NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 839

Institution and Course Information

Name of Institution	**WNMU**
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	**ALAS**
Number	**1835**
Title	**Creativity**
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	N/A
Number	N/A
Title	N/A

New Mexico Common Course information

Prefix	N/A
Number	N/A
Title	N/A

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 ☐ Other

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.

Not common- Flex GE

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

A. This course provides an intellectual foundation for exploring and understanding the three philosophical questions underpinning WNMU's Applied Liberal Arts and Sciences program (ALAS)

- **What is Truth?**
- **What is Justice?**
- **What does it mean to be Human?**
- **How should we Live?**

By the end of the course, students should be able to apply these questions to both the course content and to their lives in a reflective way

B. Students will practice, apply, and improve 4 of New Mexico's 5 essential skills assessed in this course, demonstrating basic competency as follows

Communication Consistently demonstrates the ability to 1. explain content thoroughly 2. use a logical structure to convey content 3. follow standard English conventions, though there may be grammar/punctuation errors.

Critical Thinking
Consistently demonstrates critical thinking skills by showing understanding of course content, asking thoughtful questions, and engaging with the course material.

Personal and Social Responsibility Consistently demonstrates ability to engage in critical inquiry through ethical reasoning while recognizing and utilizing civic discourse.

All ALAS courses agree to the following learning outcomes:

1. Actively participate in helping students develop a WNMU ALAS liberal arts foundation
2. Provide discipline-specific context for the Big Questions
3. Model how to think about these Big Questions within the context of the course
4. Consistently ask students to reflect on the questions (at least 2-3 times during the course)

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 will be required to practice and hone their communication skills during class activities through writings, discussion, and debate as they search for the answers to the four ALAS Questions: What is Truth? What is Justice? What is it to be Human? How should we Live? **Students will concentrate on the following communication skills which will be needed to successfully navigate the class and become effective creative communicators.** **• Articulate creative ideas by effectively using all forms of communication in a variety of contexts.** **• Listen to others to understand meaning, attitude, and intention. Critically and fully listening to others is an important aspect of creative communication.** **• Communicate for a variety of purposes and audiences – to educate people and promote creative ideas.** **Effective communication of creative ideas requires the following of students.** **• Thoughtful, logical, organized written and verbal communication** **• Knowing why you are writing/speaking - the purpose of the creative idea** **• Knowing who you are writing/speaking for – one's audience, client, or supervisor** **Employ effective communication to complete assignments and communicate creative ideas effectively with other students and future employers.** **• Concrete and specific, not vague and abstract** **• Concise, not verbose** **• Familiar, not obscure** **• Precise and clear, not inaccurate or ambiguous** **• Appropriately formal** **Communication tools to be used by students during the course to prepare them for future employment. Students will use media and technology to communicate creative ideas with impact.** **• Microsoft Word** **• G-suite and Microsoft 365/Office** **• Video conferencing - Zoom** **• Google Calendar** **• Perhaps social networking sites – Facebook, YouTube, LinkedIn, or others** **• Perhaps a Task Management App**

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.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Throughout the course, students will continually engage with questions of what creativity is within historical and modern contexts, problems, and questions; and then consider their relationship to the four ALAS Questions. In major assignments as well as class debates and discussions, students will develop and practice research skills to ask the right questions; acquire, identify, and utilize quality evidence to develop conclusions and explaining their critical reasoning of creativity and its uses based on academic evidence and case studies. Particularly in regard to What is Truth? and What is it to be Human? Students will regularly practice the skills of analyzing evidence and ideas, consider how to distinguish fact from opinion, relevant from irrelevant information, assessing the credibility of data/information, identifying minority opinion and information as well as multiple perspectives on a problem/issue/debate, and assessing agreement among authorities in class activities, discussions, debates, and major essays and projects. **Critical Thinking is at the core of most intellectual activity that involves students to recognize or develop an argument, use evidence in support of that argument, draw reasoned conclusions, and use information to solve problems. Examples of critical thinking skills are interpreting, analyzing, evaluating, explaining, sequencing, reasoning, comparing, questioning, inferring, hypothesizing, appraising, testing, and generalizing.** **Personal dispositions such as inquisitiveness, reasonableness, intellectual flexibility, open- and fair-mindedness, a readiness to try new ways of doing things and consider alternatives, and persistence promote and are enhanced by Critical and Creative Thinking. These attitudes will further feed ALAS's four questions: What is Truth? What is Justice? What is it to be Human? How should we Live?**

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.

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

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.

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*
Crossing time and cultures, course content will require students to examine their own value systems and to understand and respect other cultural viewpoints and practices to develop intercultural reasoning and competence that then will further expand their creative minds. Students will practice civil discourse and engagement in class discussion/activities as well as major projects which require them to engage in, examine, and debate some of the biggest challenges we face as a species with ALAS's questions that run through the course: What is Truth? What is Justice? What does it mean to be human? and, How should we Live? Students will work through and create major projects that examine these questions from multiple perspectives and analyze the ethical challenges peoples have faced both historically and contemporary context as they organize and express their creative minds. Coursework includes multiple self-reflection assignments that include Social/Personal Responsibility assessment in light the open boundaries of creativity. **Brainstorming is collaboration and teamwork. It encourages students to generate thoughts and ideas that can, at first, seem a bit crazy. Some of these ideas, thought, will be crafted into original, creative solutions to a problem, while others can spark other ideas that lead in new directions. Brainstorming helps to get students unstuck by jolting them out of their normal ways of thinking while expanding their personal point of views. Brainstorming will be a critical skill students will develop in the class as they work through the final project.** **Personal and social responsibility embodies: What is Truth? What is Justice? What is it to be Human? How should we Live?**

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.

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**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

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New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1207

Institution and Course Information

Name of Institution	**NMMI**
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	**1310L**
Title	**Calculus Based 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	1310
Title	Calculus Based Physics

New Mexico Common Course information

Prefix	PHYS
Number	1310L
Title	Calculus Based 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 ☐ Other

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
Upon completion of this course, the student will be able to:
1. Develop a reasonable hypothesis.
2. Work effectively as part of a team.
3. Take measurements and record measured quantities to the appropriate precision.
4. Estimate error sources in experimental techniques.
5. Apply appropriate methods of analysis to raw data, including using graphical and statistical methods via computer-based tools.
6. Determine whether results and conclusions are reasonable.
7. Present experimental results in written form in appropriate style and depth.
8. Experience the relationship between theory and experiment.

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

III. COURSE OUTCOMES

The laboratories are intended to teach physical knowledge and practical physics skills

1. Substantive Objectives: At the conclusion of this course, you will be able to
a) Become familiar with correct laboratory procedures;
b) Be able to identify laboratory apparatus;
c) Use of laboratory safety equipment.

