the essay, research paper, and presentation while avoiding common logical fallacies. Students also practice critical analysis by commenting on each other's rough drafts for essays and the research paper.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Sustainability and the natural and human worlds:
Students identify and analyze personal and social justice issues in a variety of texts, including a diversity of natural, social, and cultural contexts.

Ethical reasoning:
In assignments like written discussions, and Perusall annotations, the midterm, and final exam, students analyze texts for ethical thought and action, including individual actions of characters and separating individual character thought and action from the commentary and thematic implications offered by the text as a whole. Students write about literature as a social activity that reflects, promotes, and critiques values while comparing and contrasting these perspectives with belief systems currently operating in the world.

Collaboration skills, teamwork and value systems:
Throughout the course, students have opportunities to interact with the instructor and each other through social assignments and small group activities. Examples of typical teamwork include online discussions, in class group discussion questions, social annotation assignments of stories, and peer review of rough drafts for the analytical essay and research paper.

Civic discourse, civic knowledge and engagement –local and global:
In written discussion assignments, the analytic essay, the research paper, the presentation, the midterm, and the final exam, students analyze works of literature to determine the cultural, racial, economic, or political factors present in the work. They diplomatically engage in dialogue concerning these topics in social discussion and annotation assignments, recognizing the factors that shape literary production as well as analysis of literature itself.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*
Authority and Value of Information: The research paper in this course is the centerpiece assignment and is worth a minimum of 30% in all sections. Students practice finding, evaluating, and citing sources in analytical and argumentative writing. Avoiding plagiarism through ethical use of sources and citation is a key topic. Instructors require the use of professional sources from reputable publishers and peer reviewed journals. Student work is evaluated for ethical use of sources with Turnitin. Instructors offer guidance on interpreting Turnitin reports to help students responsibly and ethically cite sources. Digital Literacy: Classes discuss the value of using library databases over search engines like Google for academic research. Students submit several scaffolding assignments as they prepare their research papers and presentations, including a topic proposal, an annotated bibliography, a bibliography, and a rough draft. Students use digital tools, including word processors, email clients, the internet, Perusall, and the Canvas LMS to complete assignments and communicate with their instructor and peers. Students receive feedback from the instructor and their peers on the rough draft before submitting the final draft of the research paper. Information Structure: Students practice paraphrasing and summarizing information from professional secondary sources. Students integrate multiple primary and secondary sources into a research paper structured around a developed thesis statement and topic sentences in MLA format.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmjc.edu/about/institutional_effectiveness/assessment_student.aspx

Research Paper: Good Times, Right!?

This SoftChalk assignment presents and quizzes the instructions for the research paper. The final draft is due later-- after several lessons and prewriting assignments. Check Canvas to see due dates.

Assignment:

You will write a research paper that analyzes a primary source in a minimum of 1,500 words and no more than 2,000 words (including formatting and Works Cited) in MLA format.

This assignment is likely similar to the research paper you wrote for your Composition II class, so you have done this successfully before. Ready to do it again? Here we go! Here is what you will need to do from start to finish

1.Choose any cultural artifact that from the approved list (on Canvas). You *cannot* recycle work from previous classes. This paper needs to be fresh and new!
2.Submit the creator, title, and year released of the popular culture artifact you choose to me for approval. You must get approval, so we can make sure the artifact you pick is from the approved list.
3.Formulate a thesis and matching topic sentences about the primary source (the film you pick) and **submit for approval** in Canvas. **You cannot proceed without approval.**
4.Write a preliminary draft to flesh out your ideas.
5.Research ideas and sources related to your popular culture artifact and thesis in the NMJC library.
6.Integrate and cite the secondary sources, completing the prewriting assignments in Canvas as you go.
7.Submit a rough draft.
8.Give and receive critiques to and from other students.
9.Revise and edit your paper.
10.Submit your final draft (worth 30% of your grade in this course).
11.Celebrate with a nap or your favorite restaurant -- or both!

Warning!
Failure to follow instructions about topic selection, length requirements, and use and citation of sources on this paper will result in a grade of zero for the paper. Since this paper is worth 30% of your grade, be prepared to spend a significant amount of time and effort researching and writing on this assignment. Read the instructions carefully, and read them more than once. Do not procrastinate. When you have any questions, please let me know.

Primary Source Selection:

The Thesis:

Once you have selected your popular culture artifact and begun studying and analyzing the artifact, you want to start considering what you want to say about the popular culture artifact. That is, you want to begin developing a thesis.

Remember that many essays can use an enthymeme as a thesis: **Claim because A, B, and C.**

You can write an *analysis for main idea* like we did for our first paper by showing how three specific and concrete details in the primary source contribute to the primary source's main idea (thesis or theme): A, B, and C develop Main Idea in “Artifact Title”.

Once you pick an artifact, you can focus your thesis on the soundtrack, the setting, a major character, or a symbol, etc. that seems significant to you. The goal is to pick some important features of the artifact and analyze the meaning of the features in relation to the story as a whole.

Whatever your specific topic, always ask why "it" is significant, how it works, and why it is important. Ask yourself what it means (whether "it" is a character, a setting, an idea, a symbol, a reference to another work, a sentence, a piece of architecture, a monument, or whatever). Your goal is to show evidence that what you say about the artifact is true.

Write your thesis and topic sentences to make analytical points. When you submit your thesis and topic sentences, I will approve or ask for revisions. **You must receive approval to submit a final draft.**

Most folks revise several times before getting their thesis and topic sentences approved, so don't be alarmed or discouraged if I ask you to revise. I am picky because a good start on the topic produces good papers, and I want all of you to do well. When your topic is approved, I will post the full points for the assignment. If you need to revise your prospectus, I post a zero for the grade. This does not mean you get a zero for the assignment. It does mean that you need to revise the topic and submit the assignment again.

The paper must:

have a clear focus on the story; make your thesis and topic sentences directly and clearly relate to the story

present a critical analysis of the story that explores meaning or significance

synthesize ideas from multiple secondary sources in each body paragraph

avoid excessive summary of any source

avoid lengthy background about the author (this is an analysis, not a movie review)

receive approval for the thesis and topic sentences.

Primary Versus Secondary

Once you have a thesis and topic sentences, you should ask yourself what you know about the story, and what you need to find out. The best way to do this is to write a rough draft as if your paper were an essay. After that, you are ready to do some preliminary research. Again, the p***rimary source is*** the work that you are analyzing; the primary source is the topic and focus of your paper. *Secondary sources* are materials that you research to help you make your analysis. For example, if you were to write a paper on *The Color Purple* then *The Color Purple* is your primary source, and anything you use other than *The Color Purple* is a **secondary source**. *You will need a minimum of six, but no more than eight secondary sources,* and one of those secondary sources must be our textbook – *An Introduction to Film Genres.*
Let's break that down into a list:
Primary Source: The film you pick and get approved by me
Secondary Source 1: *Required source from the NMJC library*
Secondary Source 2: Required source from the NMJC library
Secondary Source 3: Required source from the NMJC library
Secondary Source 4: Required source from the NMJC library
Secondary Source 5: Required source from the NMJC library
Secondary Source 6: Required source from the NMJC library
Secondary Source 7: Additional optional source from the NMJC library
Secondary Source 8: Additional optional source from the NMJC library

What should I Research?

As you draft, use your research as a source of evidence to help you prove that your thesis is true. Blend and synthesize information from multiple sources in each body paragraph to support the topic sentence. The easiest way to do this is to look up the title and author of the primary source you are writing about. That is the quickest way to find sources to use in your paper, and a later lesson will show you how to get your sources from online databases from the NMJC library.
In addition to using at least a few sources directly about your particular primary sources, you might also look up *a topic* related to the primary source. For instance, you might look up sources about alcoholism if you were doing a character analysis of an alcoholic character. If you were writing about *The Color Purple* you might look up information slavery and Civil Rights.
Remember to keep the focus of the paper on the primary source at all times, especially in the thesis and topic sentences. Do not write a paper about slavery; rather, you can use information about slavery to help understand a character. Do not write a paper about the Salem Witch Trials, but you can use information about Salem to provide context for *The Crucible*. Be sure to relate all research back to the primary source and the topic sentence for that paragraph.
To research, look up:
sources about your primary source.
historical or cultural information relevant to understanding the primary source.
psychological / scientific/ sociological information that can help analyze the primary source.

Sources and Documentation

As you know from your Composition classes, you need to document your sources with in text citations and works Cited entries. Cite all of the sources you use, and only cite sources that you use. If you cannot figure out how to cite a source, ask me for help!
The primary source (the story) may be quoted, but secondary sources should be summarized and paraphrased. Cite all summaries, quotations, and paraphrases from all sources. You are not only citing the words; you cite the information and ideas. Changing the wording and grammar does not relieve you of the need to document the source. All sources must be cited in the text and on the Works Cited page.

The required number and kinds of sources must be used and cited with both in text citations and Works Cited entries in

MLA format to earn a grade on this paper. If you do not use and cite the required sources both in the text and on the Works Cited, I will not be able to assign a grade to your paper.

Structure:

Your paper should be presented in MLA format and should also consist of:
a title
an introduction with a thesis statement
a body that starts each paragraph with a topic sentence that connects to the thesis
a conclusion
a works cited page.

Reminders:

1.This is not a book report. Do not simply summarize the contents of your sources. Your purpose is to *analyze*. You should present an idea about the topic's importance, meaning, affect, or function in each topic sentence, using multiple sources to provide evidence and justification for your idea.
2.Your essay must have a title, an introduction that ends in a thesis, a body, and a conclusion with a minimum of 1,500 words.
3.Ask yourself what each paragraph and sentence adds to your thesis.
4.Make sure each paragraph has a topic sentence that focuses directly on the primary source.
5.Do not use abbreviations or contractions. This is a formal essay.
6.Do not use phrases such as "I believe," "in my opinion," "it seems to me," etc. These phrases only take up space. This is your paper, and if you don't believe it, then you shouldn't write it.
7.Find the least amount of words possible to communicate the maximum amount of ideas.
8.Use MLA format.
9.For every quotation and/or paraphrase, cite the author and page number.
10.Write in present tense when referring to a work of literature such as a poem, essay, or story.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1536

Institution and Course Information

Name of Institution	New Mexico Junior College
Chief Academic Officer Name	Jeff McCool
Chief Academic Officer Email	jmccool@nmjc.edu
Registrar Name	Joseph Flotte
Registrar Email	jflotte@nmjc.edu
Department	Humanities
Prefix	-
Number	-
Suffix	-
Title	-
Number of Credits	-

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	ENGL
Number	2580
Suffix	-
Title	Science Fiction

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences
☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. To understand the way science fiction texts reflect larger culture issues, fears, and desires.
2. To apply the techniques of literary analysis and cultural analysis to a wide variety of science fiction texts.
3. To discuss the development and evolution of science fiction.
4. To practice critically speaking and writing about science fiction.
5. To explore the full range and complexity of science fiction.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

N/A

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Problem Setting:
Instructors provide instruction on critical thinking skills related to reading, writing, and research throughout the course. Students analyze a variety of science fictin by applying a range of interpretive strategies. With guidance from the instructor, learners engage in dialogue to interpret the readings while also discussing the cultural and historical significance of the texts.

Evidence Evaluation:
Instructors demonstrate how to gather professional evidence from peer reviewed sources and emphasize use of materials from a library over use of popular sources gathered through a search engine. Students use secondary

sources as evidence in analyzing primary sources (works of science fiction literature) in writing assignments and a centerpiece research paper.

Reasoning/Conclusion:
Students use support and evidence from primary and secondary sources to defend a thesis statement while avoiding common logical fallacies. Students also practice critical analysis by commenting on each other's rough drafts for essays and the research paper.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Sustainability and the natural and human worlds:
Students analyze natural elements, including weather, climate, and season in fictional works to consider how these natural elements convey meaning. Students identify and analyze personal and social justice issues in a variety of texts, including a diversity of natural, social, and cultural contexts.

Ethical reasoning:
Students analyze texts for ethical thought and action, including individual actions of characters and separating individual character thought and action from the commentary and thematic implications offered by the text as a whole. Students discuss literature as a social activity that reflects, promotes, and critiques values while comparing and contrasting these perspectives with belief systems currently operating in the world.

Collaboration skills, teamwork and value systems:
Throughout the course, students have opportunities to interact with the instructor and each other through social assignments and small group activities. Examples of typical teamwork include online discussions, in class group work, social annotation assignments of stories, and peer review of rough drafts for writing assignments.

