NM Curriculum & Articulation Committee

September 20, 2018

updated 9/12/18

Proposed Anatomy & Physiology

Please ask the appropriate department/faculty at your institution to review the course descriptions and SLOs. Many of the included courses were already identified as being part of this course. However, they were also identified as another anatomy and physiology course. We are trying to get to a point where each course is only listed in the matrix a single time. If your faculty does not want to be part of this course, please submit the course description and SLOs for their course and a unique number will be assigned.

Please bring your institution's decision to the meeting on September 20, 2018.

BIOL 2210. Human Anatomy and Physiology I

Courses Included:
CCC BIOL 211 (combined)
CNM BIO 2210
Diné BIO 201 (combined)
ENMU BIOL 209
ENMURo BIOL 209
ENMURu BIOL 209
LCC BIO 217
MCC BIOL 211
NMJC BI 214A
NMMI BIOL 2210
NMSUA BIOL 225 (combined)
NMSUC BIOL 225 (combined)
DACC BIOL 225 (combined)
NMSUG BIOL 225 (combined)
NMSUA BIOL 225 (combined)
NNMC BIO 237
SFCC BIOL 230
SJC BIOL 252 (combined)
UNM BIOL 237
UNMG BIOL 237
UNMT BIOL 237
UNMV BIOL 237
WNMU BIOL 254

Course Description:
This course is the first of two that serve as an introduction to human anatomy and physiology for biology majors and allied health students. The course entails describing, explaining, and analyzing structure and function from the submicroscopic to the organismal level with emphasis on anatomic, directional, and sectional terminology, basic cellular structure and metabolism, tissue differentiation and characteristics, and organ system structure and function; Specifically the integumentary, skeletal, muscular, and nervous systems.

Student Learning Outcomes:

1. Describe and apply anatomical terminology.
2. Describe multi cellular organization.
3. Distinguish and describe major tissue types.
4. Describe the structure and function of the integumentary system.
5. Describe the structure and function of the skeletal system.
6. Describe the structure and function of the muscular system.
7. Describe the structure and function of the nervous system.
8. Describe the structure and function of the special senses.
9. Define homeostasis and describe specific examples for the integumentary, skeletal, muscular, and nervous systems.

BIOL 2210L. Human Anatomy and Physiology I Lab

Courses Included:
CCC BIOL 211 (Combined)
CNM BIO 2292
Diné BIO 201 (combined)
ENMU BIOL 209L
ENMURo BIOL 209L
ENMURu BIOL 209L
LCC BIO 217L
MCC BIOL 211 (combined)
NMMI BIOL 2210L
NMJC BI 214AL
NMSUA BIOL 225 (combined)
NMSUC BIOL 225 (combined)
DACC BIOL 225 (combined)
NMSUG BIOL 225 (combined)
NMSUA BIOL 225 (combined)
NNMC BIOL 237L
SFCC BIOL 230L
SJC BIOL 252 (combined)
UNMG BIOL 227L
UNMLA BIOL 227L
UNM BIOL 247L
UNMV BIOL 247L
WNMU BIOL 256

Course Description:
This is the first in a series of two laboratory courses designed to introduce laboratory practices and techniques for human anatomy and physiology, from the basic cell structure through the organ system level; specifically the integumentary, skeletal, muscle, and nervous systems. ~~Specimen dissections, anatomic models, or synthetic cadavers are used and dissection is required~~ (Co requisite with the lecture course.)

Student Learning Outcomes:

1. Apply the scientific method correctly.
2. Collect, analyze, and interpret scientific data.
3. Use laboratory equipment, such as a microscope, correctly and safely.
4. Analyze the structure of cells, cell membranes, and cell organelles with respect to their respective physiological roles.
5. Identify the anatomical components of human tissues, organs, and organ systems using prepared microscope slides, models, diagrams, illustrations, or cadaver specimens.
6. Describe the functional characteristics of human tissues, organs, and organ systems using prepared microscope slides, models, diagrams, illustrations, or cadaver specimens.
7. Analyze the physiological processes of the integumentary, skeletal, muscle, and nervous systems.

BIOL 2xxxL. Human Anatomy and Physiology I Lab

Courses Included:
UNM BIOL 247L
UNMV BIOL 247L

Course Description:
Laboratory work using cadavers. Anatomy stressed with appropriate physiological work. Topics integrated with 237.

BIOL 2225. Human Anatomy and Physiology II

Courses Included:
CCC BIOL 212
CNM BIO 2310
Diné BIO 202 (combined)
ENMU BIOL 210
ENMURo BIOL 210
ENMURu BIOL 210
LCC BIOL 218
MCC BIOL 212 (combined)
NMJC BI 224A
NMSU BIOL 226 (combined)
NMSUC BIOL 226 (combined)
DACC BIOL 226 (combined)
NMSUG BIOL 226 (combined)
NMSUA BIOL 226 (combined)
NNMC BIOL 238
SFCC BIOL 231
SJC BIOL 253 (combined)
UNM BIOL 238
UNMG BIOL 238
UNMLA BIOL 238
UNMT BIOL 238
UNMV BIOL 238
WNMU BIOL 255

Course Description:
This course is the second of two that serve as an introduction to human anatomy and physiology for biology majors and allied health students. The course entails describing, explaining, and analyzing structure and function from the submicroscopic to the organismal level with emphasis on specific cellular, tissue, and organ structure and physiology, and organ system structure and function; specifically the endocrine, cardiovascular, respiratory, urinary, and reproductive systems. Additionally, an analysis of these concepts is included: fluid and electrolyte balance, pregnancy, growth and development from zygote to newborn, and heredity.

Student Learning Outcomes:

1. Identify and describe the major anatomical features of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems.
2. Analyze the physiological roles of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems in maintaining homeostasis in the human body.
3. Explain how fluid and electrolyte balance is maintained in the human body.
4. Compare and contrast the anatomy and physiology of male and female reproductive systems.
5. Describe pregnancy from conception to parturition including human growth and development from zygote to newborn.
6. Explain heredity and genetic control.

BIOL 2225L. Human Anatomy and Physiology II Lab

Courses Included:
CCC BIOL 212 (combined)
CNM BIO 2392
Diné BIO 202 (combined)
ENMU BIOL 210L
ENMURo BIOL 210L
ENMURu BIOL 210L
NMSU BIOL 226 (combined)
NMSUC BIOL 226 (combined)
DACC BIOL 226 (combined)
NMSUG BIOL 226 (combined)
NMSUA BIOL 226 (combined)
NNMC BIOL 238L
SFCC BIOL 231L
SJC BIOL 253 (combined)
UNMG BIOL 228L
UNMLA BIOL 228L
WNMU BIOL 257

Course Description:
This is the second in a series of two laboratory courses designed to introduce laboratory practices and techniques for human anatomy and physiology, from the basic cell structure through the organ system level; specifically the endocrine, cardiovascular, lymphatic, respiratory, urinary, and reproductive systems. ~~Specimen dissections, anatomic models, or synthetic cadavers are used~~ (co-requisite with the lecture).

Student Learning Outcomes:

1. Apply the scientific method correctly.
2. Collect, analyze, and interpret scientific data.
3. Use laboratory equipment, such as a microscope, correctly and safely.
4. Identify the anatomical components of human tissues, organs, and organ systems using prepared microscope slides, models, diagrams, illustrations, or cadaver specimens.
5. Describe the functional characteristics of human tissues, organs, and organ systems using prepared microscope slides, models, diagrams, illustrations, or cadaver specimens.
6. Analyze the physiological processes of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems.
7. Analyze the physiological processes of fluid and electrolyte balance and acid base balance in the human body.
8. Analyze heredity and genetic control.