2. Skills gained from these laboratories are (a-h are general education outcomes):
a) Develop a reasonable hypothesis.
b) Work effectively as part of a team.
c) Take measurements and record measured quantities to the appropriate precision.
d) Estimate error sources in experimental techniques.
e) Apply appropriate methods of analysis to raw data, including using graphical and statistical methods via computer-based tools.

f)	**Determine**
whether results and conclusions are reasonable.	
g)	**Present**
experimental results in written form in appropriate style and depth.	
h)	**Experience**
the relationship between theory and experiment	
i)	**Be able to**
use common laboratory apparatus	
j)	**Become**
confident in collecting, organizing, and presenting data in a scientific form.	
k)	**Be able to**
use graphs, units and formulas to analyze data.	
l)	**Be able to**
use technology for locating scientific literature, gathering data and problem solving.	
m)	**Be capable**
of recognizing and using sound scientific information for the betterment of the community.	

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.*

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.

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. During data collection, students should be able to answer questions such as which measuring devices should be used for precise measurement of a metal cylinder's length and what additional data should be collected to determine the horizontal distance of projectile motion.** **2. Evidence Acquisition: Students need to gather the data in the lab section to test a theory or physical laws. During the lab section, students should be able to gather information based on the physical principle and available laboratory equipment to support their conclusion.** **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 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.**

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.

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, a student can estimate the horizontal distance of a ball shot by a projectile launcher if the initial height and time are acquired. During the laboratory section relating to projectile motion, students should be able to use modern equipment to gather quantitative information for certain physics quantities, such as the time for the ball to reach the ground, find the height of the table, etc.** **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, in order to estimate the horizontal distance, the student should analyze the projectile motion, then find the appropriate physics equations to solve the problem. 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. For example, in order to estimate the horizontal distance of the ball, the student should use two-dimensional kinematic equations to estimate the horizontal distance. During the laboratory section, students should use appropriate physical models to draw conclusions using corresponding quantitative information acquired with scientific 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.

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.**

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.

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**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1277

Institution and Course Information

Name of Institution	**NMMI**
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	**MATH**
Number	**1230**
Title	**Trigonometry**
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	None
Number	None
Title	None

New Mexico Common Course information

Prefix	MATH
Number	1230
Title	Trigonometry

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 ☐ Other

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 define and evaluate the trigonometric functions as functions of angle in both degree and radian measure using the definitions in terms of x, y, and r; as the ratio of sides of a right triangle; using the unit circle; using reference angles, commonly used (0 o, 30 o, 45 o, 60 o, 90o) angles and using a calculator.
2. Students will be able to solve right triangles. They will be able to draw a sketch in an applied problem when necessary.
3. Students will be able to solve non-right triangles using the law of sines and the law of cosines.
4. Students will be able to prove trigonometric identities and apply addition and subtraction, double-angle, half-angle and power reduction formulas.
5. Students will be able to graph the six trigonometric functions, their transformations and their inverses.
6. Students will be able to use algebraic methods, including the use of identities and inverses, to solve trigonometric equations and demonstrate connections to graphical and numerical representations of the solutions.
7. Students will be able to add and subtract vectors in two dimensions. They will be able to use the dot product to project one vector onto another and to determine the angle between two vectors. They will be able to solve a variety of word problems using vectors.
8. Students will be able to work with polar coordinates; this includes graphing in polar coordinates and transforming an equation with polar coordinates into one with rectangular coordinates, and vice versa. 9. Students will be to work with the trigonometric form of complex numbers, including using De Moivre's formula.

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

1. Apply problem solving and critical thinking skills to the study of trigonometry (2,3,6,7,8,9)
2. Demonstrate the utility of the unit circle in relationship to the trigonometric functions (1,2,3,9)
3. Demonstrate the use and application of right triangle trigonometry (2,3,4,6,7,8,9)
4. Demonstrate skill in using the special angles and quadrantal angles in all contexts within the course (3,5,7,9)
5. Use translation, compression, and stretching of the graphs of trigonometric functions (2,3,5)
6. Demonstrate skill in the use of trigonometric identities in a variety of contexts (1,2,4,7)
7. Use inverse trigonometric functions in solving certain types of equations (1,2,4,5,7)
8. Use reference angles to aid in the solution of trigonometric equations (1,2,4,8,9)
9. Use the Law of Sines and the Law of Cosines, particularly in the context of vectors (1,2,6,9)
10. Use a graphing calculator to aid in problem analysis and solution (2,3,4,6,7)
11. Locate and use a variety of resources to enhance the learning of trigonometry (4,6,7,8)
12. Use technology as an effective learning and problem solving tool in the study of trigonometry (2,3,4,6,8,9)

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.*
Throughout the semester, students must use a variety of media to learn and communicate. Students use an e-text book, interactive animation, and faculty made lecture videos to support student's comprehension with the concepts, facts, and uses of trigonometry. **Students work individually and in small group settings where they will practice applying introductory trigonometric concepts. The faculty teach students to analyze, identity, and express the proper mathematical models, properties, and trigonometric identities necessary to solve real-life problems and practice exercises. Student's progression will be seen by both faculty and peers as they communicate their mathematical arguments, solutions, and reasoning both on paper and in front of class with multiple students writing their solutions at the board at once. Students will exercise their ability to reason logically, to assess what they read or what others say mathematically and to distinguish between supported and unsupported mathematical arguments. All oral and written work assesses students on their ability to construct a sound mathematical argument; to draw theoretically and empirically supported conclusions and their ability to advocate their solutions while recognizing and honoring the validity of alternative explanations and solutions. Students are assessed on their clarity, validity, and mathematical eloquence.**

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.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
This trigonometry course supplies a natural environment to use and further develop student's current critical thinking abilities. This development results from a variety of mathematical and trigonometric topics, concepts, processes, analysis, evaluation, reasoning, and validating conclusions. Problem settings, such as triangular problems requiring the use of the trigonometric functions, law of signs, law of cosines, navigation terminology and facts, mathematical and or trigonometric processes needed to solve these real-world problems. Verifying trigonometric identities is an invaluable opportunity to abstract proof and logic. Lastly, understanding the connection of physical relationships to trigonometric models and their graphs promotes critical thinking and the importance of mathematical facts. **This course offers students' further opportunities improve on their ability to acquire mathematical evidence given both explicitly and implicitly, and then to use their knowledge of mathematical processes and formulas necessary in the setting of the question to ultimately provide valid solutions to their questions.**

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.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
This math-1230 trigonometry course presents students with college level academic experience that concentrates on trigonometric and other mathematical concepts, problem solving, and modeling needed in mathematics and scientific disciplines. It supplies a foundation in quantitative literacy and helps meet quantitative needs in academic areas. Students address problems presented as real-world situations by creating and interpreting mathematical models. Solutions to these problems are formulated, computed, confirmed, and analyzed using trigonometric, mathematical, and technology as needed. Students continue to develop their mathematical communication abilities both verbally and symbolically using proper terminology notation and mathematical valid arguments to defend their hypotheses and solutions.

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.

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*

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.