Civic discourse, civic knowledge and engagement –local and global:
Students analyze works of literature to determine the cultural, racial, economic, or political factors present in the work. They diplomatically engage in dialogue concerning these topics, recognizing the factors that shape literary production as well as analysis of literature itself.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

Authority and Value of Information:
The research paper in this course is the centerpiece assignment and is worth a minimum of 30% in all sections. Instructors present students with lessons on finding, evaluating, and citing sources in analytical and argumentative

writing. Avoiding plagiarism through ethical use of sources and citation is a key topic. Instructors require the use of professional sources from reputable publishers and peer reviewed journals. Student work is evaluated for ethical use of sources with Turnitin. Instructors offer guidance on interpreting Turnitin reports to help students responsibly and ethically cite sources.

Digital Literacy:
Classes discuss the value of using library databases over search engines like Google for academic research. Students submit several scaffolding assignments as they prepare their reports, including a topic proposal, an annotated bibliography, a bibliography, and a rough draft. Students use digital tools, including word processors, email clients, the internet, and the Canvas LMS to complete assignments and communicate with their instructor and peers. Students receive feedback from the instructor and their peers on the rough draft before submitting the final draft of the research paper.

Information Structure:
Students practice paraphrasing and summarizing information from professional secondary sources. Students integrate multiple primary and secondary sources into a research paper structured around a developed thesis statement and topic sentences in MLA format.

Research as Inquiry:
Students practice formulating research questions and suspending judgment until professional and credible sources have provided adequate evidence for analysis of the literary work in question.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmjc.edu/about/institutional_effectiveness/assessment_student.aspx

Research Paper
Good Times, Right!?

This SoftChalk assignment presents and quizzes the instructions for the research paper. The final draft is due later -- after several lessons and prewriting assignments. Check Canvas to see due dates.

Assignment:

You will write a research paper that analyzes a primary source in a minimum of 1,300 words and no more than 1,600 words (including formatting and Works Cited) in MLA format.

This assignment is likely similar to the research paper you wrote for your Composition II class, so you have done this successfully before. Ready to do it again? Here we go! Here is what you will need to do from start to finish

1. Pick a famous work of science fiction to write about. It does *not have to be a story we have read for this class*, but it *cannot* be the story you wrote about for your first paper, and you *cannot* recycle work from previous classes. This paper needs to be fresh and new!
2. Submit the title and author of the story you would like to write about to me for approval. You must get approval, so we can make sure the story you pick is both famous and literary.
3. Formulate a thesis and matching topic sentences about the primary source (the story you pick) and **submit for approval** in Canvas. **You cannot proceed without approval.**
4. Write a preliminary draft to flesh out your ideas.
5. Research ideas and sources related to your text and thesis in the NMJC library.
6. Integrate and cite the secondary sources, completing the prewriting assignments in Canvas as you go.

7. Submit a rough draft.
8. Give and receive critiques to and from other students.
9. Revise and edit your paper.
10. Submit your final draft (worth 30% of your grade in this course).
11. Celebrate with a nap or your favorite restaurant -- or both!

Warning!

Failure to follow instructions about topic selection, length requirements, and use and citation of sources on this paper will result in a grade of zero for the paper. Since this paper is worth 30% of your grade, be prepared to spend a significant amount of time and effort researching and writing on this assignment. Read the instructions carefully, and read them more than once. Do not procrastinate. When you have any questions, please let me know.

Primary Source Selection:

The Thesis:

Once you have selected your story and begun to read, annotate, and reread the source, you want to start considering what you want to say about the story. That is, you want to begin developing a thesis.

Remember that many essays can use an enthymeme as a thesis: **Claim because A, B, and C.**

You can write an *analysis for main idea* like we did for our first paper by showing how three specific and concrete details in the primary source contribute to the primary source's main idea (thesis or theme): A, B, and C develop Main Idea in author's "Story Title."

Once you pick a story, you can focus your thesis on the theme, the setting, a major character, a symbol, weather, or anything else that seems significant to you. The goal is to pick some important features of the story and analyze the meaning of the features in relation to the story as a whole.

Whatever your specific story and topic, always ask why "it" is significant, how it works, and why it is important. Ask yourself what it means (whether "it" is a character, a setting, an idea, a symbol, a reference to another literary work, a sentence, a piece of architecture, a monument, or whatever). Your goal is to show evidence that what you say about the story is true.

Write your thesis and topic sentences to make analytical points. When you submit your thesis and topic sentences, I will approve or ask for revisions. **You must receive approval to submit a final draft.**

Most folks revise several times before getting their thesis and topic sentences approved, so don't be alarmed or discouraged if I ask you to revise. I am picky because a good start on the topic produces good papers, and I want all of you to do well. When your topic is approved, I will post the full points for the assignment. If you need to revise your prospectus, I post a zero for the grade. This does not mean you get a zero for the assignment. It does mean that you need to revise the topic and submit the assignment again.

The paper must:

- have a clear focus on the story; make your thesis and topic sentences directly and clearly relate to the story
- present a critical analysis of the story that explores meaning or significance
- synthesize ideas from multiple secondary sources in each body paragraph
- avoid excessive summary of any source
- avoid lengthy background about the author (this is an analysis, not a book report)
- receive approval for the thesis and topic sentences.

Primary Versus Secondary

Once you have a thesis and topic sentences, you should ask yourself what you know about the story, and what you need to find out. The best way to do this is to write a rough draft as if your paper were an essay.

After that, you are ready to do some preliminary research. Again, the p***rimary source is*** the work that you are analyzing; the primary source is the topic and focus of your paper. *Secondary sources* are materials that you research to help you make your analysis. For example, if you were to write a paper on "Battle Royal" by Ralph Ellison, then "Battle Royal" is your primary source, and anything you use other than "Battle Royal" is a **secondary source**. *You will need a minimum of six, but no more than eight secondary sources,* and one of those secondary sources must be our textbook -- *How to Read Literature like a Professor:*

Let's break that down into a list:

Primary Source: The story you pick and get approved by me

Secondary Source 1: *Required source from the NMJC library*

Secondary Source 2: Required source from the NMJC library

Secondary Source 3: Required source from the NMJC library

Secondary Source 4: Required source from the NMJC library

Secondary Source 5: Required source from the NMJC library

Secondary Source 6: Required source from the NMJC library

Secondary Source 7: Additional optional source from the NMJC library

Secondary Source 8: Additional optional source from the NMJC library

What should I Research?

As you draft, use your research as a source of evidence to help you prove that your thesis is true. Blend and synthesize information from multiple sources in each body paragraph to support the topic sentence. The easiest way to do this is to look up the title and author of the primary source you are writing about. That is the quickest way to find sources to use in your paper, and a later lesson will show you how to get your sources from online databases from the NMJC library.

In addition to using at least a few sources directly about your particular primary sources, you might also look up *a topic* related to the primary source. For instance, you might look up sources about alcoholism if you were doing a character analysis of an alcoholic character. If you were writing about "The Veldt" by Ray Bradbury you might look up information on television in the twentieth century.

Remember to keep the focus of the paper on the primary source at all times, especially in the thesis and topic sentences. Do not write a paper about alcoholism; rather, you can use information about alcoholism to help understand a character. Do not write a paper about the Salem Witch Trials, but you can use information about Salem to provide context for "Young Goodman Brown." Be sure to relate all research back to the primary source and the topic sentence for that paragraph.

To research, look up:

- sources about your primary source.
- historical or cultural information relevant to understanding the primary source.
- psychological / scientific/ sociological information that can help analyze the primary source.

Sources and Documentation

As you know from your Composition classes, you need to document your sources with in text citations and works Cited entries. Cite all of the sources you use, and only cite sources that you use. If you cannot figure out how to cite a source, ask me for help!

The primary source (the story) may be quoted, but secondary sources should be summarized and paraphrased. Cite all summaries, quotations, and paraphrases from all sources. You are not only citing the words; you cite the information and ideas. Changing the wording and grammar does not relieve you of the need to document the source. All sources must be cited in the text and on the Works Cited page.

The required number and kinds of sources must be used and cited with both in text citations and Works Cited entries in

MLA format to earn a grade on this paper. If you do not use and cite the required sources both in the text and on the Works Cited, I will not be able to assign a grade to your paper.

Structure:

Your paper should be presented in MLA format and should also consist of:

- a title
- an introduction with a thesis statement
- a body that starts each paragraph with a topic sentence that connects to the thesis
- a conclusion
- a works cited page.

Reminders:

1. This is not a book report. Do not simply summarize the contents of your sources. Your purpose is to *analyze*. You should present an idea about the topic's importance, meaning, affect, or function in each topic sentence, using multiple sources to provide evidence and justification for your idea.

2. Your essay must have a title, an introduction that ends in a thesis, a body, and a conclusion with a minimum of 1,300 words.

3. Ask yourself what each paragraph and sentence adds to your thesis.

4. Make sure each paragraph has a topic sentence that focuses directly on the primary source.

5. Do not use abbreviations or contractions. This is a formal essay.

6. Do not use phrases such as "I believe," "in my opinion," "it seems to me," etc. These phrases only take up space. This is your paper, and if you don't believe it, then you shouldn't write it.

7. Find the least amount of words possible to communicate the maximum amount of ideas.

8. Use MLA format.

9. For every quotation and/or paraphrase, cite the author and page number.

10. Write in present tense when referring to a work of literature such as a poem, essay, or story.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1544

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	OGriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	Wright@NMMI.edu
Department	Math and Science Division
Prefix	BIOL
Number	1110
Suffix	L
Title	General Biology Lab
Number of Credits	0

Was this course previously part of the general education curriculum?

☒ Yes ☐ No

Is this application for your system (ENMU, NMSU, & UNM)?

☒ Yes ☐ No

Co-Requisite Course Information

Prefix	BIOL
Number	1110
Suffix	-
Title	General Biology

New Mexico Common Course information

Prefix	BIOL
Number	1110
Suffix	L
Title	General Biology Lab

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☒ Science ☐ Social & Behavioral Sciences
☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☒ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1.	Employ critical thinking skills to judge the validity of information from a scientific perspective.
2.	Apply the scientific method to formulate questions and develop testable hypotheses.
3.	Analyze information/data and draw conclusions.
4.	Operate laboratory equipment correctly and safely to collect relevant and quality data.
5.	Utilize mathematical techniques to evaluate and solve scientific problems.
6.	Recognize biodiversity in different ecological habitats and communities of organisms.
7.	Communicate effectively about scientific ideas and topics.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

1.	Employ critical thinking skills to judge the validity of information from a scientific perspective.
2.	Apply the scientific method to formulate questions and develop testable hypotheses.
3.	Analyze information/data and draw conclusions.
4.	Operate laboratory equipment correctly and safely to collect relevant and quality data.
5.	Utilize mathematical techniques to evaluate and solve scientific problems.
6.	Recognize biodiversity in different ecological habitats and communities of organisms.
7.	Communicate effectively about scientific ideas and topics.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Learning and utilizing the scientific method addresses all components of problem setting, evidence acquisition, evidence evaluation, and reasoning/conclusions. Various laboratory exercises are utilized in which different components are stressed. In some the problem is pre-set while in others the student is expected to recognize aspects of a problem. Techniques of accumulating evidence are discussed and decided upon with emphasis on gathering all data available. Evaluation of the data (evidence) is stressed from the standpoint of utilizing all data points and avoiding bias in all cases. Conclusions and the reasoning behind them evolve from class and individual discussion of data and analysis.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
Students analyze experiments conducted in laboratory exercises and develop quantitative models and arguments to support conclusions. They then use the available literature to compare their data with that of others and address any differences in conclusions due to approach or methodology. They are assessed by the presentation of data in their reports and assemblage of quantitative information and arguments contained in research papers otherwise assigned. Students will study the application of models across various topics, the compilation of such models and the absolute necessity of using all available data to construct them in order to avoid any inclusion or exclusion that would introduce bias into the completed model. Research papers, lab reports, and models will be critiqued among peers.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
Students in the classes work together as teams to carry out lab procedures, learn to use lab equipment, and to research current issues regarding sustainability of natural resources in a changing world with increasing population. NMMI is very culturally diverse, so the interaction between students is invaluable. Current issues, such as pros and cons of vaccination, are discussed and classroom simulations of epidemics are carried out. We do another lab that demonstrates population growth and decline by different parental approaches as we study patterns of survival. We also examine how the world has changed to support a much larger population, with greater yields of crops and ways to water those crops along with all the modern methods of food preservation and storage. The approach is to give the students a positive but proactive approach to future issues. Locally, we examine issues such as possible ground water contamination by dairies and how that industry prevents contamination.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/wp-content/uploads/2022/11/ACADEMIC-ASSESSMENT-PLAN.pdf

BIOL 1110 General Biology NMMI Syllabus

Semester: Spring 2022

Course numbers, times, and places:

BIOL 1110/01 MF 7:50 W 8:20 Room 01 Willson Hall

BIOL 1110/02 MF 8:50 W 9:15 Room 01 Willson Hall

BIOL 1110/03 MF 9:50 W 10:10 Room 01 Willson Hall

BIOL 1110L/13 T 9:50-11:40 Room 26 Willson Hall

BIOL 1110L/15 T 12:40-2:30 Room 26 Willson Hall

BIOL 1110L/33 Th 9:50-11:40 Room 26 Willson Hall

Teacher name: COL M. B. Atwood **Email**: atwood@nmmi.edu **Phone**: 575-624-8140

Required Texts: Biology Today and Tomorrow without Physiology., 5th edition, Starr, Evers, Starr

Office hours and location: As posted Room 04 Willson Hall

Course Description: This course introduces nonscience majors to basic biological concepts including, but not limited to, the properties of life, biochemistry, cell biology, molecular biology, evolution, biodiversity, and ecology.