BIOL 2xxxL. Human Anatomy and Physiology II Lab

Included Courses:
UNM BIOL 248L
UNMV BIOL 248L

Course Description:
Continuation of BIOL 247L. Topics integrated with 238.

Questions regarding Criminal Justice & Sociology Courses

Please ask the appropriate department/faculty at your institution to review the course descriptions and SLOs. There is a question of whether these courses are the same and should share a prefix, number, and title.

Please bring your institution's decision to the meeting on September 20, 2018.

Can these courses be combined as a CJUS course? If yes, which course description and SLOs should be used.

CJUS 1140. Juvenile Justice	**SOCI 2140. Juvenile Delinquency**
Includes CCC CRJU 243 CNM CJ 1502 ENMU CJ 240 ENMURu CJ 233 Luna CJ 215 NNMC CJ 233 UNMLA CRJS 260 UNM-T CRJS 103 WNMU CJUS 260	**Includes** CNM SOC 2212 SJC SOCI 212
Course Description This course covers the diversity of the informal and formal juvenile justice system, the process of identifying delinquent behavior, the importance of legislation, law enforcement, courts, diversion, referrals, and juvenile correctional facilities.	**Course Description** This course is an introduction to sociological theories that explain juvenile delinquency in the United States. The course will explore the history of the juvenile justice in the U.S. and the causes and solutions of juvenile delinquency. The course will also cover how the U.S. juvenile justice system works and how it is different from the adult criminal justice systems in the US. The course will examine policing of juvenile delinquents, juvenile rehabilitation, probation services, and approaches to address limitations of the current U.S. juvenile justice system.
Student Learning Outcomes 1. Identify distinct aspects of the juvenile court system, law and procedure. 2. Compare and contrast the juvenile justice system with the adult criminal justice system. 3. Apply criminological theories in explaining juvenile crime. 4. Outline the historical development of juvenile justice. 5. Describe the processes of informally and formally handling juveniles within the juvenile justice system. 6. Explain the role and impact of community-based and institutional corrections within the juvenile justice system.	**Student Learning Outcomes** 1. Understand and define important events in the history of the juvenile justice system in the United States. 2. Explain the social theories of juvenile delinquency and how these theories explain both the causes of delinquency and possible solutions to delinquency. 3. Describe the relationships between the institutions of the U.S. juvenile justice system and how this system is different from the adult criminal justice systems in the U.S. 4. Identify the strengths and weaknesses of the current U.S. juvenile justice system in preventing delinquency and examine ways to facilitate changes to make it more effective.

Can any of these courses be combined as one or more CJUS courses? If yes, which course description and SLOs should be used.

CJUS 1110. Introduction to Criminal Justice	**SOCI 2130. Introduction to Criminology**	**CJUS 1170. Introduction to Criminology**
Includes CCC CRJU 102 CNM CJ 1001 DACC CJ 101G ENMU CJ 102 ENMU-Ruidoso CJ 102 Luna CJ 111 MCC CRJU 102 NMHU SOC 231 NMMI CRIJ 1113 NMSU CJ 101G NMSU-A CJ 101G NMSU-C CJ 101G NMSU-G CJ 101G NNMC CJ 111 SFCC CRJS 111 SJC POLI 110 UNM-T CRJS 101 UNM-V CRJS 111 WNMU CJUS 111	**Includes** CNM SOC 2215 DINE SOC 220 NMJC SO 223C	**Includes** CCC CRJU 201 NMMI CRIJ 2213 NNMC CJ 132 UNMV CRJS 132
Course Description This course provides an overall exploration of the historical development and structure of the United States criminal justice system, with emphasis on how the varied components of the justice system intertwine to protect and preserve individual rights. The course covers critical analysis of criminal justice processes and the ethical, legal, and political factors affecting the exercise of discretion by criminal justice professionals.	**Course Description** Students will learn to understand and apply criminological theories that are produced within the field of sociology. These theories focus on how social structures, social contexts and particular kinds of social relationships influence the social activity of crime at both the micro and macro levels. Students will understand and analyze a variety of topics also pertinent to the study of crime, such as divergent definitions of crime, various correlates of criminal activities, criminal trends, and other key topics within the field of criminology.	**Course Description** The course will explore the crime problem, its context, and especially to explain causes of crime. The course will cover Foundations for Criminology, Theories of Crime, and Types of Crime. The first half of the class will be lectures on Crime and Criminology, The Nature and Extent of Crime, and Victims and Victimization. The second part of the class will be lectures on Rational Choice Theories, Trait Theories, Social Structure Theories, Social Conflict, Developmental Theories, Social Structure Theories of Crime, Social Process Theories of Crime, Social Reaction Theories of Crime. The third part will cover lectures in Interpersonal Violence, Political Crime and Terrorism, Property Crime, Enterprise Crime, Public Order Crime. The class will also be devoted to discussion groups who will be assigned special discussion questions related to the chapter being discussed. Discussion groups

		will give opportunity to students to use communication skills with each other as they work as a team to resolve a question/problem. The instructor will use handouts, films and guest speakers as additional information on topics.
Student Learning Outcomes 1. Describe the history, structure and function of the criminal justice system in the United States. 1. Discuss the role of law enforcement, court systems, corrections, and security in maintaining social order. 2. Identify and describe crime causation theories, various measures of crime and their reliability and victimization theories. 3. Relate fundamental principles, concepts and terminology used in criminal justice to current events. 4. Apply basic analytical and critical thinking skills in evaluating criminal justice issues, policies, trends and disparities.	**Student Learning Outcomes** 1. Understand and communicate the historical development of criminology as a field of inquiry through academic research, in-class discussions, written assignments, and other methods as necessary. 2. Evaluate and identify the assumptions, limitations and appropriate applications of theories of criminology through academic research, in-class discussions, written assignments, and other methods as necessary. 3. Assess the validity and reliability of empirical research used to test the theories of crime examined through academic research, in-class discussions, written assignments, and other methods as necessary. 4. Communicate an understanding of criminological theories and how these theories can be used to explain the occurrence of crime at both micro and macro levels through academic research, in-class discussions, written assignments, and other methods as necessary.	**Student Learning Outcomes** n/a

General Education Certification Requests

Please review the following General Education certification requests. If you would like additional information about any of the following courses, please let me know by September 14, 2018.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Communications, Humanities & Social Science
Course Number, Title, Credits: ARTS 1240, Design I, 3 credits
Co-requisite Course Number and Title, if any: None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Cheryl Dietz, Creative & Fine Arts chair
Email and Phone Number of Contact Person: cdietz@cnm.edu, 505-224-4000, Ext 50049

Was this course previously part of the general education curriculum?

☐ Yes ☑ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

ARTS 1240, Design I

List all learning outcomes that are shared between course sections at your institution.