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**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

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New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1278

Institution and Course Information

Name of Institution	**NMMI**
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	**ASTR**
Number	**1115L**
Title	**Introduction to Astronomy Laboratory**
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	ASTR
Number	1115
Title	Introduction to Astronomy

New Mexico Common Course information

Prefix	ASTR
Number	1115L
Title	Introduction to Astronomy Laboratory

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 ☐ Other

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 discuss the night sky as seen from Earth, including coordinate systems, the apparent daily and yearly motions of the sun, Moon, and stars, and their resulting astronomical phenomena.
2. Students will list and apply the steps of the scientific method.
3. Students will describe the scale of the Solar System, Galaxy, and the Universe.
4. Students will explain telescope design and how telescopes and spectra are used to extract information about Astronomical objects.
5. Students will describe the formation scenarios and properties of solar system objects.
6. Students will describe gravity, electromagnetism, and other physical processes that determine the appearance of the universe and its constituents.
7. Students will describe methods by which planets are discovered around other stars and current results.
8. Students will describe the structure, energy generation, and activity of the sun.
9. Students will compare our sun to other stars and outline the evolution of stars of different masses and its end products, including black holes.
10. Students will describe the structure of the Milky Way and other galaxies and galaxy clusters.
11. Students will describe the origin, evolution, and expansion of the universe based on the Big Bang Theory and recent Astronomical observations.
12. Students will describe conditions for life, its origins, and possible locations in the universe.

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

Upon successful completion of the course, the substantive knowledge that the cadet should possess includes:

1. the demonstration of familiarity with basic content material and concepts in astronomy, (1)

2. an astronomical knowledge base sufficient to make informed, ethical, and critical scientific judgments. (5)

Upon successful completion of the course, the skills that the cadet should possess include:

1. the mastery of critical thinking skills in solving astronomy problems in prose format by actually doing so, (1), (6)

2. the ability to use a systematic approach to problem-solving using graphs, units, and formulas, (6)

3. the ability to locate and gather relevant astronomical data using appropriate sources, (4)

4. the demonstrated ability to present data in a clear and organized manner, (4)

5. the improvement of reading comprehension and problem-solving. (4), (6)

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.*

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.

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: Various techniques of use in Astronomy will be examined to demonstrate how real-world problems are addressed within the subject. Students will have access to and make use of devices used to explore the astronomical phenomenon. These include computers, telescopes, filters, gratings, and spectroscopes.** **2. Evidence Acquisition: Students will take astronomical measurements in the application of the theories learned. They will also see qualitative sights regarding other models that they have been learning. These will include planets, the Sun, stars, constellations, and angular measurements.** **3. Evidence Evaluation: Students are required to analyze collected data to draw useful astronomical conclusions. They will learn how space phenomena affect our daily lives. The day itself is astronomical. They will learn that much of the scientific theories prevalent in science come from astronomical thinking. These will include the works of Galileo, Newton, and Einstein demonstrating the development of scientific thought.** **4. Reasoning/Conclusion: Students will be able to relate astronomy topics to their lives seeing why it matters to know astronomy. Students will realize how astronomical considerations have allowed scientists to advance humanity's knowledge to the point of being the technologically advanced world that we all share.**

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.

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: Graphical data will be prepared illustrating astronomical relationships. Reports will be submitted by students to verify an understanding of said relationships. These will include measurements of temperature, luminosity, apparent magnitude, absolute magnitude, albedo, orbital periods, velocities, color, and spectral analysis among others. The ability to communicate quantitative results will be measured frequently. They will include the ability to read astronomical works to glean pertinent information.** **2. Analysis of Quantitative Arguments: Laboratory reports will demonstrate an appreciation and understanding of numerical relationships between objects in the universe. Relationships between temperature and light will be explored. The reality that mathematic modelling is the only way to describe accurately the universe will be emphasized. Both graphs and formulae will be used to educate students. Graphs will be both prepared and read. Formulae will be utilized to compute results.** **3. Application of Quantitative Models: Weekly laboratory exercises will enable students to elucidate physical reality being correctly modelled by mathematical formulae. Such results will be tabulated and analyzed by mathematical modelling and visual relating by graphing. The ubiquity of the Hertzsprung-Russell diagram for stellar analysis will be strongly emphasized. Its use for quantitative analysis will be clearly elucidated. In particular, its use for variable stars and stellar cluster age will be presented with the timeline of stellar behaviour.**

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.

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. Sustainability and the natural and human worlds: Students will be taught of the limited nature of planet Earth. They will learn that other planets are exceptionally inhospitable and that astronomy allows for a more scientific and efficient management of our world. The astronomical techniques involve the use of satellites in space examining different electromagnetic regions. Satellites also take photographs and use pertinent scanning techniques and data transmission methods that are of extremely common use in our increasingly computerized society. The exploitation of the Moon and nearby planets for the benefit of humanity will also be addressed. Potential asteroid impacts will be covered for sober contemplation.** **2. Ethical reasoning: Students will be taught that large scale planetary adjustments may have unfortunate consequences. They also will be taught of the starkly unique positive attributes of our planet. Furthermore, the perfect size and resulting perfect environment provided by our star will be emphasized. The wonder that life exists on Earth at all will be emphasized. The intent is to inculcate an appreciation of our world and situation to the point of wanting to terraform Venus and Mars to allow for colonization by future generations. Challenges with colonization, including that with the Moon, will be noted. As will the very dangerous nature of human equipped space travel and human extraterrestriality.**

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.

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**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1321

Institution and Course Information

Name of Institution	**SFCC**
Chief Academic Officer Name	**Margaret Peters**
Chief Academic Officer Email	**margaret.peters@sfcc.edu**
Registrar Name	**Bernadette Gonzales**
Registrar Email	**bernadette.gonzales@sfcc.edu**
Department	**Arts, Design and Media Arts**
Prefix	**ARTS**
Number	**1414**
Title	**Camera Use and the Art of Seeing**
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	N/A
Number	N/A
Title	N/A

New Mexico Common Course information

Prefix	ARTS
Number	1414
Title	Camera Use and the Art of Seeing

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 ☐ Other

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. Define the relationship of shutter speeds, f-stops and ISO
2. Recognize the concepts of depth-of-field and reciprocity failure
3. Define various focal lens lengths
4. Identify the properties of film and the characteristics of various film types and the characteristics of different digital file types and resolutions
5. Demonstrate an evolved "art of seeing" through deliberate use of texture, pattern, shadow, viewpoint, etc.