Biology 1110 serves as a pre-requisite for nursing and other allied-health programs. There is an emphasis on the molecular and cellular levels of biology surrounding the core theme of evolution. Topics include chemistry of cells, cell structure and function, metabolism, genetics, evolution and ecology. Labs emphasize the process of scientific inquiry which includes learning how to propose testable hypotheses and carry out experiments to test them. Students learn the proper use of microscopes and safe handling of lab chemicals and other lab equipment while conducting hands-on experiments. This course serves as a prerequisite for Anatomy and Physiology (BIOL 2210), Microbiology (BIOL 2224), Insects and Man (BIOL 2254), and Environmental Biology (BIOL 2264). It also aligns with content for common healthcare admissions exams.

General Scope of the Course: The goal of this college biology course is to introduce the current concepts of life and the structures and functions of living organisms. For the non-science major, Biology 1154 will provide the basis for understanding some of today's issues: the origin and evolution of life, human genetics and genetic engineering, and conditions and diseases affecting the human population. .

Student Learning Outcomes

1. Explain the value of the scientific method as a means for understanding the natural world and for formulating testable predictions.

2. Explain how chemical and physical principles apply to biological processes at the cellular level.

3. Understand basic concepts of cell biology.

4. Understand that all organisms share properties of life as a consequence of their common ancestry.

5. Understand fundamental processes of molecular biology.

6. Understand the mechanisms of evolution, including natural selection, genetic drift, mutations, random mating, and gene flow.

7. Understand the criteria for species status and the mechanisms by which new species arise.

8. Understand methods for inferring phylogenetic relationships and the basis for biological classification.

9. Recognize the value of biological diversity (e.g., bacteria, unicellular eukaryotes, fungi, plants, and animals), conservation of species, and the complexity of ecosystems.

10. Explain the importance of the scientific method for addressing important contemporary biological issues.

Course Outcomes:

1. Demonstrate familiarity with basic content and concepts in each discipline.
2. Identify and use laboratory apparatus and instrumentation to perform demonstrations, carry out experiments and develop observational skills.
3. Exhibit learning skills necessary to succeed in the sciences as well as other disciplines.
4. Obtain factual information from various sources and be able to present it in a clear, well-organized manner.
5. Show familiarity with current issues in each discipline to include the moral and ethical questions involved.
6. Apply critical thinking skills and a systematic approach to problem solving using graphs and formulae as needed.

Procedures and Classroom Rules: Be on time for lecture and lab. Bring a notebook and writing materials to class. Absolutely no laptops or cell phones allowed in class. Talking and disruptive behavior will result in a “stick” and dismissal from the classroom.

General Format:
Biology 1110 is presented as a combined lecture and laboratory course. Concepts will be presented by lectures, reading assignments, and canvas assignments. The course consists of three hours of lecture and one lab section per week. Biology lab must be taken in conjunction with the class. Lab materials will be provided. You need not purchase a lab kit or a lab manual.

Grading Procedures: Grades are based on a percentage. Lecture and lab grades are combined. 100-90 A 80-89 B 70-79 C 60-69 D Less than a 60 will result in an F for the class.

Final Exam Policy: A mandatory comprehensive final exam or final project will be administered on the scheduled date according to the Final Exam Schedule, unless an exception is approved

by the Academic Dean, and will be given to all cadets regardless of their grade in the course. It will account for no more than 25%, but no less than 15%, of a student's semester grade.

Academic Dishonesty: Cheating, assisting another to cheat, or employing other types of academic dishonesty to any degree and in any form automatically results in a grade of **zero** on the entire assignment or test for all parties involved. A grade of **F** for the semester may be given and the incident will be referred to the Commandant of Cadets. Cheating on extra credit will result in no further extra credit possible for that student.

Class absences: Class absence and tardiness will be reported. It is your responsibility to attend lab and take the lab quizzes. If you know that you will miss a lab because of a trip or excused absence, make arrangements to attend another lab section during the same week or pick up the materials from the instructor. You are still responsible for the lab quiz, even when you miss the lab. There will be no make-up for unexcused absences and you will receive a zero for that lab or test.

Course Outline:

Week	Lecture	Lab
Jan 11-13	Ch 1 Invitation to Biology. Ch 2 Molecules of life	No lab
Jan 16-20	**No class Monday Jan 16** Finish Ch 2 **Test Ch 1,2**	Enzymes
Jan 23-27	Ch 3 Cells Ch 4 Energy and Metabolism	Microscope/cells
Jan 30-Feb 3	Ch 5 Capturing and Releasing Energy	Sugar fermentation
Feb 6-10	**Test Ch 3,4,5** Ch 6 DNA Structure and Function	Genetics video
Feb 13-17	Ch 6 DNA structure and function Ch 7 Gene expression	Mitosis and karyotypes
Feb 20-24	**No class Monday Feb 20** Ch 8 Mitosis, Meiosis	Human phenotypes

	Test Ch 6,7,8	
Feb 27-Mar 3	Ch 9 Patterns of Inheritance	Pedigree analysis
Mar 6-10	Ch 10 Biotechnology Ch 11 Evidence of Evolution	TBA Evolution video
Mar 13-17	Ch 12 Processes of Evolution **Test Ch 9, 10, 11, 12**	Timeline
Mar 20-24	**Spring break**	
Mar 21-25	Ch 13 Viruses, Bacteria, Protists	Human epidemic, Protists
Mar 27-31	**Test Ch 13** Ch 14 Plants and Fungi	Plants and fungi
Apr 3-7	Ch 14 Plants and Fungi Ch15 Animals **No Class Friday Apr 7**	Animal Kingdom Invertebrates
Apr10-14	**No class Monday Apr 10** Ch 15 Animals **Test Ch 14, 15**	Animal Kingdom Chordates
Apr 24-28	Ch 16, Population Ecology Ch 17 Communities and Ecosystem	Survivorship curves
May 1-3	Ch 18 Humans and the Biosphere **Quiz Ch 16, 17, 18**	Producers/consumers
May 6-10	**Final exams**	

Assessment Statement: In fulfilling NMMI's assessment program, students in this class will be required to complete a variety of feedback tools to provide information on the efficacy of courses and the achievement of target goals. NMMI expects students to provide honest and thoughtful answers to these assessment tools.

BIOLOGY LAB. Patterns of Survival. Plotting Survivorship Curves.

Each species, including us, has a Life History Pattern: a pattern of reproduction, survival and life expectancy of the population. One component of a life history pattern is the *age-specific survivorship schedule*, which the number of individuals that reach a certain age. (Sometimes the inverse, *age-specific death schedule*, is used.)
As you have observed, each species has a characteristic life span, but few individuals live until the maximum age possible. Some species have an *age-specific pattern* that is characterized by most individuals dying shortly after hatching (or birth or production of the next generation) and only a few living to "old age". At the other extreme, the *age-specific pattern* is characterized by most individuals surviving until some age.

A "COHORT" is a group of individuals born (hatched etc.) during the same year, (or other time interval). from the time of birth. A Life Table is created by tracking a cohort through time until the last individual dies and listing the number of survivors by age categories (percentage surviving may be used instead of numbers).

A species' "Survivorship Curve" can be then be drawn from the data contained within the Life Table. A "Survivorship Curve" is a graph line plotted from a cohort's age-specific survivorship. These curves reveal differences between species or even populations within a species.

In today's lab exercise, you will (1) determine the life table of a cohort of 50 dice and then plot the survivorship curve on a semi-log graph and (2) gather data for the life tables of three species of bubbles and then plot the survivorship curves of each species.

Work in groups of three of four (depending on class size).

Population 1.
Start with a cohort of 50 dice. Roll the dice on the table. All the dice that come up "1" during that time interval (generation) have died of a heart attack and are removed from the cohort. The number of survivors is plotted on the Life Table and these remaining survivors are then rolled on the table. Again, all the dice that come up "1" died and are removed and the number of survivors is recorded on the Life Table. The surviving dice are rolled again, the "1"s are removed, and the number of survivors is recorded. The process is repeated until there no more survivors.

Are the Survivorship Curves Type I, Type II, or Type III? _____

What does this tell you about the death rate of the dice populations?

_____

_____

2. SURVIVORSHIP OF THREE SPECIES OF SOAP BUBBLES.

In this exercise, you will create cohorts of 50 bubbles (or 100 bubbles depending on the number of groups in the lab) representing three species.

All of you are individually responsible for recording the data placed on the board by the other groups in the lab.

FOR ALL:

Prepare a Life Table for EACH SPECIES.

To determine the number surviving at each age, subtract the number dying at each age from the number surviving at the previous age.

For example, if 5 bubbles die at age 1 second, then 50 – 5 = 45 survive at least 1 second.

If 10 more bubbles die at age two seconds, then 45 – 10 = 35 survive at least 2 seconds.

If 7 more bubbles die at age 3 seconds, then 35 – 7 = 28 survive at least 3 seconds, and so forth.

Percentages are calculated by: $\frac{\text{number surviving at age}}{50} \times 100\%$

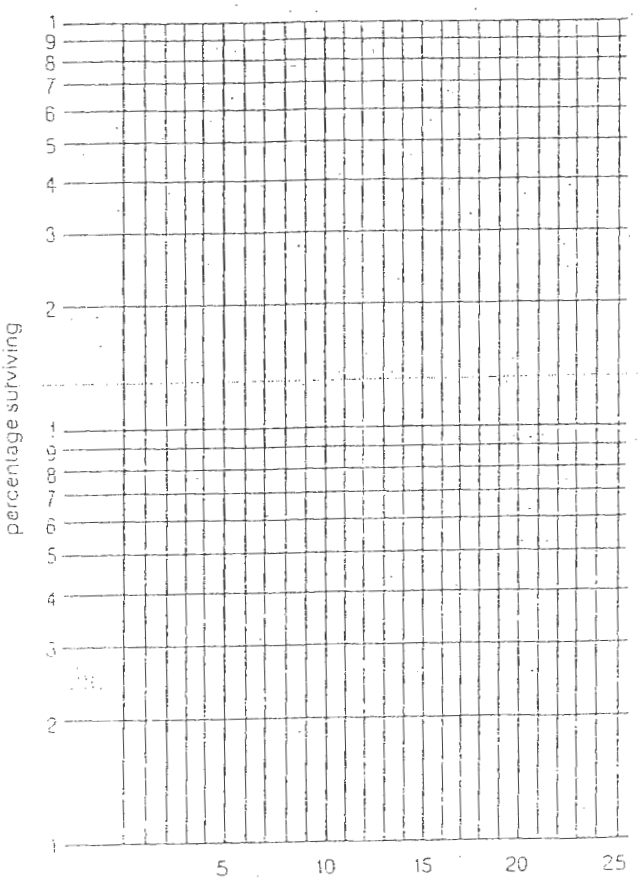
Or, because the cohort was 50, simply multiply the number of survivors by 2 to get the percentage.

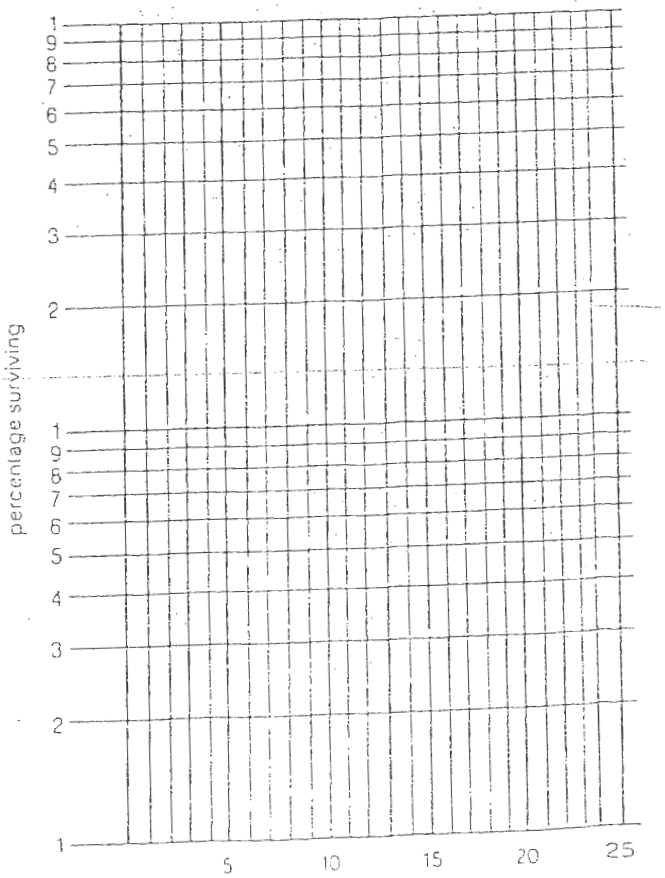
THEN, PLOT THE SURVIVORSHIP CURVE FOR EACH SPECIES ON THE SEMI-LOG
GRAPHS.