1. Produce art works that apply and organize the elements of two-dimensional form (line, shape, value, texture, color and space).
2. Produce artworks that apply the principles of two-dimensional design (harmony, variety, repetition, balance, rhythm, proportion, dominance, movement, and economy).
3. Demonstrate effective use of materials and techniques with consideration for craftsmanship and presentation.
4. Use visual art vocabulary in the development and critique of work
5. Explore concepts and ideas: from conceptual, realistic/referential to non-representation.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*
At the beginning of the course, instructors present two-dimensional visual examples of historical and/or contemporary art works to create students' genre and medium awareness. Students then create visual art works that apply the principles of organization and elements of design, demonstrating a versatility with media awareness (paint, collage, drawing, etc.) in order to communicate to the viewer specific visual experiences. Students then evaluate other students' art works. Student critiques evaluate the visual communication of other students' visual messages, while producing arguments to defend their critiques of the technical skills in the art works presented. Student learning will be assessed with post-test of the elements and principles of design and shape; production of line, shape, texture and color paint projects; compositions with painted color schemes, collages, abstractions, and/or portraits; critiques of other students' color scheme, abstractions, portrait and collage projects.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Students will apply problem solving as the critique presentations of two-dimensional student artworks. Students will acquire evidence for their critique by analyzing other students' color scheme painted projects, collages, abstractions, and/or portraits, evaluate that acquired evidence, and orally present, defend and evaluate their reasoning and conclusions about the conceptual and visual attributes of other students' projects based on conceptual, realistic or non-representational problems proposed in the color scheme paint projects, collages, abstractions, and/or portrait assignments. Student learning will be assessed with a grading rubric that evaluates their oral critiques of other students' artwork.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
By apply responsible and ethical use of two-dimensional art-making materials, students will demonstrate an understanding of sustainability. Students will evaluate materials (i.e. cadmium vs non-cadmium paint) for their personal, social and global health and environmental impact. Students will collaborate in studio clean up practices as well as identify, select, and ethically use and dispose of art materials. A materials worksheet will assess students' understanding of personal and social responsibility of using environmentally sound art-making materials.
Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*

In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

E. Supporting Documents (required).

☐ ☑Syllabus Attached ☐ ☑Sample Assessment Attached

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM's Student Academic Assessment Committee (SAAC) requires annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the assessment will rotate through the three essential skills associated with ARTS 1240 with one of these essential skills being assessed each year. In addition, SAAC's policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of art studio faculty. See ARTS 1240 Assessment Rubric.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

Revised By: Cheryl Dietz Summer 2018

Master Syllabus for ARTS 1240, Design I- days/times

NOTE TO FACULTY: The blue text contains instructions and options to choose from to create your syllabus that can be deleted and/or made black.
Do not deviate from the course syllabus format and/or change any black text. You have academic freedom in teaching methods, sequencing, pacing and personal flair with the exception of specified assignments listed under requirements.

I. GENERAL INFORMATION

Instructor: Course/Section:

Office#: Term:

Office Hours: Credit Hours:

Phone/Fax: E-mail:

Homepage (if applicable):

CNM ART DEPARTMENT WEB ADDRESS:
http://www.cnm.edu/depts/chss/programs/art/index.php.

II. COURSE DESCRIPTION

This course introduces the fundamentals of two-dimensional design as it applies to fine art and commercial contexts. Emphasis will be on basic color theory, elements of dynamic composition, vocabulary of visual arts and design, and development of visual conceptual skills. Students will use a variety of materials and techniques.

Recommended: ARTH 1101 (Introduction to Art)
Prerequisite: RDG 0950 or appropriate placement scores

III. TEXTBOOKS/MATERIALS

Faculty: you may add texts for this course using the standard bibliographic format (alpha by author).
Suggested / not required: Ocvirk, Stinson, Wigg, Bone, and Cayton, *Art Fundamentals: Theory and Practice. 10th ed.*,. McGraw-Hill, current addition.

Art Dept. studio policy is to provide a list of required materials that students will purchase. Faculty have a $500 materials budget for supplies for their course.

EXAMPLE STUDENT SUPPLY LIST

- **Notebook for taking notes**
- **Pencil (always bring this!)**
- **White eraser**
- **Metal Ruler 24" or longer**
- **Compass (the metal kind that has the yellow pencil is the best)**
- **Triangle**
- **Black Faber-Castlell 4 PITT artist pen set – buy at Langells or Artisans**
- **One circle or oval template**
- Exacto, razor blade or utility knife with blades
- Scissors
- 0.25mm Micron black archival ink pen
- A selection of three or more Tombo or Prismacolor brand colored markers (no sharpies or other markers that give off strong odors)
- Kneaded eraser
- Roll of drafting tape
- Role of purple easy release masking tape (Ace Hardware is the only place that carries it anymore) or blue tape for delicate surface (not blue painters tape)
- Golden synthetic Brushes: very small round, small 1/4" flat, medium 1/2" flat (purchase quality brushes, the bristles should have some spring to them. Poor brushes always make poor artwork, no matter how skilled you are!!)
- Plastic, non-breakable glass, wood or paper palette
- Palette knife (optional) – inexpensive plastic ones are fine
- Portfolio case to carry artwork in (optional)

Supply Outlets

Artisan's ……..3017 Monte Vista 256-4540

IV. COURSE OUTCOMES

Faculty: do not delete or change the following

Students will be able to:

1. Produce art works that apply and organize the elements of two-dimensional form (line, shape, value, texture, color and space).
2. Produce artworks that apply the principles of two-dimensional design (harmony, variety, repetition, balance, rhythm, proportion, dominance, movement, and economy).
3. Demonstrate effective use of materials and techniques with consideration for craftsmanship and presentation.
4. Use visual art vocabulary in the development and critique of work
5. Explore concepts and ideas: from conceptual, realistic/referential to non-representational

V. COURSE REQUIREMENTS/ATTENDANCE

Faculty: you must teach the following. Do not delete or change the following course requirements (you may add additional requirements).

A. Course Requirements.

All students are required to:

- Use two dimensional art-making materials and tools in the studio environment with ethical practices that are sustainable in relation to the health of fellow students, facilities and the environment.
- Color match by mixing colors, creating a value scale and a color wheel.
- Translate color into values.
- Create a minimum of 7 projects, utilizing the elements of art and the principles of organization in addition the following specifics must be addressed:
  - Subject matter, form and content
  - Color relationships with a range of shades, tints, and tones.
  - Concept of balance.
  - Spatial depths and spatial illusions.
  - Simultaneous Contrast
  - Open and closed, value, shape and composition
  - Decorative and plastic space
  - Pattern
- Execute projects with attention to craftsmanship and presentation.
- Have a high degree of work ethic
- Submit a final portfolio
- Participate in at least three to four group critiques

B. Attendance Policy

CNM Attendance Policy: https://www.cnm.edu/student-resources/academic-records/academic-records-list/attendance

OR

Students enrolled for credit, credit/no credit, or audit are expected to attend all class sessions. The instructor will take attendance. A student with excessive absences—15% of total class hours—may be dropped from the class. Students should not assume they will be dropped from the class automatically. Absences do not relieve students of the responsibility for missed assignments and exams. Students must take the initiative in arranging with their instructor to make up missed work.

Students who are dropped by an instructor for non-attendance will be notified at their CNM e-mail address. If the student believes a mistake has been made, he or she must contact the instructor within two working days of receipt of the drop notification.

May Include:
Students are expected to attend all class sessions.
Instructors may drop students with excessive absences from courses.
Enrolled students who miss the first class meeting and have not contacted the instructor or who miss two consecutive class meetings in the first week may be dropped from the course.
Students dropped for attendance reasons from courses that have co-requisites also must drop the co-requisite courses.
Students should not expect instructors to drop them if they stop attending classes. (Registration policy)

Note: instructor may have modified version of these statements as long as the attendance policy with regards to total absences allowed is clearly articulated. Instructors should also state students "will be dropped" from the class if this would be the action of the instructor when a student exceeds maximum allowed absences.