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

6. Demonstrate individual expression and imagination in photography

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.*
1. Genre and Medium Awareness. In the course "Camera Use and the Art of Seeing," students will be introduced to photographic works of various genres such as portraiture, landscape, still life, documentary, and the constructed image. They will explore these genres in their own photographic "studies" of vantage point, light, shadow, texture, pattern, color, reflection, symmetry, and asymmetry. These assignments will be critiqued in writing by the instructor and orally in group settings. A grading rubric will also be used. In these "studies" or field assignments, students are encouraged to communicate what they value, what interests them, and what they discover. After the course, students report that the world looks different as these "studies" have increased their Visual Perception – one of the pillars of Visual Literacy. And they now have a powerful tool to express what they care about using the medium of photography. **The work of notable photographers will be shown, read about, and discussed to develop an awareness of fine art photography's history, processes, and genres. Students learn to place photographic artwork within their historical context and zeitgeist; identify camera formats – from small to large film and digital cameras; camera settings used; photographic processes from historical to digital, including blended processes (e.g., tintype integrated with Augmented Reality,) and other current technologies. They become aware of how a skilled photographer can use these visual elements to create photographs that convey emotions, ideas, and stories. Students' awareness of genre and medium as a vehicle of communication is evaluated with quizzes, discussions, and field assignments.** **2. Application and Versatility. Students will engage in hands-on activities applying technical knowledge in shooting assignments. They'll learn to control depth of field through Aperture, using optimal or selective focus. By manipulating Shutter Speed, students learn to freeze a moment in time or capture a blur of motion in ways the eye cannot see. The relationship between ISO (film/sensor sensitivity) and acceptable levels of noise/grain is explained with the use of graphs and exposure simulators. Understanding this relationship allows students to creatively control photographic outcomes, rather than relying on the camera's Auto mode. Bracketing (making a range of exposures of the same scene) is practiced, demonstrating that the "correct" exposure isn't always the most dynamic or expressive, only a good starting point. Students also apply what they learn about how to control photographic outcomes through lens choice (e.g., wide angle, telephoto). They learn to compensate for reciprocity failure when metering in low light conditions. Preconceptions about what a photograph is, when and where it can be made, and habituated ways of seeing are challenged in assignments that activate originality and stimulate greater visual perception. Students learn how to invite the element of surprise into their photography (such as a light flare, so an image is not entirely pre-visualized), and they look at the work of photographers who do this. It is easy to make an interesting mistake – to repeat and build on it requires skill. The technical aspects of photography provide the tools for students to communicate their message effectively to their intended audience. They consult publicly and in private with instructor about their technical challenges. Being able to articulate questions is a skill that is sharpened by requiring that they post at least one each week. They also practice writing analyses about the**

technical aspects of photographers' works. By mastering the technical aspects of photography, photographers can create images that communicate their intended message with greater impact and clarity.

Students also develop communication versatility as photographers by mastering the use of their camera (film or digital), increase their visual perception (noticing more than they normally see), and use a new vocabulary for speaking about photographs and photography and art in general. The medium itself is a versatile form of communication - we often discuss how photography can be incorporated into other coursework, pursuit of a degree, academic project, and/or new career.

3. Understanding and Evaluating Messages. Understanding works that articulate meaning or messaging often requires a combination of personal associations and outside research. Personal associations refer to the viewer's subjective interpretation of the photo based on their own experiences and perspective. These associations can be influenced by factors such as culture, upbringing, and personal interests. However, personal associations alone can't always provide a complete understanding of a photo's meaning or messaging. This research can include studying the artist's biography, historical context, and cultural references that may be present in the work. In the example of Ansel Adams' landscape photographs of New Mexico, personal associations may include the viewer's appreciation for the beauty and majesty of nature, or their own personal experiences visiting national parks. However, by conducting outside research, students can gain a deeper understanding of Adams' intention to use his art photography as a tool for environmental activism and advocacy. Adams used his fine art photographs to lobby Congress to establish Kings Canyon as a National Park.

Through a combination of personal associations and outside research, students gain a better understanding and appreciation for how photographs can articulate meaning and/or messaging. By engaging with the photos on multiple levels, students gain a richer and more nuanced understanding of the artist's intention and the cultural and historical context in which the work was created. When students first encounter Will Wilson's portraiture project, the Critical Indigenous Photographic Exchange (CIPX), they may not recognize the multiple narratives and meanings in the photographs. Through additional readings, online video, and guided discussions, students consider issues of cultural appropriation and the re-thinking of representation.

Students analyze and interpret photographic works from a diverse range of artists and historical periods. They practice evaluating images critically through context and intended messaging whether it be biographical, psychological, historical, mythological, feminist and/or post-colonial in nature. This reinforces their understanding of how photography can convey meaning and message.

4. Evaluating and Producing Arguments. Students evaluate their own work and the work of others, analyzing how composition, lighting, and other technical elements contribute to the overall impact of a photograph. They defend their own creative choices with arguments (e.g., I chose selective focus for this portrait – optimum depth of field would have included too much information that would distract from the subject). They practice being both truthful, tactful, and civil in their evaluations of the choices by others (e.g., In this portrait, your selective focus is just on the ears of the primary subject – is there something about the ears of the subject that would help me understand your choice for not having the entire face in focus?)

By studying the work of influential photographers and analyzing how they used composition and technical skills to convey their messages and arguments, students gain a deeper appreciation for the ways in which photography can be used to visually communicate an argument for a cause one is passionate about.

5. Assessment of student learning. Students' progress will be evaluated in quizzes (a mix of objective, narrative, and problem-solving items), discussions, field assignments, instructor critiques, and peer reviews. Students assess their own learning during their portfolio development at the end of each semester when they select and organize their strongest images, engage in reflexive writing, and present the portfolio for feedback from instructor and peers. These assessments gauge one's mastery of various technical skills and creative use of the elements of composition (e.g., shadow, light, color, reflection, texture, asymmetry, etc.).

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.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
In the photography course "Camera Use and the Art of Seeing," students will practice critical thinking skills. Specifically, they will engage in: **1. Problem Setting. Students will be required to regularly articulate a problem or question they have related to the use of their cameras or terminology. Examples of identifying photography-related problems or questions include: How can camera settings create a specific mood and/or meaning in my photograph? What is the best way to capture or infer motion in a photograph? How can selective focus be used to direct a viewer to a subject?** **2. Evidence Acquisition. Students will identify and gather the necessary information and data to address the problem or question about photography techniques, equipment, and historical context, using sources such as selected readings on photographic composition, academic articles on the history of photography, and online resources such as photo-based technique tutorials.** **3. Evidence Evaluation. Evaluate evidence and data for credibility, probable truth, and relevance to the situation. Students will analyze the information and data they have gathered by testing it with their cameras to make photographs. The relative "success" of their photography will determine the validity of their sources and relevance to their problem or question. They will also consider potential biases in their sources.** **4. Reasoning/Conclusion. During the course, students clearly express in written and/or visual form their understanding of the solutions to their photography-related problems or questions. At the end of the course, students will write informed and well-reasoned conclusions about what the "art of seeing" means to them.**

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.

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

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.