Generation	Population 1 (heart disease only)		Population 2 (cancer & heart disease)	
	Number Surviving	Percentage Surviving	Number Surviving	Percentage Surviving
0	50	100%	50	100%
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

To generate the Survivorship Curve, the percentage surviving at each age interval (generation) is plotted on the semi-log graph.

Repeat with Population 2 in which "1"s are deaths from heart attacks and "6"s are deaths from cancer.





Species 1.

Requires 5 individuals.

One member of your group will blow a SINGLE bubble.

A time-keeper (the person in your group with a watch that shows time in seconds) will determine the age at death (the bubble pops) in seconds.

A recorder will keep track of the number dying at each age.

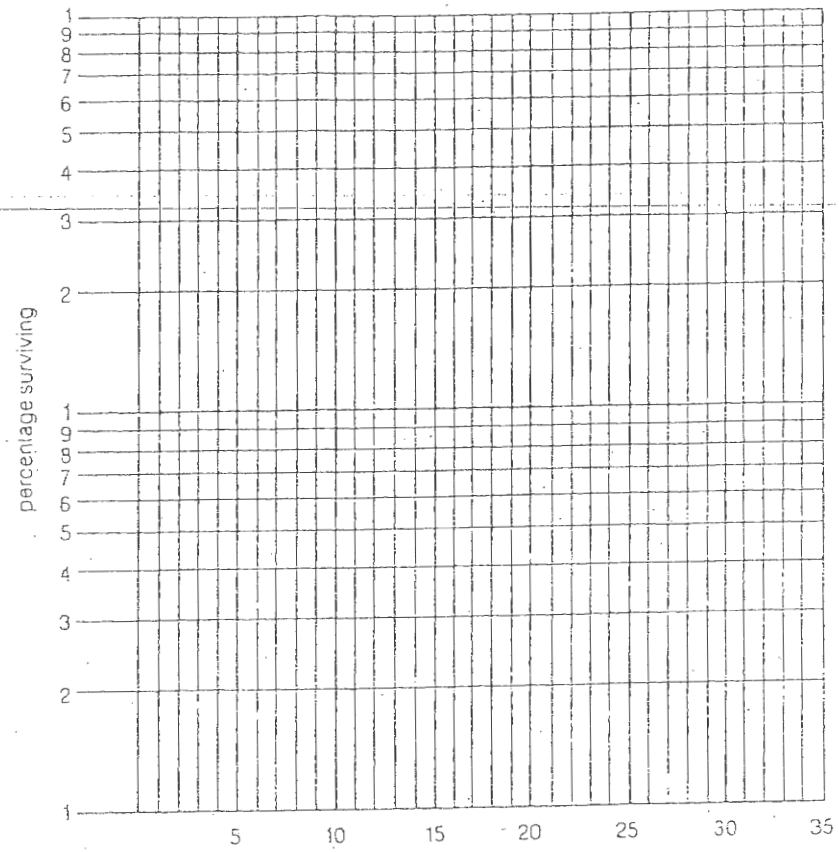
The other two members will try to keep the bubble alive for as long as possible by blowing, wafting, etc.

After 50 bubbles have been timed, the Total Number Dying At Each Age (in seconds) will be recorded on the board for the rest of the class to copy.

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
0			50	100%
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30+				

SOAP BUBBLE SPECIES 1



Species 1 showed which type of survivorship curve? _____

What does this tell you about the life history pattern of this species? _____

_____

_____

Species 2.

Requires 3 individuals.

One member of your group will blow a SINGLE bubble.

A time-keeper will determine the age at death in seconds.

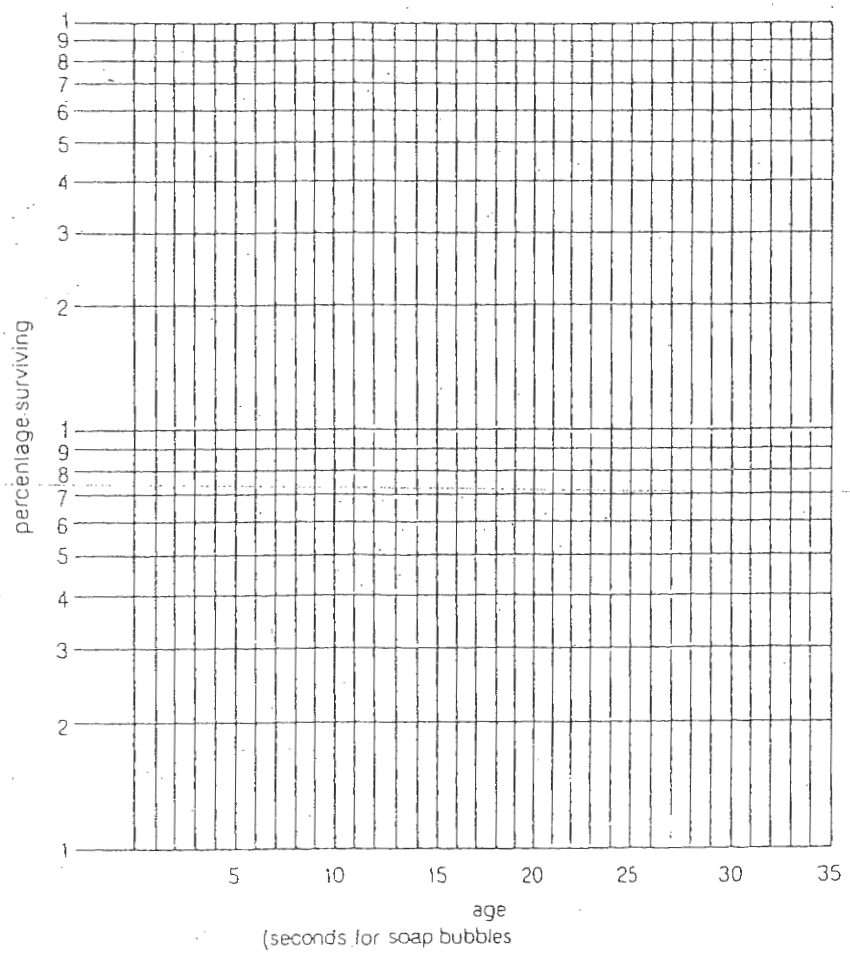
No effort will be made to keep the bubble "alive".

The recorded will record the time at death in seconds

After 50 bubbles have been timed, the Total Number Dying at Each Age (in seconds) will be recorded on the board for the rest of the class to copy.

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
0			50	100%
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30 +				



Species 2 showed which type of survivorship curve? _____

What does this tell you about the life history pattern of this species? _____

_____

_____

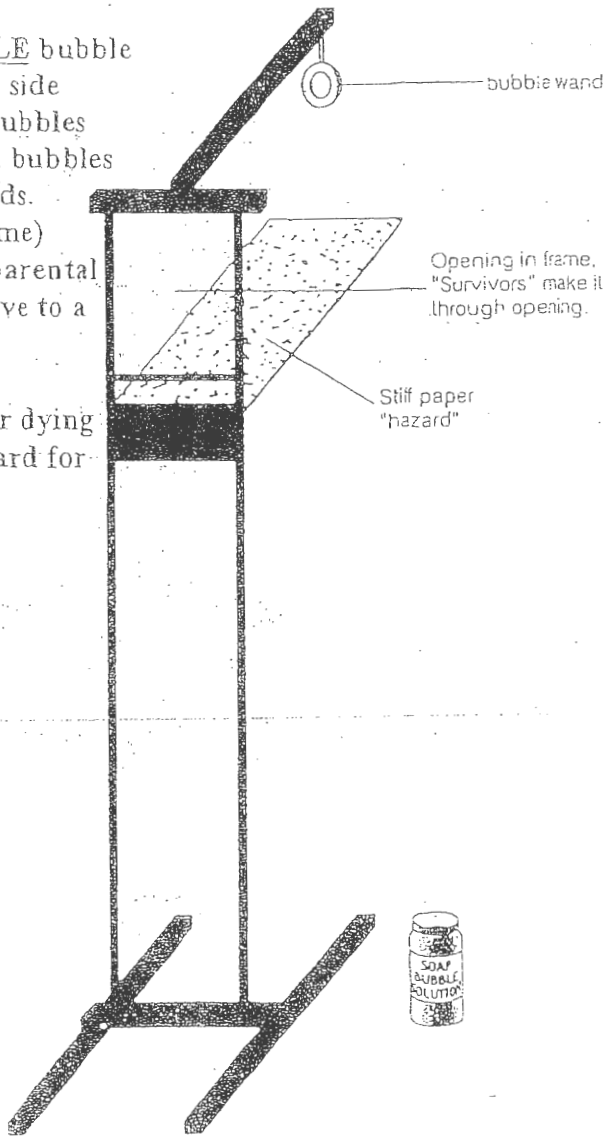
_____

Species III.

Requires 4 individuals (a bubble blower, a time-keeper, a recorder, and one to keep the survivors alive) and a Frame.

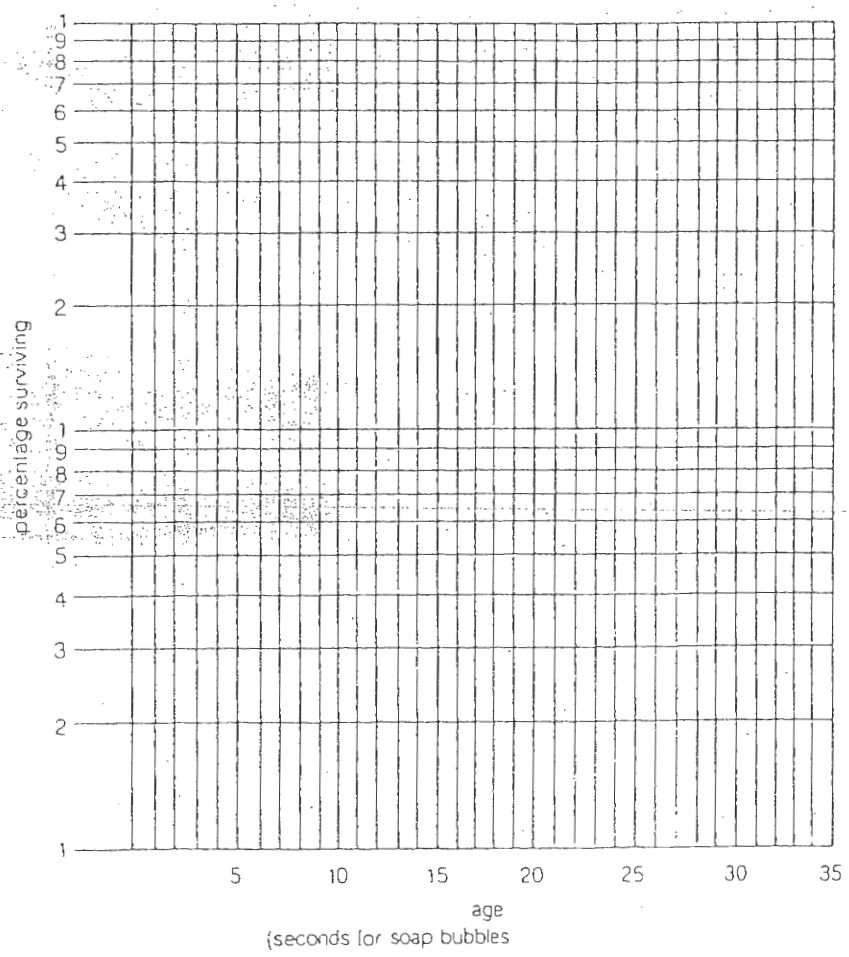
The "bubble blower" will attempt to blow a SINGLE bubble through the opening. Bubbles that move off to one side before reaching the paper or frame are ignored. Bubbles that break on the paper are scored as 1 second and bubbles that break against the frame are scored as 2 seconds. Surviving bubbles (those that pass through the frame) are kept alive as long as possible (note: this is not parental care but simply reflects the ability of a few to survive to a relatively long age.)