C. Special Needs Statement:

Students with documented disabilities who need special accommodation in the classroom should contact the Disability Resource Center for assistance, 224-3259. Also, students should tell the instructor if they have special needs because of learning or other disabilities. For personal counseling, contact Merry Guild in the Counseling Office at Main campus, 224-3271.

VI. GRADING

CHSS grading scale.

90-100%=A
80-89%=B
70-79%=C
60-69%=D
below 60%=F

Include the specifics for computation of the grade. If assignments are weighted by percentage of the final total, list these (1 research project @ 30%, 2 quizzes @ 10%=20…final exam @ 20%). If assignments are based on points, list these (1 research project=200 points, 2 quizzes=50 points…final exam=100 points). If participation is part of the course grade, the method for evaluating participation must be explained clearly. If attendance is figured into your grading policy, indicate specifically how that figure is to be derived.

In the event CNM closes during the final week of classes, final grades for students will be calculated based on all work assessed up to that point in the course.

Academic Dishonesty Policy:
https://www.cnm.edu/depts/dean-of-students/academicdishonesty.html
(See sample Master Syllabus policies for options).

VII. ART DEPARTMENT POLICIES

Studio Etiquette

(Example phone policy) The use of cell phones is not permitted in the classroom (before, during or after class). Phones must be turned to vibrate or to silent mode. Texting and phone calls can be done during break, outside of the classroom. Students must leave the classroom to talk on the phone and not return until the call is completed. Headphones can only be used with permission of instructor and only if the volume is low enough that music does not interfere with hearing the instructor and cannot be heard by anyone else. Students are asked to respect the facilities, our staff and other students by cleaning up after yourself and returning clean drawing boards, easels and drawing horses, tables, chairs, etc. to their designated storage places. Replace all tools, materials, equipment, etc. to their designated storage places. All Classes must participate in the End of Semester Clean up, as assigned by the studio tech.

Open studio Usage

There are specific schedules at each campus for open studio times. Students who access these must sign in on the open studio form provided by the tech. Students are responsible for clean up and room closure.

Studio Safety Policy

Students agree to follow the safety standards described below in order that all users of CNM art classrooms will be protected against avoidable injury.

- Acquire and wear approved safety equipment (goggles and gloves) when an assigned project specifically requires or when told to do so by the instructor and/or tech.
- Wear appropriate clothing when using tools: no loose, baggy clothing, shirts with very long sleeves, open-toed shoes, jewelry that might interfere with the safe operation of tools or equipment as necessary.
- Tie up or cover long hair, while working around power equipment or when told to do so by the instructor and/or tech.
- Conduct oneself in a safe and responsible manner in order to minimize potential injury or damage to oneself, others or property including: no yelling or distracting loud conversations, no distractions or unwarranted interruptions of people using equipment, no rapid movement in the classroom, no personal items in pathways and no use of earphones for personal sound systems that might prevent users from hearing verbal warnings or instructions while using tools and equipment.
- Attend all group demonstrations of hand and power tools, and follow specific safety procedures outlined by the instructor and/or tech.
- Understand that students will not be allowed to use designated hand and power tools until individually approved by the instructor and/or tech.
- Agree to provide an emergency contact with phone number at the beginning of the term.

MSDS statement

- SAFETY is an important consideration for all art courses. At CNM we practice "safe" art making by using "non-toxic" materials when necessary. MSDS (Material Safety Data Sheets) are posted in each art room, stationed by the door. All materials stored in the fire cabinet must be labeled. All products stored in the Art studios must be taken to the Studio Lab Technician for identification, labeling and procedure.

Waste disposal

- Students agree to dispose of waste materials appropriately. No pouring of paint, ink, plaster, clay, solvent or other particulates down the sink. All flammable materials are to be disposed in the fire can or stored in the fire cabinet.

*** Failure to adhere to these safety rules may result in the student having to meet with the Dean of Students before attending the following class session**.

Art Exhibition and Use of Images of Student Artwork

The Art Department exhibits student work throughout the CNM Community, for the purpose of teaching and promoting our student's accomplishments.

Students understand the following:

- CNM may display work at various locations at CNM's campuses and that artwork may be reproduced or published for promotional use online and in print.
- Artwork may or may not be selected for display.
- Reasonable care will be used in the handling of artwork but CNM cannot be held responsible for any work that is damaged or stolen.
- In the event that student work is on display any time during the semester, the student alone is responsible for its retrieval.
- Unclaimed artwork will only be stored one additional term. After the additional term, artwork becomes the property of CNM and may be discarded, used as a teaching tool or sold for the Art Scholarship.
- In order to retrieve artwork that has been on display, students will be responsible for contacting their instructor and the Art Studio Lab Tech at the campus the course was held (Montoya Campus: 224-4594, Main campus: 224-3697, Westside Campus: 224-5409).

*Students who wish to opt out of the use of their artwork for display or for Art Department promotion should see the instructor to sign and date the opt out form.

VII. SCHEDULE OF ASSIGNMENTS/READINGS

Faculty: Schedule of assignments and activities should address the objectives for the course. Include specific dates and week # for readings, assignments and examinations Include the finals day and any holidays.

Example schedule:

SCHEDULE OF ASSIGNMENTS BY WEEK & DATE

Subject to change at any time

Week 1

1/13	Syllabus, overview of materials, proper uses, disposal & clean-up
1/15	Lecture: Visual communication through the Elements and Principles of Design / Shape. SHAPE Project: bring pencil, ruler, triangle, circle or oval templates, compass and black Faber Castil Pitt marker

Week 2

1/20	SHAPE continuation
1/22	SHAPE continuation

Week 3

1/27	SHAPE project critique and student presentations
1/29	Lecture: Visual communication through Value. VALUE SCALE Project: bring brushes, ruler, pencil, palette, container for water and drafting and purple tape.

Week 4

2/3	VALUE SCALE
2/5	LINE PROJECT: bring pencil, ruler, xacto, brush, & Micron pen

Week 5

2/10	LINE PROJECT
2/12	LINE PROJECT

Week 6

2/17	LINE PROJECT
2/19	LINE project critique and student presentations

Week 7

2/24	Lecture: The nature of color, light and pigments, ethical paint practices and visual communication through color. COLOR WHEEL: bring brushes, xacto blade, ruler, pencil, palette, container for water and drafting and purple tape.

2/26	COLOR WHEEL
Week 8	
3/3	COLOR WHEEL
3/5	COLOR WHEEL
Week 9	
3/10	COLOR WHEEL
3/12	PORTRAIT: bring enlarged black and white photocopy of a person's face. brushes, xacto blade, ruler, pencil, palette, container for water and drafting and purple tape.
Week 10	
3/17	PORTRAIT
3/19	PORTRAIT
Week 11	
3/24	PORTRAIT
3/26	PORTRAIT project critique and student presentations
Week 12	
3/31	Lecture: The Principles of organization - Composition. COLLAGE: Bring scissors, glue, brush, razor blade, ruler, templates, pencil
4/2	COLLAGE
Week 13	
4/7	COLLAGE
4/9	COLLAGE project critique and student presentations
Week 14	
4/14	Lecture: Text and Design Communication. TEXT: Bring markers, ruler, scissors, templates and pencil
4/16	TEXT
Week 15	
4/21	TEXT ALL RESUBMISSIONS AND FINAL PROJECT DUE AT THE END OF CLASS. NO WORK WILL BE ACCEPTED AFTER TODAY!!!!
4/23	Final Critique and presentations

ARTS 1240, Design I

Analogous and Monochromatic Portrait Project

Objectives:

- Base a color schemes painting project on the cultural significant work of Andy Warhol
- Explore monochromatic and analogous color schemes while painting two versions of the same portrait one realistically and the other graphically.
- Use two techniques one using closed values and one using open values.
- Incorporate acrylic medium in the painting process in order to blend values to create volume.
- Practice sustainable use and clean up of acrylic paints
- Analyze and discuss how color creates content including cultural social bias or affirmation
- Develop paint handling skills
- Break down an image into visual components and then render it in two distinct ways.