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*
Personal & Social Responsibility: Students will learn to take responsibility for their own learning and their interactions with others in the class. This will involve actively participating in class discussions, working collaboratively with their peers, and taking ownership for the decisions they make in their own photographic work. **1 Intercultural Reasoning and Intercultural Competence. Through exposure to a range of photographic styles and techniques and photographic artists, students will learn to appreciate and respect diverse cultural perspectives. They will engage in critical reflection on their own cultural assumptions and biases and learn to recognize the influence of cultural factors on the creation and interpretation of photographs.** **2. Civic Discourse, Civic Knowledge, and Engagement – Local and Global Students will learn that photography can be a means of exploring social and political issues both within their own communities and on a global scale. They will be encouraged to engage in critical reflection and dialogue about socially relevant work, both within the class and with the broader community. They will also be encouraged to use their photographic work to engage with and contribute to their local and global communities. They will also take advantage of the CENTER Santa Fe's NEH sponsored program: The Democratic Lens: https://thedemocraticlens.org**

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.

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.sfcc.edu/54536-2/**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1325

Institution and Course Information

Name of Institution	**NMMI**
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	**2110L**
Title	**Principle of Biology I 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	2110
Title	Principle of Biology I

New Mexico Common Course information

Prefix	BIOL
Number	2110L
Title	Principle of Biology I 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 ☐ Other

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. Describe and apply the scientific method to solve problems in biological context
2. Demonstrate knowledge of laboratory safety skills and procedures.
3. Practice principles of scientific method while conducting laboratory activities and experiments.
4. Perform laboratory activities using relevant laboratory equipment, chemical reagents, and supplies to observe biological specimens, to measure variables, and to design and conduct experiments.
5. Operate light microscopes, prepare wet mount slides, and use stains.
6. Exhibit ability to use pipettes and other volumetric measuring devices, chemical glassware, balances, pH meters or test papers, spectrophotometers, and separation techniques, such as chromatography and/or electrophoresis to perform activities relevant to other course competencies.
7. Analyze and report data generated during laboratory activities and experiments

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

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.*

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.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Students in this laboratory course will use the scientific method as a problem solving tool. Experiments will be conducted weekly to assess all aspects of critical thinking. **1. Problem setting: Students will use the scientific method to identify problems and gather background information on various scientific topics. The problem solving pathway should include research questions like who, what, where, when, why and how is the problem occurring. After the problem has been identified, students will develop a hypothesis to test in a laboratory experiment.** **2. Evidence Acquisition and Evidence Evaluation: Students will gather materials and follow a scientific method to acquire data to analyze. Throughout this course, the evidence will be acquired from viewing samples in a microscope, weighing objects using a scale, viewing change in samples over time, calculating probability, measuring distance changes, bacterial growth, and more. After completing this portion of the laboratory, students will be asked to evaluate the data. The lab group will form a discussion and cadets will be asked to write their evaluations in a laboratory report. Students should evaluate their hypothesis, and compare it to the evidence acquired in the lab.** **3. Reasoning/Conclusion: Students will be asked to discuss and type a conclusion for each laboratory experiment. The conclusion is a chance, to evaluate the entire laboratory process. This is also a good time for the students to recognize mistakes and future problems that could be researched. Students should use sound reasoning and judgement for why the results occurred in the laboratory.**

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.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
This laboratory course will provide students plenty of chances to process quantitative data acquired from experimentation. **1. Communication/Representation of Quantitative Information: Students in this course will build at least one scientific poster that include quantitative data. The student may be asked to present this poster to the class, or take it to a scientific conference for discussion. Students should be able to communicate the entire scientific process and discuss the data gathered from laboratory experimentation.** **2. Analysis of Quantitative Arguments: Students should be able to back up their laboratory analysis with a constructive argument. Corrections will be made, and or experiments repeated if an error occurred. Otherwise, students should be able to analyze and defend the data and conclusions reached.** **3. Application of Quantitative Models: Students will be asked to create scientific graphs of quantitative data. Trends may easily be seen and studied with this approach. Students will use Microsoft Excel to build the model/graph. Each axis must be properly labeled and a college level title included.**

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.

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*
In this biological sciences course, students will need to use intercultural reasoning and ethical reasoning for science advancements. **1. The natural and human worlds will be studied in this course. Students will be given the freedom to express their cultural beliefs and values on topics such as evolution and natural selection.** **2. If animal specimens are dissected, they will be acquired and treated with ethical scientific standards. When possible, models will be studied to promote sustainability of living organisms.** **3. Collaboration and teamwork will be a necessary for all laboratory sections. Students will work in groups of two or three to complete the labs. Group work will promote collaboration skills and communication. When possible, field trips will be taken to promote civic engagement within our local area.**

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.

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**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1326

Institution and Course Information

Name of Institution	**NMMI**
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	**1215L**
Title	**General Chemistry I 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	1215
Title	General Chemistry I

New Mexico Common Course information

Prefix	CHEM
Number	1215L
Title	General Chemistry I 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 ☐ Other

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 and follow laboratory safety rules. Know consequences of not following the safety rules.
2. Perform variety of calculations required to complete a lab. Calculations include, but are not limited to dimensional analysis, thermochemistry, frequency, wavelength, energy using significant digits rules, exponential notations, correct units, manipulation of math formulas and other math operations. Demonstrate the ability to use a systematic approach to problem-solving using graphs, units, and formulas.
3. Demonstrate the ability to perform and observe experiments, and gather relative chemical data in a quantitative and qualitative manner. Correctly and safely use analog and digital devices to perform experiments and collect data.
4. Use appropriate procedures and glassware to prepare solutions of certain concentration and accuracy.
5. Demonstrate the ability to perform basic laboratory procedures, such as determination of mass, volume, temperature of solids, liquids and gases; heat, cool, filter, decant, titrate a sample.
6. Master basic experimental techniques such as pressure measurements, calorimetric measurements, and spectrophotometric measurements.
7. Analyze laboratory experiments' data and draw conclusions.
8. Demonstrate the ability to present data in a clear and organized manner as required.
9. Master an understanding of the relationship of laboratory experiments, operations, observations and findings and the principles and concepts discussed in class.
10. Design experimental procedures to study chemical phenomena.

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

same as CCN student learning outcomes

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.*

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.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Laboratory experiments are designed and taught to engage students in the development of critical thinking skills. **Problem Setting: Objectives of each lab are stated at the beginning of the laboratory manual. Safety precautions are emphasized before the lab background description. Lab procedures hell develop students' practical and transferable skills, as well as their content knowledge and scientific understanding of chemical principles, phenomena, laws and theories. Reflection and connection questions at the end of each lab inspire critical thinking and relevance to real-life situations.** **1. Evidence Acquisition:** **The importance of planning, methodology, common decision-making to improve the quality of measurements (in terms of accuracy or precision), documentation and thoroughness in a research setting is emphasized in each lab. Mastery in laboratory techniques that use appropriate sensory experience and measurement instrumentation, both analog and digital, is also emphasized.**

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.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
Chemistry laboratory work designed to deepen students' ability to properly represent, manipulate data, perform laboratory related calculations, make conclusions and relate them to real world situations. **1. Communication/Representation of Quantitative Information** **Required communication and representation of data lead to better understanding of chemical phenomena in real world settings. Laboratory communication of quantitative data and calculations include but are not limited to dimensional analysis, stoichiometry, titration, and concentrations.** **2. Analysis of Quantitative Arguments.** **For quantitative labs the analysis of quantitative data include interpretation of data, graph analysis, calculations and a written conclusion. Making conclusions and predictions is relevant to real life situations. For example, the gravimetric analysis of calcium carbonate in Texas lime stone requires quantitative data collection and calculations of molar masses, use of the data in mole calculations, and percent calculations. This quantitative information is used in the Reflection and Connection sections.** **3. Application of Quantitative Models.** **Justification of students' model choice by including baseline comparisons to simpler models, as well as current state-of-the-art models is often required in labs. For example, in the above mentioned lab, students are asked to correct the calculations assuming that not all carbon dioxide escaped into the atmosphere.**

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.