After 50 bubbles have been timed, the total number dying at each age (in seconds) will be recorded on the board for the rest of the class to copy.



Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
0			50	100%
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Age at Death (seconds)	Put a Check for Each Bubble Dying	Total Number Dying at This Age	Number Surviving to This Age	Percentage Surviving to This Age
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30 +				



Species 3 showed which type of survivorship curve? _____

What does this tell you about the life history pattern of this species? _____

_____

_____

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1547

Institution and Course Information

Name of Institution	Eastern New Mexico University - Roswell
Chief Academic Officer Name	Annemarie Oldfield
Chief Academic Officer Email	annemarie.oldfield@enmu.edu
Registrar Name	Chris Meeks
Registrar Email	chris.meeks@enmu.edu
Department	Arts & Science Education
Prefix	ENGL
Number	1410
Suffix	-
Title	Intro to Literature
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	ENGL
Number	1410
Suffix	
Title	Intro to Literature

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences

☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1.	Identify, define, and understand basic literary conventions and themes in fiction, poetry, and drama.
2.	Write reasonable, well-supported analyses of literature that ethically integrate evidence from texts.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

NA

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
[*Problem Setting:] During the semester, students enjoy an active participation in a community of readers through engagement with a wide range of texts including those selected from multiple genres, time periods, and authors. Each text is a kind of "problem," and the process of learning to read is akin to the process of "solving" the problem of the text. At the most basic level, reading literature is about encountering unique ideas, situations, ethical constructs, cultural environments, and moral, emotional, social, economic, political, and other situations in an effort to sympathize, understand, and otherwise connect to them. Students interact with texts as they practice annotation skills, improve reading efficacy, participate in workshops and class discussions, and the write critical responses to classmates and professional writers' efforts. Students learn to shape and share their ideas, to deploy and understand the nomenclature of reading in general and genres (poetry, fiction, nonfiction, drama, film) in particular, to work within specific formats and forms, to appreciate and shape their own writing style, to value the impact their reading has within their personal cultures and the larger audiences who might contribute different reactions or understanding to the material. Students participate in individual and group activities while exploring literature and share their reactions and experiences through various kinds of written documents, including focused annotation.

[Evidence Acquisition:] Students access and consider evidence through their assigned course readings, recordings, handouts, the library's general collection, and the University's numerous databases (e.g., EBSCO, Academic Search Complete, ProQuest, JSTOR, etc.), and faculty-provided material to support their investigation and study of literature and writers. Students enjoy a wide variety of samples of each genre from published writers, which they annotate and discuss; handouts provide them theoretical discussion of concepts, terms, and strategies for reading; they produce their own artifacts, which become part of a larger conversation about the source text. A student might, for example, read ten poems, discuss the poems in class, write her own poem, and then discuss her and other students' poems in workshop while linking back to the original text, traditions of literature, and other filters through which they may consider the meaning(s) of what they've read.

[*Evidence Evaluation:] The course asks students to evaluate works from diverse authors, across diverse time periods and genres, as well as evaluate their own and other students' ideas and reactions. Through discussions and written assignments (including summaries, reactions, and off-shoot creative writing), vocabulary review, responses, and short essays compel students to respond to primary texts, other students' positions, as well as professional critiques / reviews; the discussions and written responses model techniques of textual and cultural evaluation. Interactions with the faculty member and other students allow students to weigh observations and conclusions, to test the mettle of their thinking. During discussions (about a writer's use of subtext, for example, or metaphor), students balance the value of professional texts and other students' opinions. For many of the statements students make (in discussions, for example, about how a poem begins or the title), we emphasize currency, relevance, authority, accuracy, and purpose. Students are working on creating their own opinions and understanding of the material, their own interpretations; many assignments make conscious the techniques of evaluation necessary to assure thoughtful and hearty interpretation across schools of literary study (feminist, structuralist, etc).

[*Reasoning/Conclusion(s):] Students arrive at thoughtful, clean, and cogent positions about the "meaning" of poems, stories, and other texts based on critical reading, instructor guidance, and peer conversation; their written and verbal responses serve as their conclusions brought forth through an iterative process of considering individual words, lines, images, forms, and styles and connecting them to larger themes, movements, and ideas. They are guided to ask questions about language, form, and genre; then they posit answers and enact their conclusion in their own writing. Repeated exposure to primary and secondary sources allows students to engage examples of good and poor reasoning, awkward or ineffective interpretation, and creative pathways that lead toward the ability to support and explain their position and ideas. Their ability to explain their interpretation matures into college-level academic discourse. Their final essay, for example, demonstrates their reasoning process as they encounter a larger, more complex text and support their conclusions with significant textual support.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

[*Intercultural Reasoning and Intercultural Competence:] During the semesters, through readings, discussions, and individual writing, students encounter a diverse selection of writers representing a multitude of socio-economic, religious, ethnic, gender, and identity perspectives; the readings derive from writers as diverse as Shakespeare and Chinua Achebe, Margaret Atwood and Mercedes de Acosta. Students, too, bring their unique cultural perspectives and backgrounds to discussion and their work. Many of the readings open windows on traditionally excluded or stifled perspectives and open channels for sympathetic engagement and appreciation. Because students arrive at the class with a significant diversity of original languages, economic-social-gender-race-religious-political backgrounds, their perspective, too, provides a unique opportunity to engage in cross-cultural appreciation. Student progress is measured in part on their ability to access (sympathize with) and share differing perspectives and backgrounds. Each new reading assignment asks students to inhabit the experience of someone with a background substantially different from their own.

[*Civic Knowledge and Engagement—Local and Global:] The literature course is an exercise in civic engagement, and one by-product is an increased social intelligence—an ability to communicate across and access differences in productive, generous, and valuable ways. Throughout the semester, students tackle socio-cultural, artistic, religious, scientific, and political issues inherent in great literature; these explorations are anchored in practical, real-world examples and creative problem solving: we meet characters in crises and talk about the social milieu, the internal and external conflicts, the larger pressures that shape actions and thought. We might consider, for example, the novel "Into the Beautiful North" (Urrea, 2014) and have lengthy discussion about border politics, racism, and our role in others' suffering. Nearly every primary text embraces the conversation of civic responsibility either as a critique, a model, or an investigation of communities in action; the texts provide the leaping-off point for conversations about how the individual is in conflict with, correspondent to, or estranged from civic duties, responsibilities, and obligations; their annotation and analyses allow them to reflect and sharpen their understanding.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

[*Digital Literacy / Information Structures:] Students master Canvas both to initiate and participate in several course discussions, communicate with their classmates and instructor, check their grades, and receive course-wide and institutional updates. Several class meetings, office hours, and individual meetings with faculty occur over Teams or Zoom. Students engage other important digital tools, including email, PowerPoint, web browsers, and often other platforms like Instagram for communication, research, and general communication. Students have access to tutoring services as well as a wealth of online tutorials and services available to assist their academic progress (Youtube videos, tutorials, Purdue Owl, etc.). These digital tools manifest in their assignments at every level. Their final presentation, for example, uses Power Point (with rich slides, including film and sound clips), to share their final portfolio with the class.

[*Information Structures:] Students embrace the library, both physical and virtually, as an enormous campus resources to facilitate and conduct research and investigation. They have access to and are required to interact with the library's digital resources, including e-Books, electronic articles, and electronic reference works, especially in their vocabulary building exercises and in research for the details / examples they use in their reading (they might need to research the name of a town or a particular name of a restaurant or a mythological figure, for example).

[*Research as Inquiry:] Each genre requires a unique series of questions to be asked and answered by the diligent student. A student reading a fiction story about the Old West might, for example, need to ask "how was mail delivered in the unincorporated West?" A different student might need to research the psychological implications of a particular drug. A reading a pantoum would need to ask, why do they look like that—what are the implications of form? And then research models and samples to make connections. When students read professional writers, their analysis derives from a series of questions and follows a learned pattern: what did I notice? What might what I noticed mean? Assignments and academic interaction in the classroom emphasize a student's ability to initiate, conduct, and arrive at conclusions through a variety of research methods. The course teaches students, first, to ask good questions and then to explore through personal and academic channels various forms of knowledge that assist them in drawing a conclusion. Students learn to supplement their observations with an array of support, including quotations from source material, professional commentary integrated into their writing, and other research. Assignments challenge students to appreciate their role in the knowledge-making adventure of academic, creative investigation through the process of asking questions and seeking solutions that are well-supported and engaging. Sometimes, they answer questions the faculty member proposes; sometimes, they generate their own inquiry.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.roswell.enmu.edu/wp-content/uploads/delightful-downloads/2019/09/2019-General-Education-Assessment-Plan_ENMURoswell.pdf

English 1410: Intro to Literature

Short Response Essay to 'The Fourth State of Matter'

After enjoying and submitting your annotations for *The Fourth State of Matter*, please **write a one-page response (single spaced).** Your response is, truly, *your* response: respond in whatever way you're inspired to write about what you read.

In your short essay, you could, for example, share with me what you thought was most interesting (likely you "understood" or appreciated some element of the piece I would like to hear about!); a close reading of a specific passage; an examination of a metaphor, simile, or other figurative language; an explication of how the title fits into the meaning of the story; an examination of a character, the setting, tone; a close look at symbols or symbolism; a look at a theme you found moving or intriguing; a rebuttal of an analysis you read online; a thoughtful exploration of a passage or quotation you found especially profound; and/or the explanation of a link you found between the writing and another piece of writing or your own personal experience.

You will need to include details and quotations (which might be individual words, snippets of a sentence, or complete passages.

I suggest a first line that echoes the following phrasing:

In JoAnn Beard's *The Fourth State of Matter,* her sad, dying dog represents the author's life where so many parts of her experience that used to be good are passing away but still present. [Author, title, my main idea I'm going to discuss]

Don't forget to include an APA header and a clever title!

Have fun! Tell me the story of your reading experience!

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1551

Institution and Course Information

Name of Institution	Southwestern Indian Polytechnic Institute
Chief Academic Officer Name	Val Montoya
Chief Academic Officer Email	Valerie.Montoya@bie.edu
Registrar Name	Admissions-Records Department
Registrar Email	admissions@mail.sipi.edu
Department	Business and Liberal Arts
Prefix	PHIL
Number	1115
Suffix	-
Title	Introduction to Philosophy
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	PHIL
Number	1115
Suffix	-
Title	Introduction to Philosophy

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences

☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Comprehend and differentiate between various philosophical approaches to questions within fields such as metaphysics, epistemology, ethics, and aesthetics.
2. Critically evaluate various philosophical arguments and positions.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

3. Identify indigenous worldviews, examine their potential philosophical content, and consider multiple possible interpretive and comparative contexts for indigenous philosophies
4. Distinguish systematic indigenous worldview and/or philosophical content in contrast to nonsystematic thought as well as categories of systematic worldviews such as universalist, conversionist, theological, ideological, secular, totalitarian, and so forth.

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Students will identify philosophical problems and formulate their expression while engaging with critical methods of rational inquiry, including classical philosophical problems, independently developed philosophical questions, and development of the ability to properly articulate and frame such questions in a manner suitable for philosophical inquiry. Methods of this inquiry may include, but are not limited to, discussion, dialogue/dialectic, debate, scholastic argumentation, contemplation and personal inquiry, naturalistic and/or participant observation, syllogistic logic and reasoning, and critical analysis.

Students will become familiar with how various classical problems have been addressed in a variety of primary and secondary sources. Becoming conversant with previous approaches to philosophical problems, students will learn to recognize patterns that coalesce into philosophical "schools" and traditions, enabling them to select and evaluate those that may be relevant to the philosophical problem in question. Students will also need to use logic, critical thinking and reasoning, and basic research skills in order to acquire practical knowledge of their chosen problems in order to apply philosophical reasoning to their resolution. They will also learn to critically evaluate previous responses with regard to their consistency and coherence as well as their relevance and applicability to the problem. This necessitates weighing opposing philosophical positions against each other while evaluating their own considered positions, based on rational standards of evidence, recognizing and applying syllogistic reasoning and logical thought.

Based on these competencies, students will formulate answers to philosophical questions and propose solutions to philosophical problems, independently generating rationally articulated, clearly and coherently expressed philosophical conclusions, formulated in a logical and self-consistent manner. Rather than elaborating only their own positions, students will apply the reasoning skills cultivated in this course to philosophical worldviews and positions other than their own. Consequently, students will demonstrate these competencies through rational presentation of their own arguments while critically examining counter-arguments.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

By becoming conversant with philosophical worldviews and traditions from multiple cultures and civilizations in diverse historical periods, subjecting these to rational examination and evaluation, students will increase their competencies in intercultural reasoning and engage with discussion and debate concerning the appropriateness and applicability of rational methodologies to culturally specific philosophies and worldviews, and address whether or not philosophical worldviews can be culturally determined or mediated.