Materials You Need to Bring:

- A head shot photo of a person and a black and white photo-copy of that photo enlarged to fit into an 13"x18" area (the bigger the image the easier to paint. The head should fill the space as much as possible with very little amount of shoulders or space in-between the top of the head and the edge of the format).
- The first day bring pencil, black marker, ruler, acrylic paints, brushes & transfer paper (optional).

The Materials provided: Acrylic paint, acrylic medium, white paper.

The Format dimensions: 13" x 18" (horizontal or vertical)

Instructions: Set up your composition (See Sample Project and Demostraition)

- Use a black marker to trace your portrait onto tracing paper. Make sure to mark "front" on your tracing paper before you remove it from your photocopy. When tracing, be sure to capture all of the major and the minor value shapes as possible; both dark and light and everything in-between. You will use this like a "paint-by-number" so the more detailed you make it the better.

- Transfer your portrait twice onto your 13" x 18" format either next to each other horizontally or stacked on top of each other vertically.

- Next choose three analogous manufactured colors from your color wheel. These are colors that are next to each other on the color wheel, are closely related and are usually experienced as warm or cool. Example: yellow, orange & red or yellow green, green & blue/green, the three violets, etc…

Portrait #1: Closed Value Portrait / Monochromatic Color

Paint this portrait first using one of your chosen colors with the addition of black, white and gray. Note: you are using black, white and gray to "mix in" with that color, creating tints, shades and neutralized colors. Do not use black, white and gray independently. In this portrait you are basically working in a process similar to a "paint-by-number". Each value shape of the portrait should be painted flat, be a closed value and should correspond with the value shifts in your original image.

Portrait #2: Open Value Portrait / Monochromatic Color

Choose one of your remaining colors from the three you initially selected and paint this portrait with the addition of black, white and gray. Note: you are using black, white and gray to "mix in" with that color, creating tints, shades and neutralized colors. Do not use black, white and gray independently. In this portrait you are working in a process where all of the values are blended. Mix a little bit of acrylic medium with your paint as you are painting. This will extend the drying time of the paint and will help you be able to blend values together. Paint

this portrait as realistic as possible making smooth transitions between one area and another. This painting should correspond as close as possible to the value shifts of your original.

The Background

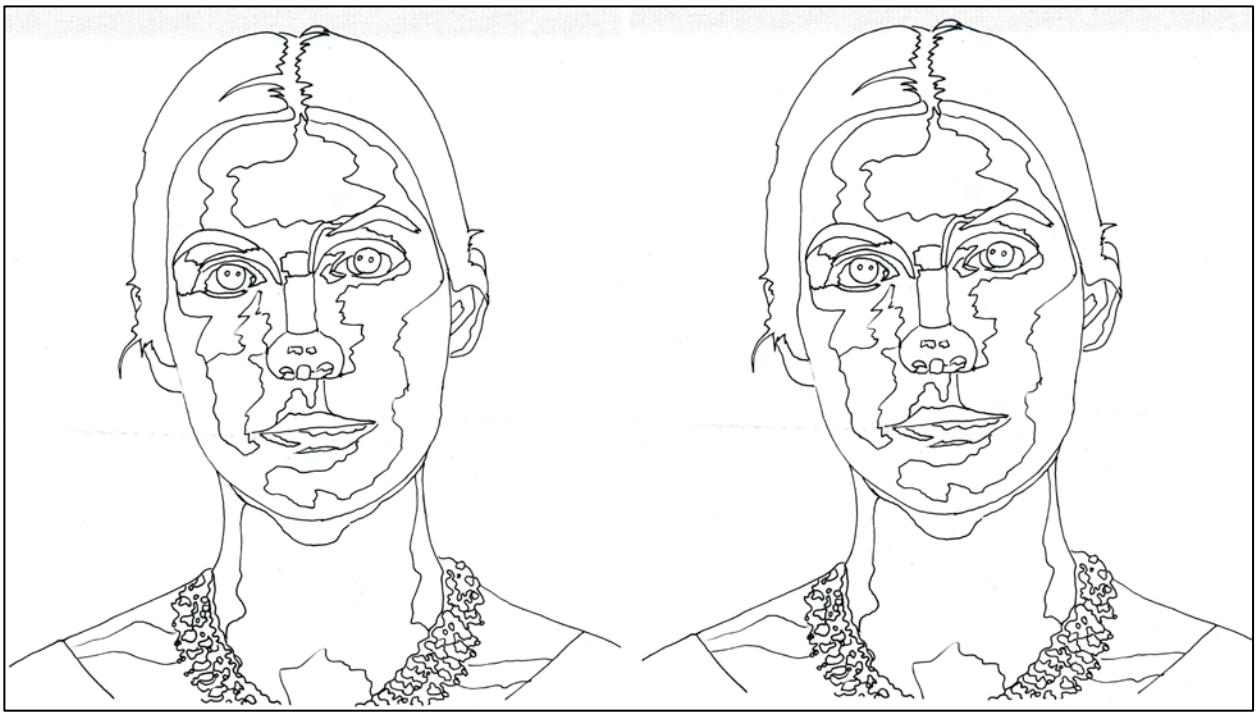
In the background use shapes (organic, rectilinear, or curvilinear) to create a design. Use the remaining color of your original analogous group to paint the background. If you would like to use all three colors in the background that is OK.

Criteria for grading:

- The use of the correct color combinations.
- The complexity of closed value shapes in the closed value portrait
- The complexity of value ranges used in both portraits
- Evidence of smooth value transitions in the open values portrait
- Background design
- Craftsmanship (brushwork, opacity, blending)
- Craftsmanship (presentation)

Present Portrait for Critique and address the following:

- How your portrait expresses the elements and principles of design.
- How your portraits addresses concepts of cultural color bias and experience



Central New Mexico Community College
School of Communications, Humanities and Social Sciences
Fall 2018 Student Learning Assessment: ARTS 1240

Assessment Scoring Rubric

Component Skill	Novice (1)	Emerging (2)	Developing (3)	Proficient (4)
Communication				
Two-dimensional work is appropriate for audience, purpose and context.				
Critical Thinking				
Relevant problem/question clearly stated				
Relevant problem/question appropriately described/explained				
Response contains a relevant and logically sound argument				
Personal and Social Responsibility				
Response contains at least one social justice and/or sustainability issue in scenario				
Response explains at least one social justice and/or sustainability issue in scenario				
Response uses aesthetic theory to support or help explain the impact of scenario on social justice and/or sustainability issue				
Response demonstrates the ability to participate in respectful civic dialogue				

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Communications, Humanities, & Social Science
Course Number, Title, Credits: ARTS 1250, Design II, 3 credits
Co-requisite Course Number and Title, if any: None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Cheryl Dietz, Creative and Fine Arts chair
Email and Phone Number of Contact Person: cdietz@cnm.edu, 505-224-4000, Ext 50049

Was this course previously part of the general education curriculum?

☐ Yes ☑ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

ARTS 1240, Design II

List all learning outcomes that are shared between course sections at your institution.