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*
Development of the personal and social responsibilities is an important part of a laboratory work. **1. Collaboration skills, teamwork, and value systems.** **Students work in groups when performing laboratory procedures, collecting data, and analyzing them. The following skills are developed during lab work: communication and interpersonal skills, reliability, building trust, active listening, conflict management, positive attitude, and etc.** **2. Sustainability and the natural and human worlds.** **Laboratory work is developing students' understanding of chemistry's major role in achieving sustainability. Real life tasks, examples, questions and problems such as corrosion, green chemistry, gas laws, enthalpy change, and others are helping students to understand the importance of chemistry to improve the sustainability of the natural and human worlds.** **3. Civic discourse, Civic Knowledge, and Engagement – Local and Global.** **The knowledge and skills that allow students to participate effectively in civic life are emphasized during lab sessions. Helping students stay informed, teaching them how to stay informed, and knowledge on how to exercise the rights and obligations of citizenship at all levels are important components of the course. For example, discussion of the ecological effect of acidic rain or pollution were conducted during lab. Also, reflection and connection question have information pertaining to these 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.

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**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1331

Institution and Course Information

Name of Institution	**SENMC**
Chief Academic Officer Name	**Dr. Andrew Nwanne**
Chief Academic Officer Email	**anwanne@senmc.edu**
Registrar Name	**Amy Dewey**
Registrar Email	**adewey@senmc.edu**
Department	**Registrar**
Prefix	**HIST**
Number	**1122**
Title	**History of Latinos in the United States**
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	NA
Number	NA
Title	NA

New Mexico Common Course information

Prefix	HIST
Number	1122
Title	History of Latinos in the United States

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 ☐ Other

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 core concepts, events, and institutions in the history of Latino populations in the U.S., and how those cultures changed over the course of the centuries from the pre-colonial period to 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 diverse cultural, ethnic, and linguistic manifestations of Latino populations in the U.S. 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 ENGAGE with critical topics in the historical study of Latino populations in the U.S., including gender, class, and sexuality, while also 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 genre and 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 the Latino experience in the U.S. 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.

1. Students will be able to EXPLAIN in their work core concepts, events, and institutions in the history of Latino populations in the U.S., and how those cultures changed over the course of the centuries from the pre-colonial period to 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 diverse cultural, ethnic, and linguistic manifestations of Latino populations in the U.S. 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 ENGAGE with critical topics in the historical study of Latino populations in the U.S., including gender, class, and sexuality, while also 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 genre and 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 the Latino experience in the U.S. in both past and present. Bloom Taxonomy's Cognitive Process: Apply, Analyze

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 in this class will GAIN an understanding of genre and how to INTERPRET primary sources using tools including the rhetorical triangle through a lens of cultural relativism. Applying those concepts, students will APPRAISE sources and RESPOND verbally in class during discussions and in writing through their course journal. Students will MAINTAIN a writing journal where they will RECORD their estimations, perceptions, and conclusions to various thought-provoking inquiries presented during most class sessions, which will provide an opportunity for them to EVALUATE and ASSESS critical themes for understanding the history of Latinos in the U.S. Additionally, six times during the semester, students will CONTRIBUTE to lively online forum discussions where they will RESPOND to the instructor's questions, to the instructor's responses, and to their classmates' responses. In addition, students will DRAFT an oral history term paper that will follow the style of one of our course texts: "Migrant Daughter" by Mario Garcia. (See Critical Thinking section below as well as the Sample Assessment.)

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.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Both in-person and online discussions ask students to critically REFLECT on primary and secondary sources and make connections to other course materials. Students will READ primary source documents from various Native/Indigenous, Spanish, Latino, and Anglo groups; EXAMINE census data; EXPLORE Latino cultural expressions (including visual art, music, poetry, etc.); and VIEW video footage. For each of these examples, students will WEIGH how these historical records reflect upon and contribute to the Latino experience, both past and present. **Students will LEARN that canonical sources often clash with lived experiences. In order to create a fuller interpretation that more reliably reflects what transpired in the past, students will PROBE how the past is recorded by dissimilar perspectives that appear in often various modalities. To augment that practice, students will also COMPOSE an oral history, known in Chicano literature as a testimonio. (An example of that assignment is included in this application as the Sample Assessment.) Students will CONDUCT one-on-one interviews with a family member, elder, or community member and then CREATE a project based on that individual's experiences and how they were shaped by historical moments. Students will DRAFT a paper based on that research, in which they will DEMONSTRATE an understanding of the impact of historical contingencies on the individual, while also learning to APPRECIATE the importance of this type of narrative as a source of historical record.**

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.

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

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.

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*
A large portion of the course is oriented toward the struggle for and attainment of Latino civil rights in the U.S. Students will ANALYZE topics that invoke civic responsibility, including the sustainability of the Latino identity and the socio-cultural, political, and economic systems that have shaped the Latino experience throughout history. Students will EXPLORE and EVALUATE the cultural norms that intersect and conflict with western civilization more broadly as a way to RECOGNIZE the unique challenges faced by Latinos over the past several centuries. Students will also ENGAGE with personal histories through collaboration as a way of bridging the history of local, regional, and national histories with that of individual lived experiences. (See Critical Thinking section above as well as the Sample Assessment.) Students will also ATTEND cultural events on campus during the semester that will provide an opportunity to ENGAGE with Latino culture and individuals in a tangible way that will engender a more palpable connection to the Latino experience. The course will conclude by providing students the opportunity to EXAMINE 21st-century issues such as immigration, civil rights, and LGBTQA identities and ASSESS the historical legacies that impact these ongoing struggles.

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.