As one of the five branches of Western philosophy, ethics exemplifies the application of philosophical reasoning to questions of personal and social responsibility that exhibit moral weight or significance. Students will apply comparative philosophical reasoning and engage in rational inquiry in all five branches of philosophy – as well as discuss the purported universality of these branches – and ethical reasoning will be frequently revisited in the contexts of cultural and civilizational variation.

The coherence and consistency of this reasoning will be evaluated based on its clarity, logic, and adherence to the principle of non-contradiction. Students will be able to articulate why their proposed answers to philosophical problems (such as ethical ones) are reasonable and applicable, identifying and presenting their own approach to ethics as well as the other branches of Western philosophy. This will require familiarity with the diverse ways in which philosophical worldviews have been communicated and expressed and cultivate the ability to rationally examine, critically analyze, and logically evaluate philosophical claims ranging from the metaphysical positions to the 'truth claims' central to various philosophical worldviews and traditions, as well as non-philosophical worldviews and

ideologies. In their responses to ethical questions as well as metaphysical and epistemological questions, students will practice reasoning from the abstract to the concrete, as well as from the general to the particular, so they will also have the opportunity to apply philosophical reasoning to questions of politics and aesthetics.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

Students will become acquainted with problems in philosophical sources, particularly those involving philosophical authorities, information subject to translation, and information mediated by factors including circumstances of suppression and bias, applying philosophical reasoning, particularly ethical reasoning, to those problems of sourcing, learning to identify indications of bias, mistranslation, intercultural and intra-cultural misunderstanding, and ideological deployment of philosophical concepts. This will include examination of examples of political philosophy but also apply generally to discussions of the construction of philosophical and academic authority.

Those discussions will also address the authority of reason itself along with academic conceptions of philosophy, introducing scholarly debate concerning Western philosophy and its antecedents, as well as the academic recognition of (at least some) non-Western worldviews as comparably philosophical in character. Students will examine available sources for indigenous, pre-Columbian, and non-Western worldviews, in which selection, translation, and representation of information can have significant impact on its reception and dissemination.

In order to articulate and support their own philosophical reasoning and conclusions, as well as their examinations and evaluations of primary sources, students will need to develop competency in selecting which sources and which portions of those sources to cite and examine in their work, arranging this information in a clear, concise, and logical way, practicing the skills necessary to the acquisition of information literacy, being required to recognize, identify, comprehend, evaluate, and utilize source material from a wide variety of possible sources, as well as analyze the use of those sources by the source material itself. Students will also be asked to describe their own process of inquiry, recognizing its adherence to the methods of philosophical reasoning and articulating its conclusion accordingly.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://4.files.edl.io/787b/08/15/19/035151-fb2f656e-d695-4a75-b9a8-9431e7379251.pdf

Evaluation (100 points complete total)

Content (30 points total)

Does the paper include all required original content? (20 points)

Are primary sources referenced when necessary and appropriate? (5 points)

Is comparison and contrast between the philosophical position of the paper and the primary sources present and accurate? (5 points)

Logic and Reasoning (30 points total)

Is the paper free of internal contradictions? (10 points)

Do the paper's conclusions follow from its premises? (10 points)

Is analysis of primary sources logically sound? (10 points)

Style and Presentation (30 points total)

Is the philosophical position presented in a clear and understandable way? (10 points)

Is the structure of the paper according to the Five Branches coherent and well organized? (10 points)

Is the application of the philosophical position to its application to a philosophical question or problem demonstrated thoroughly? (10 points)

Relevance (10 points total)

Is the significance of the philosophical problem or question made apparent? (5 points)

Does the conclusion present a resolution to that problem or question? (5 points)

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1556

Institution and Course Information

Name of Institution	Southwestern Indian Polytechnic Institute
Chief Academic Officer Name	Val Montoya
Chief Academic Officer Email	Valerie.Montoya@bie.edu
Registrar Name	Admissions-Records Department
Registrar Email	admissions@mail.sipi.edu
Department	Business and Liberal Arts
Prefix	ANTH
Number	1140
Suffix	-
Title	Introduction to Cultural Anthropology
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	ANTH
Number	1140
Suffix	-
Title	Introduction to Cultural Anthropology

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☒ Social & Behavioral Sciences

☐ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☒ Communication ☒ Critical Thinking ☐ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Introduce students to the basic concepts and research methods of cultural anthropology as one of the disciplines of social science, including fundamental concepts, such as culture and society, which form the pillars of the discipline (e.g., cultural relativism, cultural persistence and change, world-view and enculturation).
2. Comprehend the importance of studying cultural anthropology.
3. Demonstrate knowledge of the practice of anthropological research in the modern world that is increasingly multicultural, transnational and globally interconnected (e.g., globalization and modern world system).
4. Demonstrate an awareness of how students' own cultures shape their experiences and the way they see the world, as well as help them understand and interact with other cultures.
5. Understand how beliefs, values and assumptions are influenced by culture, biology, history, economic, and social structures.
6. Gain a sense of relationship with people possessing different experiences from their own.
7. Gain a deeper understanding and appreciation for cultural anthropology as a broad discipline through learning about its practices, and differentiating cultural anthropology from other disciplines that study people.
8. Become more sensitive and engaged global citizens from culturally relative perspectives.

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

9. Acquire familiarity with the ways in which scientific anthropological models have been applied and could be applied to cultural expressions, traditions, and legacies characteristic of indigenous cultures in general, and Native American cultures in particular
10. Investigate and apply indigenous and Native American anthropological models to indigenous and Native American cultural phenomena as well as other cultural phenomena, including western cultural expressions

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Genre and Medium Awareness, Application, and Versatility: In addition to developing the skills necessary to communicate and examine anthropological concepts in writing, in live discussion, and in formal presentations,

students consider through personal reflection and group discussion the variety of ways in which anthropological knowledge and concepts can be communicated to diverse audiences. Our institution's student body is entirely Native American, so it is significant to introduce them to the influence of the colonial history of Western anthropology on the rhetorical style and character of much scholarship in this field and anti-colonial and post-colonial responses. We discuss the relevance of these presentational issues and how different cultural audiences might receive and interpret them. Examples: ethnographic studies, collection of oral tradition, participant observation, especially when relating to living and/or ancestral communities of which students might be members or related in some way. Special consideration will be given to modes of communication pertaining to traditional, secret, initiatory, and/or otherwise protected cultural lore, along with discussion and debate regarding claims about knowledge and access to knowledge.
Strategies for Understanding and Evaluating Messages: Beyond standard skills needed by anthropology students for identifying arguments and counterarguments in written and orally presented scholarship, featuring throughout the course and requiring student summary, interpretation, and evaluative response, students are introduced to major theoretical models along with social, cultural, political perspectives, agendas, biases frequently accompanying them: models of historical significance that have been scientifically repudiated, demonstrating the impact that widely popular, academically established, yet fallacious, models can have on interpretation and communication of data, perpetuating distortion and bias; the ways such models have been rejected and refuted, sometimes on the basis of accurate information, sometimes not. Students compare these to contemporary models, accepted and disputed, through classroom discussion/debates, assignments identifying source material, original data, primary references, secondary references, popular interpretations, reinterpretations, revisionist interpretations. Anthropological research and scholarship by and about Native American and indigenous subjects will be examined in content and context of its presentation and reception. Students reflect on factors that would affect their experience of doing (and/or being the subject of) anthropological research, being given small-scale activities (self-reports, surveys, observation & participant observation, interview) that they can conduct for themselves in their own communities, comparing these to similar activities conducted outside of their own communities. Comparisons/contrasts between these experiences will be discussed in class, facilitating shared mutual reflection on concepts of central importance to anthropology including emic and etic perspectives.
Evaluation and Production of Arguments: Students are introduced to standards of reasoning and argumentation, accepted premises and the status of recognized authorities, varying across time and place through excerpts of primary sources that originated the models and theories to which they are being introduced. In discussion, students identify the claims made, reasoning and evidence used to support them, and authority of the source to make the claim. Assignments involve written evaluations of coherence, plausibility, validity, and persuasiveness of these positions. Students will use references in constructing their own arguments, reflecting on conflicts and consonances of emic and etic perspectives, in the course of multiple papers written in APA style.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

Problem Setting: Students formulate anthropological hypotheses, produce evidence and reasoning necessary to support interpretive claims, and distinguish between research reviews, literature reviews, and original research, discussing with reference to provided examples, the benefits and detriments of relying on research data collected by others vs. relying on one's own fieldwork. Each paper has requirements for primary and secondary sources and expectations regarding personal and/or original research that inform topic selection. One paper focuses on comparative indigenous restoration efforts in multiple dimensions, all of which must be included, requiring the evaluation of possible cultures for selection that have engaged in restoration efforts in all of these dimensions.
Evidence Acquisition: Students will be introduced to ways in which anthropological evidence is acquired directly, including observation and field research, the use of surveys and interviews, participant observation, various methods

of recording and organizing data, and the use of standardized and qualitative measures developed by others. They will also learn categories of primary and secondary sources, find references through using internet searches, disciplinary databases, etc. They will also be introduced, through written commentaries and recorded presentations and debates, to anthropological evidence categories that have been a source of contention, particularly with regard to tribal and indigenous communities, including cultural artifacts, human remains, oral traditions, sacred and/or initiatorily guarded magico-religious knowledge, traditional medicine and folkways, etc. Being introduced to a range of positions regarding the ways such information should be used and accessed (or not) in the course of anthropological scholarship, students will formulate and express their own position on this and related matters. Evidence Evaluation: Students will practice identifying and explaining the application of established scientific and disciplinary standards for the credibility of evidence and familiarize themselves with alternative standards of reasoning, evidence, and proof typical of emic perspectives pertaining to the specific examples, but also the emic perspectives from cultures *other* than those of the scholar OR the subject of study, by engaging in thought experiments, counterfactual reasoning, and speculative activities in which anthropological evidence is reconsidered and re-evaluated from multiple points of view. Students distinguish emic and etic perspectives through evaluations of primary and secondary sources, identifying biases and their impact on usefulness, relevance, and conclusions. Reasoning/Conclusion: Students consider counterarguments and alternative interpretations, identify flaws in reasoning, practice skills in recognizing bias and examples of poor anthropological reasoning, spurious conclusions, propaganda disguised as research, and ideological products masquerading as science, in comparison/contrast to examples of anthropology practiced from various non-Western, indigenous (with particular reference to Native American models) and/or subcultural perspectives. The difference between scientific descriptive cultural relativism and the fallacies inherent in prescriptive/normative cultural relativism will be repeatedly demonstrated with provided examples and students prompted to develop their own. Students will identify the presence of bad reasoning in examples, practice correcting it, and also deliberately design examples of bad reasoning themselves in order to better recognize how such mistakes can be made unintentionally through misapplied logic and undetected bias, but also how willfully biased sources are able to masquerade as rational and objective.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

Intercultural Reasoning and Intercultural Competence: The skills necessary to reason about culture and from various cultural perspectives are practiced throughout the course given its subject matter. It also includes specific assignments and in-class activities oriented to the study and simulation of intercultural exchanges and various models through which they can be analyzed and their consequences evaluated and predicted. Students will write thought-experiments pertaining to intercultural encounters and interactions, with opportunities for creative projects that engage with issues typical of intercultural encounters, including syncretism, cultural dissimulation, prejudice and persecution, the formation of outgroups and dominant minorities, etc. Further, in select activities, students will roleplay actual intercultural encounters, variations on these, and also hypothetical and speculative such intercultural encounters. Given that intercultural encounters of a devastating and traumatic character likely feature in the ancestral heritage of the majority of our students, the course will include structured discussion that facilitates

consideration of the multifaceted nature of these circumstances, as well as comparison and contrast with other historical and contemporary intercultural encounters that have included various atrocities, colonial and otherwise. This includes direct introduction to conceptions of colonialism and colonization, as well as conflicting perspectives regarding its significance and impact. Finally, contentious contemporary issues will be examined from various anthropological perspectives, including debates regarding cultural appropriation, postulated collective ownership of traditional lore as intellectual property, ethno-cultural identitarianism, ethic and racial essentialism, and disputable constructs such as "cultural racism." Structured debates require students to advance arguments for all relevant perspectives to the best of their abilities in order to avoid disadvantaging those students whose own perspectives might be in a rejected minority; however, students will also be invited to share their own perspectives (or whatever perspectives they wish to present as their own) in more open opportunities for writing and discussion on these issues. Ethical Reasoning: The ethical dimensions of cultures, their worldviews, and claims regarding these are an important feature of cultural anthropology, given that descriptive ethics owes many of its examples, particularly concerning indigenous cultures, to the work of cultural anthropologists specializing in the identification and analysis of cultural ethics. Students will be introduced to this work and will practice expressing descriptive ethical knowledge from an accurate etic perspective. Students will also be introduced to disciplinary standards for ethical research and fieldwork in anthropology, including real and hypothetical examples of adherence to these standards being in doubt, anthropological research from historical periods prior to the adoption of contemporary ethical standards (comparing and contrasting prior standards and current standards), meta-ethical evaluations of the extent to which cultural biases, ethnocentrisms, assumptions concerning modern progress, and so forth have contributed to these differences. Also included: discussion/debate about claims regarding the acceptability of utilizing research that has been acquired in a manner deemed by some to be unethical, as well as discussing and debating the legitimacy of the use of composite figures, disguised sources, etc. in research based on fieldwork and/or participant observation.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://4.files.edl.io/787b/08/15/19/035151-fb2f656e-d695-4a75-b9a8-9431e7379251.pdf

Comprehensive Final Paper

Throughout this course, in addition to learning and applying the principles of cultural anthropology in thought and in writing, you have also engaged in fieldwork (including participant observation) and completed several interviews along with a self-report. This final paper is your opportunity to combine all of these methods and techniques, and so it can be considered to be the written portion of a comprehensive final project, for which you will also perform fieldwork and participant observation, as well as conducting either the interview of a single source or using a simple survey. You will briefly present your experiences and findings in our final class discussion.