1. Apply the artistic qualities of the elements of art and principles of design to three-dimensional form.
2. Create 3 dimensional form using varied sculptural methods, construction techniques and media.
3. Produce 3 D design projects safely with proper use of equipment and materials.
4. Apply realistic, referential, and abstract concepts and ideas to projects.
5. Demonstrate knowledge of 3-D related art vocabulary, origin and trends in sculpture, and 3-D design fundamentals.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*
At the beginning of the course, instructors present three-dimensional visual examples of historical and/or contemporary art works to create students' genre and medium awareness. Students then create visual art works that apply the principles of organization and elements of design, demonstrating a versatility with media awareness (reliefs, freestanding assemblies, manipulations in clay, carvings, and/or castings etc.) in order to communicate to the viewer specific visual experiences. Students then evaluate other students' art works. Student critiques evaluate the visual communication of other students' visual messages, while producing arguments to defend their critiques of the technical skills in the art works presented. Student learning will be assessed with post-test of the elements and principles of three dimensional design; production of form, texture, line, shape and scale projects; three dimensional compositions of substitution, additive and subtractive sculptural form; critiques of other students' sculptural forms.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Students will apply problem solving as the critique presentations of three-dimensional student artworks. Students will acquire evidence for their critique by analyzing other students' reliefs, freestanding assemblies, manipulations in clay, carvings, and/or castings, evaluate that acquired evidence, and orally present, defend and evaluate their reasoning and conclusions about the conceptual and visual attributes of other students' projects based on conceptual, realistic or non-representational problems proposed in the reliefs, freestanding assemblies, manipulations in clay, carvings, and/or castings assignments. Student learning will be assessed with a grading rubric that evaluates their oral critiques of other students' artwork.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
By apply responsible and ethical use of three-dimensional art-making materials, students will demonstrate an understanding of sustainability. Students will evaluate materials (use of sustainable wood for carving project, for example) for their personal, social and global health and environmental impact. Students will collaborate in studio clean up practices as well as identify, select, and ethically use and dispose of art materials. A materials worksheet

will assess students' understanding of personal and social responsibility of using environmentally sound art-making materials.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*
In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

E. Supporting Documents (required).

☐ ☑**Syllabus Attached** ☐ ☑**Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM's Student Academic Assessment Committee (SAAC) requires annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the assessment will rotate through the three essential skills associated with ARTS 1250 with one of these essential skills being assessed each year. In addition, SAAC's policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of art studio faculty. See attached Arts 1250 Assessment Rubric.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

Revised By: Cheryl Dietz, 2018

Master Syllabus for ARTS 1250, Design II - days/times

NOTE TO FACULTY: The blue text contains instructions and options to choose from to create your syllabus that can be deleted and/or made black. Do not deviate from the course syllabus format and/or change any black text. You have academic freedom in teaching methods, sequencing, pacing and personal flair with the exception of specified assignments listed under requirements.

I. GENERAL INFORMATION

Instructor: Course/Section:

Office#: Term:

Office Hours: Credit Hours:

Phone/Fax: E-mail:

Homepage (if applicable):

CNM ART DEPARTMENT WEB ADDRESS:
http://www.cnm.edu/depts/chss/programs/art/index.php.

II. COURSE DESCRIPTION

This course introduces the basic formal (aesthetic), spatial, and physical aspects of 3-D form as they can be applied to sculptural and functional design. Techniques that explore structure, mass, volume, scale, surface, form, and function are covered, along with various media, which may include paper, wood, clay, and/or metal.

Prerequisite: RDG 0950 + ARTS 1106 or appropriate placement scores

III. TEXTBOOKS/MATERIALS

Faculty: you may add texts for this course using the standard bibliographic format (alpha by author).

Required Text: See CHSS text book specialist for the latest textbook requirement.

Hannah, Elements of Design,. Princeton Architectural Press

Suggested Texts: Clayton, The Clay Lovers Guide to Making Molds,. Lark Books
Chavarria, The Big Book of Ceramics,. Watson-Guptill

Art Dept. studio policy is to provide a list of required materials that students will purchase. Faculty have a $500 materials budget for supplies for their course.

EXAMPLE STUDENT SUPPLY LIST

- Portfolio Envelope Case: with handle, 23" x 31" $8.59 *(optional*)
- White Drawing Pad: 18" x 24" (Strathmore 300) $8.00
- Masking Tape: 3/4" wide: $1.25 - $1.50
- Florist's Foam (two blocks): $.69 each
- Paper Scissors: $3.99
- Half-gallon Bucket, and a Sponge
- Spool of 20 guage galvanized steel wire: $3.50
- Dust/Mist Respirator Mask: 2/ $4.95 (not just "nuisance" mask)
- Impact Resistant Eye-Safety Goggles: $5.95
- Shop Apron (Painter's Cap — *optional)*
- Tackle or Tool box to carry your tools
- 24" Metal Ruler: $6.65 (or substitute cheaper)
- X-acto or Excel Knife w/#16 or #11 blades/ $3.15
- Graphite Pencil: 6b (*Ebony Jet Black) $ .65 ea.*
- Pink Pearl Eraser/ $.65
- Three-ring Looseleaf Binder for a sketchbook
- Unruled plain white 3-hole paper for above binder.
- Plastic Putty or Spackling Knives: 1' and 3," $1.50
- Some Cloth Shop towels or heavy duty fiber towels
- Leather-palmed Work Gloves: $4.95
- Latex Rubber Gloves: about 25 cents each at a paint store
- $ 2 to $4 for firing cost *(optional)*

Supply Outlets

Art Supply Stores: Santa Fe Artisan, UNM Bookstore, CNM Bookstore, Stationery Stores, Hobby Lobby, Michael's, etc.

Building Material, and Hardware Stores: Home Depot, Lowe's, etc.

IV. COURSE OUTCOMES

Faculty: do not delete or change the following

Students will be able to:

1. Apply the artistic qualities of the elements of art and principles of design to three-dimensional form.
2. Create 3 dimensional form using varied sculptural methods, construction techniques and media.
3. Produce 3 D design projects safely with proper use of equipment and materials.
4. Apply realistic, referential, and abstract concepts and ideas to projects.
5. Demonstrate knowledge of 3-D related art vocabulary, origin and trends in sculpture, and 3-D design fundamentals.

V. COURSE REQUIREMENTS/ATTENDANCE

Faculty: you must teach the following. Do not delete or change the following course requirements (you may add additional requirements).

A. Course Requirements.

All students are required to:

- Complete projects in the following sculptural methods:
  - Manipulation (Modeling)
  - Subtractive (Carving)
  - Additive (assembly, mixed media, combine, etc.)
  - Substitution (casting must create a 2 part mold and at least 5 successful castings.)
- Create at least one project in clay
- Be expected to participate in at least one collaborative /environmental (site-specific) or Teamwork based Project.
- Create a Relief
- Create a freestanding (in-the-round) sculptural form
- Demonstrate proficiency with materials and media.
- Execute projects with attention to craftsmanship and presentation.
- Have a high degree of work ethic

- Submit a final portfolio

- Participate in at least three to four group critiques

B. Attendance Policy
CNM Attendance Policy: https://www.cnm.edu/student-resources/academic-records/academic-records-list/attendance

OR

Students enrolled for credit, credit/no credit, or audit are expected to attend all class sessions. The instructor will take attendance. A student with excessive absences—15% of total class hours—may be dropped from the class. Students should not assume they will be dropped from the class automatically. Absences do not relieve students of the responsibility for missed assignments and exams. Students must take the initiative in arranging with their instructor to make up missed work.

Students who are dropped by an instructor for non-attendance will be notified at their CNM e-mail address. If the student believes a mistake has been made, he or she must contact the instructor within two working days of receipt of the drop notification.