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.senmc.edu/documents/policies-and-handbooks/assessment_handbook_2022.pdf**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1332

Institution and Course Information

Name of Institution	**SJC**
Chief Academic Officer Name	**Dr. Lisa Perez**
Chief Academic Officer Email	**perezl@sanjuancollege.edu**
Registrar Name	**Karen Doughty**
Registrar Email	**doughtyk@sanjuancollege.edu**
Department	**Registration/Records**
Prefix	**MUSC**
Number	**2120**
Title	**Major Ensemble: Topic**
Number of Credits	**1-3**

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	none
Number	none
Title	none

New Mexico Common Course information

Prefix	MUSC
Number	2120
Title	Major Ensemble:

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 ☐ Other

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. Improve performance skills
2. Develop and improve performance skills in a group setting
3. Develop understanding and interpretation within the context of music history
4. Refine and improve technical ability
5. Demonstrate proper technique and usage

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

1. Improve performance skills
2. Develop and improve performance skills in a group setting
3. Develop understanding and interpretation within the context of music history
4. Refine and improve technical ability
5. Demonstrate proper technique and usage

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.*
Participation in a music ensemble requires ongoing verbal and nonverbal interpersonal communication among ensemble members, including the conductor, and between the ensemble and the audience. **Students participating in this ensemble, the musicians, will develop and demonstrate proficiency in the following aspects of communication: (1) Genre & Medium Awareness, Application, & Versatility; (2) Strategies for Understanding and Evaluating Messages; (3) Evaluation and Production of Arguments.** **Musicians in this ensemble will learn and perform various musical genres, including but not limited to traditional Western European Classical, American Marches, Jazz, Swing, Pop, Funk, and world music influences.** **Musicians must be able to understand, interpret, and convey the message embedded within the composition, drawing on direct indications from the composer (e.g., phrasing and dynamics indicated in the sheet music), as well as integrating knowledge about the broader context within which the music was composed (e.g., What was the composer's motivation and intent? What historical, geopolitical, and/or cultural factors impacted the composer and composition?).** **Students will gain such insights through the leadership of the conductor, independent research utilizing appropriate sources of information, discussion of findings, and evaluation of others' performances (e.g., listening to/watching different ensembles' performances of the same composition). Ultimately, musicians will synthesize this information, coordinating together with the conductor to produce the ensemble's "argument" and statement to the audience, which is their unique presentation of each musical composition, employing techniques and strategies appropriate for the piece, interweaving and balancing each voice in this intricate conversation.** **Students are assessed on the accuracy of playing their notes and musical concepts, clarity of articulation and creating musical phrasing to convey and communicate emotion, correct sound and tone concepts, and consistent and appropriate technique and approach to the instrument.**

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.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
A critical component of musical communication is understanding, interpreting, and deciding how best to present, or represent, compositions. **Musicians must first identify the task: what is the appropriate or "best" representation of each particular piece, and what is necessary for each individual as well as the ensemble as a whole to attain that musical representation? At a group ensemble level, what are the appropriate articulation and dynamic ranges for a particular phrase? Are all musicians within and between sections in tune and in sync with each other? If not, where is the disconnect?** **This brings us to evidence acquisition and evaluation: Musicians must gather data from multiple sources, often beginning with the conductor and their expertise, as well as researching historical and cultural contexts of compositions, learning the biographies of each composer, and listening to and watch other ensembles' renditions of compositions, evaluating authority, reliability, and validity of each source. Musicians also gather data from the sheet music, itself, noting time signatures and tempi, dynamics, phrasing, and other such markings, once again considering authority, reliability, and validity (especially working with arrangements of original works). Finally, musicians are constantly gathering data from their senses (e.g., visual observations such as alignment of bowings and breathing, auditory feedback such as dynamics, tone, and timbre, and tactile feedback such as appropriate pressure for producing a good tone at an appropriate dynamic timbre).** **Finally, musicians reflect on the data to reach and communicate a conclusion, as evidenced through the musical performance, itself, again occurring at micro- and macro-levels. A musician might immediately adjust their pitch in response to noticing intonation inconsistencies with musicians around them. The ensemble, as a whole, works together to follow the expert direction of the conductor.** **Students are assessed on: Tone, Intonation, Technique, Balance, and Musicianship.**

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.

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

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.

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*
Participation in a music ensemble is the embodiment of personal responsibility, collaboration and teamwork, and civic discourse, knowledge, and engagement, both local and global. **Each musician must first demonstrate personal responsibility, showing up (literally and figuratively) to each rehearsal and performance prepared to contribute to the ensemble. Musicians have a responsibility to listen to, respect, communicate, and collaborate with the other musicians toward the collective goal: successful performance of each composition, striking balance of each voice with active listening to achieve a shared intricate conversation with the audience. This also affords opportunities to engage with multiple perspectives and hold respectful discourse regarding differing interpretations. For example, together musicians and conductor must agree on interpretations of ambiguous dynamics and phrasing, drawing on personal experience, historical knowledge, and other sources of information to reach a shared resolution.** **Further, because ensemble members are performing music of diverse genres and historical and social contexts, these musicians must grow their knowledge about unfamiliar genres and cultures in order to authentically integrate this into their practices and performances. In turn, the culminating performance offers the broader public opportunity to similarly engage in discourse and learning experiences.** **Students demonstrate competency in this area through appropriate active engagement in rehearsal, development through the semester, and final performance. They are assessed on: (a) consistent attendance (and communication with the conductor if they are not going to attend a rehearsal or concert); (b) participation in all performances; (c) being cooperative, supportive, and collegial to their classmates and fellow musicians, and the conductor; (d) dressing in appropriate professional attire for concert performances, (e) acting professionally and appropriately while on stage and in public, (f) keeping their instrument in good playing condition and properly stored to protect the instrument, and (g) refraining from texting or phone use during rehearsals or performances.**

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.

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.sanjuancollege.edu/media/sanjuancollegeedu/documents/learning/General-Education-Assessment-Plan-final-Fall-2019-(002).pdf**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

Fostering Student Success from Cradle to Career

New Mexico General Education Curriculum Course Certification Form

Application Number (HED use only) 1347

Institution and Course Information

Name of Institution	**NMMI**
Chief Academic Officer Name	**Orlando Griego**
Chief Academic Officer Email	**o griego@nmmi.edu**
Registrar Name	**Chris Wright**
Registrar Email	**wright@nmmi.edu**
Department	**Art**
Prefix	**ARTS**
Number	**1310**
Title	**Introduction to Ceramics**
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	n/a
Number	n/a
Title	n/a

New Mexico Common Course information

Prefix	ARTS
Number	1310
Title	Introduction to Ceramics

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 ☐ Other

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. Explain the transformation of the ceramic material from raw clay form to glazed ceramic object
2. Demonstrate proficiency of technical ceramic skills
3. Explain larger concepts and design principles
4. Apply basic 3-D design principles in the formation of a work of art, as they apply to the ceramic media
5. Create ceramic works of art based on conceptual prompts
6. Critically evaluate a variety of artwork
7. Gain an understanding of the history of ceramic art from a multicultural perspective

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

1. Explain the transformation of the ceramic material from raw clay form to glazed ceramic object
2. Demonstrate proficiency of technical ceramic skills
3. Explain larger concepts and design principles
4. Apply basic 3-D design principles in the formation of a work of art, as they apply to the ceramic media
5. Create ceramic works of art based on conceptual prompts
6. Critically evaluate a variety of artwork
7. Gain an understanding of the history of ceramic art from a multicultural perspective