For this final project, you will select a single cultural expression or phenomenon *that does not originate in your own culture or any subculture in which you regularly participate.* It can be anything that fits this general category, subject to the permission of your instructor, *and subject to not having been used for another assignment, already examined in detail in any course readings, activities, discussions, debates, etc*. In summary, this must be a completely new selection, and something that is able to be examined using any anthropological methods that you have learned.

The ultimate focus of the paper will be comparative analysis: you will compare and contrast the selected cultural expression or phenomenon with its closest equivalent within your own traditional indigenous cultural heritage. If its closest equivalent within your traditional cultural background is subject to restrictions that prevent that from being revealed and/or analyzed and discussed, you are free to select either a different indigenous tradition or, if no suitably comparable indigenous cultural expression or phenomenon is available or accessible, you should select any subcultural equivalent that involves the reconstruction or simulation of pre-modern cultural traditions. If *that* is also unsuitable or unavailable, select a subcultural expression or phenomenon that presents an interesting comparison/contrast with your selected focus, in an equivalent cultural area, that you would regard as the most variant from the local mainstream culture.

Having selected the focus of your analysis, you need to complete fieldwork, ideally in the form of direct observation, but if this is impractical, the use of the recordings and archives of other observers can, with the permission of your instructor, replace this fieldwork, although it is likely that more total time will need to be spend with archived material given its shallowness in comparison with direct observation. Subsequently, you will need to perform at least one one participant observation of the phenomenon. If you are restricted by the nature of your selection to recordings and archives, your instructor will advise you concerning a suitable alternative, which might involve creative reconstruction or some other engagement more immersive than merely written reflection. Be sure to keep good, thorough, and careful records of your experiences, following the guidelines for previous participant observation during this course.

Finally, you should interview one selected participant versed in the cultural phenomenon you have chosen. Ideally, this person should be the most expert and experienced (regardless of their level of recognized authority); failing that, someone generally recognized as representing mainstream experiences within the community should be selected if available. In the course of this interview, using the techniques that you have practiced, you are aiming to acquire as much information as possible regarding "insider" perspectives on the cultural phenomenon in question.

Alternatively, if an interview is impractical, if no interviewee is suitable, willing, or available, or if you believe that the information that you could acquire through a survey is superior, you have the option of designing a survey (which should first be approved by your instructor) that can be distributed to participants in the cultural expression that you have chosen. Its purpose is to gain a snapshot cross-section of insider perspectives in selected aspects. You can and should compare your results to any available, previously collected data.

Once you have completed your data collection, the requirements of the paper are as follows:

In 3,000 words *at minimum* (though more are likely required), select *at least three* different theoretical models still used in contemporary cultural anthropology, one of which should pertain to indigenous anthropology, and apply each component of each model to the selected cultural expression or phenomenon. You will also do the same with regard to the *equivalent expression or phenomenon* from your own traditional cultural background, subject to the qualifiers described earlier in these instructions.

You will then reflect on the applicability of each model, examining its interpretations and evaluating their relevance, validity, and explanatory usefulness based on your own observations and experiences.

In your conclusion, you should offer an interpretive perspective that either extracts the best of the common conclusions of these models – explaining why these interpretive overlaps offer insight into the significance of the cultural phenomenon that you have selected, *or* explain why the three models that you chose are insufficient, emphasizing interpretive areas in which they leave the significance of the cultural phenomenon that you have selected still undetermined, or in which they lead to its misinterpretation. The comparative-interpretation should culminate in your comparing and contrasting the meaning and significance of your originally selected cultural expression/phenomenon within its wider cultural setting, with the meaning and significance of its equivalent within your traditional culture as a whole.

Finally, you should reflect on your *own* interpretations and experiences in doing this work and in examining and evaluating a cultural experience that pertains to your own indigenous background. To what degree to you personally identify as an insider and/or outsider with regard to the phenomena and cultural expressions that you have examined? What would be required – if it is even possible – for you to be regarded as a cultural insider with regard to the phenomena on which you focused? What would it require – if it is possible – for you to *feel like*

a cultural insider in that circumstance? Now consider the inverse: what do you believe is required for someone to be regarded as an insider-participant of the equivalent cultural expression in your traditional culture? Is it possible for an outside observer to ever become a cultural insider in this context? Why or why not? What, if anything, have you learned about the role and significance of the cultural expression that you've selected for this paper? Do the common features of both examples (the selected focus and the traditional indigenous equivalent) illustrate anything about the significance of this phenomenon for humans in general? Why or why not? To the degree that the phenomenon is significant for humans in general, what do the *differences* between the examples suggest to you about human cultural variation?

RUBRIC

The 100% of possible points in this paper are divided into the ten dimensions below, each being worth 10% of those possible points.

Accuracy

All statements of fact, references to sources, claims about the content of theories and methods and their application, and so forth, should be accurate. Points will be deducted for all inaccuracies.

Completeness

At minimum, all components assigned should be included with sufficient detail that any questions or lines of inquiry suggested in the paper instructions are pursued to a conclusion within the limits of available information. Further, there should be full use made of information collected, comparisons and contrasts should be complete and parallel, and all significant components of each theoretical model selected should be applied. Points will be deducted for missing information.

Awareness

There should be acknowledgement of the limitations of observations, collected data, interview context, etc. The paper should express awareness of possible counterarguments and alternative interpretations and respond accordingly. Similarly, the paper should express awareness when its interpretations are highly speculative. Points will be deducted for lack of expressed awareness of such potential opportunities for interpretive fault and argumentative weakness.

Reliability

The information that the paper relies on should be such that it was collected and represented in a way that indicates it to be reliable, at least within acknowledged limits (see previous item). Points will be deducted for the use of unreliable information in an uncritical way.

Consistency

Not only should any claims follow from available evidence, and conclusions rest on supported claims, but resulting interpretations should be consistent throughout the paper, and consistent with the paper's sources (or, when they contradict or refute such sources, they should do so clearly). Points will be deducted for inconsistencies.

Coherence

Interpretations and arguments should be structured in such a way that they are understandable, and in particular the comparisons and contrasts should be structured in a parallel and logical manner that is easy to follow and clear in its applicability. Points will be deducted for incoherence.

Interpretive Depth

A paper of this nature is not simply a record of observations and the way that phenomena are similar to or different from each other. It is an examination of *how and why those comparisons and contrasts are observed to be the case, and why they are the case*. It is also an inquiry into *why that is significant* and what other conclusions can be drawn from this (and also why *that* is significant, and *how* it could be further evaluated and investigated). Points will be deducted for unexplored comparisons and contrasts, shallowness of interpretation, and failure to pursue inquiries beyond the surface level.

Critical Reflection

This paper also requires that the usefulness and applicability of models be evaluated, along with the reasons for any conclusions that follow from that evaluation. Further, the paper requires that the author *self-reflect* and *self-evaluate* regarding the application of insider/outsider, emic/etic perspectives, at minimum. Points will be deducted for a lack of critical reflection as well as for critical reflection that is deficient in its clarity or imprecise in its application.

Style

There are multiple styles of presentation that might be appropriate to a paper of this nature. There are even more that are not. The style of paper should be such that it would be clear and accessible to a reader with undergraduate-level knowledge of cultural anthropology (so, your peers in the course) but also such that it would be appropriate for its to be posted on a website dedicated to popular cultural anthropology sponsored by your academic institution. Points will be deducted for inappropriate style.

Referencing

References should be in APA style. Points will be deducted for errors in the use of APA citations and references.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1559

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	ogriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	wright@nmmi.edu
Department	History
Prefix	HIST
Number	1223
Suffix	-
Title	Introduction to Modern German Culture and Civilization: From 1871 to present
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	-
Number	-
Suffix	-
Title	-

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences

☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Students will have a basic understanding of the history of German civilization in terms of major periods and movements (including social, artistic, and political developments, and philosophical traditions) and a basic grasp of critical methods for interpreting these fields.
2. Students will exhibit limited knowledge about historical, cultural, social, geographical and societal issues affecting the various cultures of the German-speaking world.
3. Understand the relationship of culture to social history and intellectual life in the German-speaking countries.
4. Students will have a basic understanding of the impact the leadership of key historical figures (political and intellectual leaders) had on the shaping of German, European and World culture and civilization.
5. Students will demonstrate awareness of ethical themes pertaining to the culture and history of German speaking countries.
6. Students will demonstrate the ability to analyze, synthesize, apply and evaluate the information they are given (critical thinking) pertaining to grammar, cultural, historical, societal and language issues.
7. Students will develop an understanding and lifelong appreciation for languages, cultures, value systems, educational systems, political systems and leadership systems other than their own.
8. Students will be able to identify historical events of German speaking countries.
9. Students will be able to understand and identify cultural differences in German speaking countries.
10. Students will demonstrate the ability to adhere to the NMMI cadet honor code and to exhibit academic integrity (character development).

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

1. Students will have a basic understanding of the history of German civilization in terms of major periods and movements (including social, artistic, and political developments, and philosophical traditions) and a basic grasp of critical methods for interpreting these fields.
2. Students will exhibit limited knowledge about historical, cultural, social, geographical and societal issues affecting the various cultures of the German-speaking world.
3. Understand the relationship of culture to social history and intellectual life in the German-speaking countries.
4. Students will have a basic understanding of the impact the leadership of key historical figures (political and intellectual leaders) had on the shaping of German, European and World culture and civilization.
5. Students will demonstrate awareness of ethical themes pertaining to the culture and history of German speaking countries.
6. Students will demonstrate the ability to analyze, synthesize, apply and evaluate the information they are given (critical thinking) pertaining to grammar, cultural, historical, societal and language issues.
7. Students will develop an understanding and lifelong appreciation for languages, cultures, value systems, educational systems, political systems and leadership systems other than their own.
8. Students will be able to identify historical events of German speaking countries.
9. Students will be able to understand and identify cultural differences in German speaking countries.

10. Students will demonstrate the ability to adhere to the NMMI cadet honor code and to exhibit academic integrity (character development).

C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*

This course addresses the critical thinking skills element of essential skills. Each of the outcomes of this skill will be part of the assessment for this course. Students are required to do a final multimedia project. This project is a comprehensive digital/multimedia project, which explains and shows the elements of Germanic civilization and culture, comparing and contrasting regions and changes over time.

The project will start with addressing the problem setting skill; stating the appropriate contextual question: what was learned, including regional variations, about the German-speaking areas of Europe, regarding history, culture, artistic and philosophical movements, geography, customs and economic forces. Students will need to set up their own setting/problem.

The next stage for the project, the evidence acquisition scale is demonstrated throughout the course. Each student will need to identify and gather all the information necessary to fulfill the assignment. This will entail multiple methods. First, they have their presentations. That will require them to research their topic/person/issue via print and Internet sources. As they gather the information, they will need to condense relevant information into a coherent, brief presentation. They then upload this information to Canvas for all participants to incorporate into their project. Additionally, students have regional assignments. The answers to these assignments come from a variety of sources, including lectures, sound, visuals, etc. Each student will need to identify and acquire the relevant information from all sources for each regional area discussed. They will then need to combine and acquire all information across the regional areas into a coherent hole.