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—This course is the introduction to the concepts and techniques fundamental to the making of pottery and ceramic sculpture. As a studio-based art learning, this course emphasizes on hands-on activities, which promote visual literacy and sensitivity to the various conventions in ceramics. Students are given the opportunity to briefly explore many of the traditional approaches to ceramics including those that are used in hand building, wheel throwing, glazing, and kiln firing. As well, slide presentations, studio visits and museum critiques will augment studio exercises to facilitate a greater awareness of cultural context in which the art of ceramics functions. As a general appreciation offering, emphasis is placed on active learning processes that involve students in basic studio materials and techniques. This course also provides an opportunity for non-art majors to do studio work in conjunction with an exploration of art concepts. Student will utilize writing about their experiences, research, critiques, and reflections as a method of communicating and capturing their thinking. Students will learn to concisely write project plans and exhibition description. **The classroom learning activities for ceramics include 1) clay bodies, 2) hand building techniques, 3) forms and forming techniques, 4) glazes, 5) kiln operation, 6) process for clay design, and 7) wheel throwing** **Strategies for Understanding and Evaluating Messages—Students will do the following in order to be assessed: 1) make creative and well-crafted ceramic responses to assignment challenges and prompts using various working techniques, ceramic materials, and tools, 2) apply analysis of ceramic ideas, techniques, and issues through participation in formal critiques and discussions while using appropriate ceramic vocabulary, and 3) explore conceptual ideas through the practice of creative research and preparatory studies (such as sketchbooks, journals, maquettes, models, writing assignments, presentations, technical practice tests).** **In addition, all students will understand the role, development, and influence of the arts throughout history and across cultures. For example, students will be able to identify famous ceramic artists throughout history and understand historical functional and non-functional aesthetic reasons for ceramics.** **Evaluation and Production of Arguments—Individual work will be evaluated by instructor. The major content of evaluation bases on the technology implementation and interdisciplinary connections, including: 1) research different clay functions and uses, 2) identify tools and areas of studio, 3) complete maintenance and work responsibility every class, 4) create a safe ceramic environment, and 5) class participation through question and answer. The instructor will keep an accurate record of student activities during the ceramic experience. The instructor will complete evaluation forms on students requiring wheel-throwing and hand building techniques after each his/her portion. Each student will complete the self-evaluation forms at the end of the semester. For example, the criteria for self-evaluation including** **1. Growth in personal development (demonstrate the development of the abilities of self-thought and initiative, identify self in work, concentrate upon self-expression, express mood and feelings in work, work to capacity, accept and benefit from constructive criticism, and attain satisfaction from art accomplishments)**

2. Growth in social competence (demonstrate the development of the abilities of 1) accept and understand personal uniqueness, and 2) work with others and share ideas)

3. Growth in creativity (demonstrate the development of the abilities of 1) express ideas in two-and-three dimensional forms, 2) create own ideas in progression of increasing talent, 3) interest in related aspects of art which involve value judgements, and 4) express ideas in reality and in the abstract)

4. Growth in aesthetic understanding and ability (demonstrate the development of the abilities of 1) produce in an increasingly significant fashion, 2) observe design and value, 3) accept challenges and problems, 4) advance in processes and procedures, and 5) use acquired knowledge practical applications.

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.

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. In this course, engaging in problem solving requires the ability to think creatively, adapt and extend student's thinking, acknowledge different contexts and incorporate different perspective, embrace flexibility, consider potential implication, persist and adapt despite failure, and reflect on the results. Some questions such as, "What part of the project did you find most difficult? Explain why?" "If you could change something about your project, what would it be? Did your final project exceed your expectations?" During the classroom activities, all students are encouraged to identifying, explaining, and exploring problems, describing challenges, envisioning possible solution, making decision about how to proceed based on all these consideration.

Evidence Acquisition—Identify and gather the information/data necessary to address the problem or question. This course demonstrates the evidences of critical thinking based on three of the following lenses: 1) to help students develop skills that will foster success in all classes; 2) to help students integrate learning from different disciplines; and 3) to help students identify and apply skills they have gained to changing and varied circumstances and endeavors. This course emphasize conscious development of a few key skills by active learning rather than the accumulation knowledge by memorization. They do so by helping students develop those skills though varied pedagogical methods that instructor specify. This course also ask students to demonstrate those skills so that the instructor can assess the student's proficiency in higher-order cognition such as creativity, application, critical thinking, and evaluation.

Evidence Evaluation—Evaluate evidence/data for credibility (e.g. bias, reliability, and validity), probable truth, and relevance to a situation.
Active learning is highly encouraged. The knowledge about ceramic materials and processes, outline project, and give demonstration will guide students through hands on projects that develop critical skills and encourage experimentation. Art making dominates, with assessment of knowledge and communication through speaking and writing about art supporting the production phase. Evaluate using the rubric. Class critique. Refine. Re-evaluate.

Conclusion
In conclusion, the abilities to compare, contrast, take imaginative and intellectual risks, and solve problems creatively and effectively are all factors for instructor to assess student's skills of critical thinking. Face to face active instruction with challenging hands-on activity supported by Canvas, the Internet, and e-mail offer a variety of experiences. Students will learn to present their art, lectures, and themselves in a professional format. Students are encouraged to use the lab to practice, build artistic and communication skills and work on individual and group projects while building a creative community.

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.

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

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.

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. **This course provides inspiration and offer options of solving design and aesthetic problems. Examples of student and professional work will add to the student's visual vocabulary and develop the ability to see deeply as an artist sees, express oneself and to connect with others through art. Looking to nature for inspiration, defining personal passions as the subject for art. During the class, students will build communication skills through written, oral, and artistic formats and collaborate with classmates and community member in order to interact with communities of learners and become a cultural learners. For example, students are engaged in multicultural activities at art making process. They are encouraged to share their cultural heritage such as meaning of symbols and the significance of color's representation and use those cultural related images on their ceramic art (such as underglaze painting and drawing). Have an open mind for discussing ideas, build communicative and collaborative learning environment to help students share and learn other's culture interests.** **The instructional strategy of the cultural responsive teaching is adapted to improve student intercultural knowledge to encourage them communicate and connect with others. This course is based on a visual culture curriculum setting, in combination with a ceramics, which provide students with the methods to critique social norms and self-acceptance. For example, introducing a stories of contemporary ceramic artists and social activists like Roberto Lugo could be possible to improve student's self-esteem in a ceramics art project.** **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 emphasizes the collaborative strategies to foster student's skill of collaboration, include: 1) to know, understand, and respond to others' feelings and perspectives; 2) to work and learn in teams to enhance interpersonal relationship skills; and 3) to develop an awareness of leadership approaches and the ability to influence others. Collaboration in developing projects, assessing project success and areas for improvement, firing kilns and studio management is integrated into the course. Students will communicate about art as if presenting, marketing, or applying for a Gallery Walk. Students will assemble their writing and images into a report and develop an on-line presence. Community is essential as sharing a laboratory requires each person to be responsible and co-operate while, working, glazing, loading, or cleaning. All those communication skills are practiced.**

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.

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/assessment-plans/**