While the evidence acquisition scale is important and happens throughout the whole course, the evidence evaluation skill is perhaps the most important. Having all the information in the world doesn't help one, if one doesn't know what to do with it or how to apply it. In this assignment, students will need to evaluate the evidence/data for credibility (e.g. bias, Reliability, and validity), probable truth, and relevance to the situation. As the students evaluate the presentations of the other students, they will need to evaluate the relevance and credibility of the information and sources. As they work on the regional assignments, including the discussion group aspect, once again, credibility,

probable truth, and relevance will be paramount in submitting an acceptable document. Finalizing the project will entail students deciding which information is relevant to the final assignment. Using the regional assignments should mean that they have already evaluated the evidence/data for credibility and probable truth. Compiling all the information from their presentations, the other students' presentations, the original assignments, the lectures and all visuals from the course will specifically enhance their skills in evidence acquisition and evidence evaluation.
ADDRESS ALL:
Problem Setting—Delineate a problem or question. Students state problem/question appropriate to the context.

Evidence Acquisition—Identify and gather the information/data necessary to address the problem or question.

Evidence Evaluation—Evaluate evidence/data for credibility (e.g. bias, reliability, and validity), probable truth, and relevance to a situation.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*

This course will address the outcomes of personal and social responsibility, in the following ways. Students are required to do multiple presentations as well as other assignments. These presentations and assignments address topics or issues relating to the timeframe, people, or issues in the German – speaking areas of Europe. These presentations will address assign topics/people/issues of various Germanic speaking regions. Although Germa speaking states/countries have similarities, there are still regional variations. As part of the course assessment, students have an assignment to convey what they have learned about each region covered in lectures etc. The ethical reasoning outcome is addressed in both the presentations and the regional assignments. Moral norms or ethical responsibilities are integral part of culture. As this course addresses Germanic culture, the regional varieties of that culture clearly lead to addressing this outcome. It can be done in two different ways. The first method is to look at the regional cultural ethical and moral norms. Describing possible scenarios or actual behavior should lead to ethical reasoning, based on ethical perspectives. For example, they can discuss issues that are different from their own perspective, or they could address views that have changed over time.

The intercultural reasoning and intercultural competence outcome is addressed through course assignments. The regional assignments require each student to explain what they learned about each region. In order to do so they will need to explain a range of social and cultural issues that help explain the region. They will need to relate them to their own perspectives. What is social and culturally "correct" is variable. As students learn of regional differences, they will be confronted with their own perspectives, hopefully leading to comparisons between the two.

Additionally the collaboration skills, teamwork, and value system outcome is addressed in the presentations and regional assignments. As mentioned each student turns in regional papers detailing the things learned about regional cultural and history. However, the presentations to students do, present required information on different regions. Thus, the students need teamwork from all participants, to gain knowledge of the regions. Additionally, they can work

together, and are encouraged to comment on and discuss the information presented. Discussion groups are on Canvas to allow the expansion of topical understanding. Ethical collaboration happens through these discussion boards and the resulting regional papers. Students discuss and collaborate on information but must turn in their own work. Each student shows accountability through their presentations. They show accountability for improving class members understanding of the related topic/issues. Failure to post adequate presentations reduces the others' understanding of the topics.

ADDRESS 2 OF 5:

Intercultural reasoning and intercultural competence—Explain a range of personal, social, cultural, or social justice issues as they relate to one's own or others' perspectives.

Sustainability and the natural and human worlds—Examine the relationship among environmental, socio-cultural, political, and economic systems as they interact with and affect the sustainability of the natural and human worlds.

Ethical Reasoning—Describe shared ethical responsibilities or moral norms among members of a group. Explain ethical issues or propose solutions based on ethical perspectives or theories.

Collaboration skills, teamwork, and value systems—Demonstrate effective and ethical collaboration in support of meeting identified group goals. (Accountability is implied with "ethical.")

Civic discourse, civic knowledge, and engagement: local and global—Explain and support one's own position on specific local or global issues while recognizing that there may be multiple valid perspectives.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

This course will address the outcomes of information and digital literacy in the following ways. Students are required to do multiple presentations on topics or issues relating to the timeframe, people, or issues in the German speaking areas of Europe. For these presentations, students will need to conduct research on their assigned topics/people/issues. To start, this will address the authority and value of information outcome. Their presentation will entail evaluating source material as to the validity and authority of the sources they use. They will then need to use this knowledge ethically by citing the information they used properly; avoiding plagiarism.

The presentation assignments address the digital literacy outcome. As these assignments are presentations, students will need digital literacy. They will need to create and design digital presentations that allow others in the course to readily understand the information. As such, they will need to adequately communicate the information effectively by showing they understand both the information and the digital literacy skills to make a functional presentation. Students will need to manipulate text from outside sources into a smoothly flowing informational presentation. Additionally, they will also need to use graphics to provide examples of their statements. Using graphics will also enhance understanding. As the old saying goes, "a picture is worth 1000 words." However, the students will also need to incorporate these images with the text in order to provide an informative presentation, rather than just a confusing jumble of words and random statements. Depending on the student, sources used can also be sound or video clips. Again, students must show digital literacy when incorporating sound/video clips into the presentation.

This course will also address the information structures outcome. Students will select and use appropriate information, formatted for presentation compatibility. They will then organize this information in an appropriate

manner, produce the presentation, and then share the presentation via upload into Canvas. They will use appropriate applications and systems to produce the presentation and still have a correct upload to Canvas.

Each student will do five of these presentations, allowing them the opportunity to improve their digital literacy, finding the value and authority of information, and their information structures. They have the opportunity to evaluate information and sources, use different applications – or improve knowledge of the same application, and produce an engaging and informative presentation. As they build on their previous presentations, the students will be able to better evaluate sources and to perhaps use other applications that could be better in presenting the information.

ADDRESS 3 OF 4:

Authority and Value of Information—Recognize the interdependent nature of the authority and value of information and use this knowledge ethically when selecting, using, and creating information.

Digital Literacy—Understand, communicate, compute, create, and design in digital environments.

Information Structures—Select, use, produce, organize, and share information employing appropriate information formats, collections, systems, and applications.

Research as Inquiry—Engage in an iterative process of inquiry that defines a problem or poses a question and through research generates a reasonable solution or answer.

D. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan	https://www.nmmi.edu/assessment-plans/

Final Project

The final project is a comprehensive digital/multimedia project comprised of pictures, videos, audio, along with other appropriate text. This project will explain & show the elements of German civilization & culture, comparing and contrasting regions and changes over time, learned throughout the course. The project must include regional variations throughout the German-speaking areas of Europe, regarding history, culture, artistic and philosophical movements, geography, customs and economic forces. Grading is based on the thoroughness of the information, correctness, visual effects/professionalism, and whether it meets all formal requirements. Additional information provided in class.

Students will be assessed on the following formal requirements:
Does the project introduece what the project will address?
Does the project address all regions covered in the course?
Are the sources used valid?
Is the evidence used valid, unbiased and credible/reliable?
Was relevant information from presentations of others used?
Was all information properly cited/given credit?
Was the assignment digitally competent for access by others?
Does the project information flow smoothly and is presented clearly?
Were graphic, sound, or video clips used appropriately?

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number 1563

Institution and Course Information

Name of Institution	New Mexico Military Institute
Chief Academic Officer Name	Orlando Griego
Chief Academic Officer Email	ogriego@nmmi.edu
Registrar Name	Chris Wright
Registrar Email	wright@nmmi.edu
Department	History
Prefix	HIST
Number	1213
Suffix	-
Title	Introduction to German Culture and Civilization: From Roman Times to Bismarck
Number of Credits	3

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

Is this application for your system (ENMU, NMSU, & UNM)?

☐ Yes ☒ No

Co-Requisite Course Information

Prefix	-
Number	-
Suffix	-
Title	-

New Mexico Common Course information

Prefix	-
Number	-
Suffix	-
Title	-

A. Content Area and Essential Skills

To which content area should this course be added? *Indicate "Other" if the course is not associated with one of the six NM General Education content areas.*

☐ Communications ☐ Mathematics ☐ Science ☐ Social & Behavioral Sciences

☒ Humanities ☐ Creative & Fine Arts ☐ Flex

Which essential skills will be addressed?

☐ Communication ☒ Critical Thinking ☒ Information & Digital Literacy
☐ Quantitative Reasoning ☒ Personal & Social Responsibility

B. Learning Outcomes

List all common course student learning outcomes for the course.

1. Have a basic understanding of the history of Germanic civilization in terms of major periods and movements (including social, artistic, and political developments, and philosophical traditions) and a basic grasp of critical methods for interpreting these fields.
2. Exhibit limited knowledge about historical, cultural, social, geographical and societal issues affecting the various cultures of the German-speaking world.
3. Understand the relationship of culture to social history and intellectual life in the German-speaking countries.
4. Have a basic understanding of the impact the leadership of key historical figures (political and intellectual leaders) had on the shaping of German, European and World culture and civilization.
5. Demonstrate awareness of ethical themes pertaining to the culture and history of German speaking countries.
6. Demonstrate the ability to analyze, synthesize, apply and evaluate the information they are given (critical thinking) pertaining to grammar, cultural, historical, societal and language issues.
7. Develop an understanding and lifelong appreciation for languages, cultures, value systems, educational systems, political systems and leadership systems other than their own.
8. Be able to identify historical events of German speaking countries.
9. Be able to understand and identify cultural differences in German speaking countries.
10. Demonstrate the ability to adhere to the NMMI cadet honor code and to exhibit academic integrity (character development).

List all institution-specific Student Learning Outcomes that are common to all course sections offered at the institutions regardless of instructor.

1. Have a basic understanding of the history of Germanic civilization in terms of major periods and movements (including social, artistic, and political developments, and philosophical traditions) and a basic grasp of critical methods for interpreting these fields.
2. Exhibit limited knowledge about historical, cultural, social, geographical and societal issues affecting the various cultures of the German-speaking world.
3. Understand the relationship of culture to social history and intellectual life in the German-speaking countries.
4. Have a basic understanding of the impact the leadership of key historical figures (political and intellectual leaders) had on the shaping of German, European and World culture and civilization.
5. Demonstrate awareness of ethical themes pertaining to the culture and history of German speaking countries.
6. Demonstrate the ability to analyze, synthesize, apply and evaluate the information they are given (critical thinking) pertaining to grammar, cultural, historical, societal and language issues.
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8. Be able to identify historical events of German speaking countries.
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C. Narrative

In the boxes provided, write a short (~300 words) narrative explaining how the course weaves the essential skills associated with the content area throughout the course. Explain what students are going to do to develop the essential skills and how you will assess their learning. The narrative should be written with a general audience in mind and avoid discipline specific jargon as much as possible.

Be sure to address the component skills listed next to each essential skill. The number of component skills that must be addressed by your narrative is listed.

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
This course addresses the critical thinking skills element of essential skills. Each of the outcomes of this skill will be part of the assessment for this course. Students are required to do a final multimedia project. This project is a comprehensive digital/multimedia project, which explains and shows the elements of Germanic civilization and culture, comparing and contrasting regions and changes over time. The project will start with addressing the problem setting skill; stating the appropriate contextual question: what was learned, including regional variations, about the German-speaking areas of Europe, regarding history, culture, artistic and philosophical movements, geography, customs and economic forces. Students will need to set up their own setting/problem. The next stage for the project, the evidence acquisition scale is demonstrated throughout the course. Each student will need to identify and gather all the information necessary to fulfill the assignment. This will entail multiple methods. First, they have their presentations. That will require them to research their topic/person/issue via print and Internet sources. As they gather the information, they will need to condense relevant information into a coherent, brief presentation. They then upload this information to Canvas for all participants to incorporate into their project. Additionally, students have regional assignments. The answers to these assignments come from a variety of sources, including lectures, sound, visuals, etc. Each student will need to identify and acquire the relevant information from all sources for each regional area discussed. They will then need to combine and acquire all information across the regional areas into a coherent hole. While the evidence acquisition scale is important and happens throughout the whole course, the evidence evaluation skill is perhaps the most important. Having all the information in the world doesn't help one, if one doesn't know what to do with it or how to apply it. In this assignment, students will need to evaluate the evidence/data for credibility (e.g. bias, Reliability, and validity), probable truth, and relevance to the situation. As the students evaluate the presentations of the other students, they will need to evaluate the relevance and credibility of the information and sources. As they work on the regional assignments, including the discussion group aspect, once again, credibility, probable truth, and relevance will be paramount in submitting an acceptable document. Finalizing the project will entail students deciding which information is relevant to the final assignment. Using the regional assignments should

mean that they have already evaluated the evidence/data for credibility and probable truth. Compiling all the information from their presentations, the other students' presentations, the original assignments, the lectures and all visuals from the course will specifically enhance their skills in evidence acquisition and evidence evaluation.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*

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