May Include:
Students are expected to attend all class sessions.
Instructors may drop students with excessive absences from courses.
Enrolled students who miss the first class meeting and have not contacted the instructor or who miss two consecutive class meetings in the first week may be dropped from the course.
Students dropped for attendance reasons from courses that have co-requisites also must drop the co-requisite courses.
Students should not expect instructors to drop them if they stop attending classes. (Registration policy)

Note: instructor may have modified version of these statements as long as the attendance policy with regards to total absences allowed is clearly articulated. Instructors should also state students "will be dropped" from the class if this would be the action of the instructor when a student exceeds maximum allowed absences.

C. Special Needs Statement:
Students with documented disabilities who need special accommodation in the classroom should contact the Disability Resource Center for assistance, 224-3259. Also, students should tell the instructor if they have special needs because of learning or other disabilities. For personal counseling, contact Merry Guild in the Counseling Office at Main campus, 224-3271.

VI. GRADING

CHSS grading scale.

90-100%=A
80-89%=B
70-79%=C
60-69%=D
below 60%=F

Include the specifics for computation of the grade. If assignments are weighted by percentage of the final total, list these (1 research project @ 30%, 2 quizzes @ 10%=20…final exam @ 20%). If assignments are based on points, list these (1 research project=200 points, 2 quizzes=50 points…final exam=100 points). If participation is part of the course grade, the method for evaluating participation must be explained clearly. If attendance is figured into your grading policy, indicate specifically how that figure is to be derived.

In the event CNM closes during the final week of classes, final grades for students will be calculated based on all work assessed up to that point in the course.

Academic Dishonesty Policy:
https://www.cnm.edu/depts/dean-of-students/academicdishonesty.html
(See sample Master Syllabus policies for options).

VII. ART DEPARTMENT POLICIES

Studio Etiquette

(Example phone policy) The use of cell phones is not permitted in the classroom (before, during or after class). Phones must be turned to vibrate or to silent mode. Texting and phone calls can be done during break, outside of the classroom. Students must leave the classroom to talk on the phone and not return until the call is completed. Headphones can only be used with permission of instructor and only if the volume is low enough that music does not interfere with hearing the instructor and cannot be heard by anyone else. Students are asked to respect the facilities, our staff and other students by cleaning up after yourself and returning clean drawing boards, easels and drawing horses, tables, chairs, etc. to their designated storage places. Replace all tools, materials, equipment, etc. to their designated storage places. All Classes must participate in the End of Semester Clean up, as assigned by the studio tech.

Open studio Usage

There are specific schedules at each campus for open studio times. Students who access these must sign in on the open studio form provided by the tech. Students are responsible for clean up and room closure.

Studio Safety Policy

Students agree to follow the safety standards described below in order that all users of CNM art classrooms will be protected against avoidable injury.

- Acquire and wear approved safety equipment (goggles and gloves) when an assigned project specifically requires or when told to do so by the instructor and/or tech.
- Wear appropriate clothing when using tools: no loose, baggy clothing, shirts with very long sleeves, open-toed shoes, jewelry that might interfere with the safe operation of tools or equipment as necessary.
- Tie up or cover long hair, while working around power equipment or when told to do so by the instructor and/or tech.
- Conduct oneself in a safe and responsible manner in order to minimize potential injury or damage to oneself, others or property including: no yelling or distracting loud conversations, no distractions or unwarranted interruptions of people using equipment, no rapid movement in the classroom, no personal items in pathways and no use of earphones for personal sound systems that might prevent users from hearing verbal warnings or instructions while using tools and equipment.
- Attend all group demonstrations of hand and power tools, and follow specific safety procedures outlined by the instructor and/or tech.
- Understand that students will not be allowed to use designated hand and power tools until individually approved by the instructor and/or tech.
- Agree to provide an emergency contact with phone number at the beginning of the term.

MSDS statement

- SAFETY is an important consideration for all art courses. At CNM we practice "safe" art making by using "non-toxic" materials when necessary. MSDS (Material Safety Data Sheets) are posted in each art room, stationed by the door. All materials stored in the fire cabinet must be labeled. All products stored in the Art studios must be taken to the Studio Lab Technician for identification, labeling and procedure.

Waste disposal

- Students agree to dispose of waste materials appropriately. No pouring of paint, ink, plaster, clay, solvent or other particulates down the sink. All flammable materials are to be disposed in the fire can or stored in the fire cabinet.

*** Failure to adhere to these safety rules may result in the student having to meet with the Dean of Students before attending the following class session**.

Art Exhibition and Use of Images of Student Artwork

The Art Department exhibits student work throughout the CNM Community, for the purpose of teaching and promoting our student's accomplishments.

Students understand the following:

- CNM may display work at various locations at CNM's campuses and that artwork may be reproduced or published for promotional use online and in print.
- Artwork may or may not be selected for display.
- Reasonable care will be used in the handling of artwork but CNM cannot be held responsible for any work that is damaged or stolen.
- In the event that student work is on display any time during the semester, the student alone is responsible for its retrieval.
- Unclaimed artwork will only be stored one additional term. After the additional term, artwork becomes the property of CNM and may be discarded, used as a teaching tool or sold for the Art Scholarship.
- In order to retrieve artwork that has been on display, students will be responsible for contacting their instructor and the Art Studio Lab Tech at the campus the course was held (Montoya Campus: 224-4594, Main campus: 224-3697, Westside Campus: 224-5409).

*Students who wish to opt out of the use of their artwork for display or for Art Department promotion should see the instructor to sign and date the opt out form.

VII. SCHEDULE OF ASSIGNMENTS/READINGS

Faculty: Schedule of assignments and activities should address the objectives for the course. Include specific dates and week # for readings, assignments and examinations Include the finals day and any holidays.

Example schedule:

SCHEDULE OF ASSIGNMENTS BY WEEK & DATE

Subject to change at any time

Week 1. **Introduction: The Course and Expectations, Materials and Safety Issues**
Project: Two, and Three-dimensional space and form
Reading: Chapter 1 (Introduction)

Week 2. **Three-dimensional Art:** History, Vocabulary, Design Principles
ASSEMBLY
Project: Relief (cardboard assembly)
Reading: Chapter 2 (Form), Chapter 9 (pp. 218-238)
Video:
Field Trip: *Saturday: Albuquerque Museum Sculpture Garden*

Week 3. **Working Session:**
ASSEMBLY
Project: In-the-round (freestanding assembly)

Reading: Chapter 3 (Line), Chapter 9 (pp. 228-238)
Critique #1 (cardboard relief)

Week 4. **Three-dimensional Design Process:** Preparatory Sketching, Comprehensive Drawings, Materials, etc.
MANIPULATION
Project: Manipulation/ Relief (clay)
Reading: Chapter 4 (Shape), Chapter 9 (238-243)

- *Test #1*
- *Video:*

Week 5. **Human, and other Figures:** Slides and/or Video, Discussion
MANIPULATION
Project: Designing, and Manipulation/ In-the-round (clay)
Reading: Chapter 5 (Value), Chapter 10 (pp. 244-252)
Video:
Week/Date Assignments

Week 6. **Working Session:**
MANIPULATION
Project: In-the-round (clay**)**
Reading: Chapter 6 (Texture), Chapter 10 (pp. 252-259)
Critique #2 (Clay in-the-round)

Week 7. **Carving:** Antiquity, Western, Non-Western & the Modern
SUBTRACTION
Project: Theme development, design procedures for carving various materials
Reading: Chapter 10 (pp. 259-263)
Video:

Week 8 **Working Session:**
SUBTRACTION
Project: Carving
Reading: Chapter 10 (pp. 263-269)

Week 9. **Working Session:**
SUBTRACTION
Project: Carving

Reading: Chapter 10 (pp. 269-276)
Critique # 3 (carving)

Week 10. **Casting:**
SUBSTITUTION
Project: Theme development, design procedures, and casting in Plaster with a "waste-mold"
Reading: Chapter 10 (277-286)
Video:

Field Trip:
Saturday: Bronze Pouring at Shidoni Foundry, Tesuque
Week/Date Assignments

Week 11. **Working Session:**
SUBSTITUTION
Project: Casting
Reading: Chapter 10 (286-294)

Week 12. **Working Session:**
SUBSTITUTION
Project: Finishing, Patination, etc.
Reading: Chapter 10 (294-308)
Critique #4 (casting)
Test #2

Week 13. **Environmental Art:** Ancient Purposes and Contemporary Content
SITE-SPECIFIC
Project: Developing a Collaborative Process in Teams
Reading: Chapter 10 (308-321)
Video:

Week 14. **Working Session:**
SITE-SPECIFIC
Project: Concept and Design

Week 15. **Final Exam:**
SITE TOUR AND TEAM PRESENTATION

ARTS 1250, Design II Project
HANGING OR FREESTANDING PAPER SCULPTURE

Shape Project
This project is based on four shapes: circle, square, triangle, and organic. The idea is to transfer a two dimensional plane into a three dimensional form. Small paper forms will serve as a beginning format for a group project that will involve producing a large quantity of forms for an "installation-type" sculpture based on the works of contemporary artists: Cornellia Parker, Frank Stella and/or Alexander Calder.

Objectives
- Use simple procedures and/or guidelines for creating interesting forms
- Use ideas of mass production in terms of quantity to create concepts that address sustainability.
- Modification and perfection of form through studies and models
- Applying repetition, size variation, progression and creating mass with numbers
- Alternative approaches to display and presentation that creates a physical presence
- Collaboration as a process of communication and cooperative problem solving

Materials provided: 30"x22" sheet of paper (100% rag, BFK or Rives, heavy), grid, glue gun.

Materials you bring: Paper or material that is mass produced (example: newspaper, paper bags, plastic, etc.), fishing line, ruler, pencil, eraser, scissors, glue sticks and dowels if needed.

PART I
To Begin: Divide 30"x22" paper into equal four parts using your ruler to tear it.
Each piece of paper will have one of the shapes (circle, square, triangle, organic) drawn with a pencil directly in the center (fitting the size of a 4" square). Cut shapes or strips organic or rectangular that connect to the inner shape. Those long strips you can then use to bend, curve, twist around and then connect with each other (use glue gun) in order to make a 3/D paper form. Experiment with the different kinds of forms and shapes you can make with the paper. When possible simplify and stream line a shape that looks interesting to you. Glue bits and pieces of the massed produced paper or plastic to the forms with the glue gun, paying attention to color, texture, value, and contrast.

PART II
As A Group: Discuss and come up with a plan for your collaborative project.
- Look at the forms you each have created, choose one or two to use or modify for the project or create a new form.
- Decide first of all if you want to do a hanging sculpture or a freestanding sculpture. (sketch out ideas as a group in your sketch book)
- Discuss the engeneering problems and possibilities for what you are planning.
- Determine what other necessary materials you will need to use. Make arrangements for shared cost and who will go and get the materials.
- Mass produce it and then assemble it into a Large hanging or standing sculptural piece.
- If you cannot agree, take a vote.
- Confirm your plan with me.

CRITERIA FOR THE FORM:

- It must be three dimensional.
- It must be roughly at least 2.5 ft.x 5 ft. Hanging or standing. This can vary according to what you have planned but it does need to be a large piece.
- It must be out of the provided paper, found paper or plastic and/or wood (string, wire, thread..etc are ok in addition)
- It must be based on the use of multiple forms.

Present Sculpture as a group for Critique and address the following:

- How your sculpture expresses the elements and principles of design.
- How your sculpture addresses concepts of sustainability

Central New Mexico Community College
School of Communications, Humanities and Social Sciences
Fall 2018 Student Learning Assessment: ARTS 1250

Assessment Scoring Rubric

Component Skill	Novice (1)	Emerging (2)	Developing (3)	Proficient (4)
Communication				
Two-dimensional work is appropriate for audience, purpose and context.				
Critical Thinking				
Relevant problem/question clearly stated				
Relevant problem/question appropriately described/explained				
Response contains a relevant and logically sound argument				
Personal and Social Responsibility				
Response contains at least one social justice and/or sustainability issue in scenario				
Response explains at least one social justice and/or sustainability issue in scenario				
Response uses aesthetic theory to support or help explain the impact of scenario on social justice and/or sustainability issue				
Response demonstrates the ability to participate in respectful civic dialogue				

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Communications, Humanities & Social Science
Course Number, Title, Credits: ARTS 1610, Drawing I, 3 credits
Co-requisite Course Number and Title, if any: None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Cheryl Dietz, Creative & Fine Arts chair
Email and Phone Number of Contact Person: cdietz@cnm.edu, 505-224-4000, Ext 50049

Was this course previously part of the general education curriculum?

☐ Yes ☑ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

ARTS 1610, Drawing I

List all learning outcomes that are shared between course sections at your institution.

1. Produce drawings that demonstrate techniques and mechanics of observational drawing.
2. Demonstrate competency in the following practices: measuring and sighting, gesture, contour line, negative space, shape, value, space, volume, plane and texture.
3. Create drawings primarily from observation with black and white traditional drawing media.
4. Demonstrate effective verbal or written response to one's own art and the art of others.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*
At the beginning of the course, instructors present visual examples of historical and/or contemporary academic drawing that communicate ideas and messages through realistic and expressive drawing techniques and principles. Students then create their own drawings that apply the principles of observation and drawing techniques, demonstrating a versatility with measuring and sighting, gesture, contour line, negative space, value, space, volume, plane and texture in order to communicate to the viewer specific visual experiences. Students then evaluate other students' art works. Student critiques evaluate the visual communication of other students' drawings, while producing arguments to defend their critiques of the technical skills in the art drawings presented. Student learning will be assessed with post-test of the elements and principles of observation and drawing techniques, demonstrating a versatility measuring and sighting, gesture, contour line, negative space, value, space, volume, plane, and texture as well as critiques of other students' drawings.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Students will apply problem solving as the critique presentations of student drawing. Students will acquire evidence for their critique by analyzing other students' drawing for measuring and sighting, gesture, contour line, negative space, value, space, volume, plane and texture, evaluate that acquired evidence, and orally present, defend and evaluate their reasoning and conclusions about the conceptual and visual attributes of other students' drawing based on drawing and expressive problems proposed in drawing assignments. Student learning will be assessed with a grading rubric that evaluates their oral critiques of other students' artwork.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
By apply responsible and ethical use of drawing materials, students will demonstrate an understanding of sustainability. Students will evaluate materials (use of recycled paper, for example) for their personal, social and global health and environmental impact. Students will collaborate in studio clean up practices as well as identify, select, and ethically use and dispose of art materials. A materials worksheet will assess students' understanding of personal and social responsibility of using environmentally sound art-making materials.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*
In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

E. Supporting Documents (required).

☐ ☑**Syllabus Attached** ☐ ☑**Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM's Student Academic Assessment Committee (SAAC) requires annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the assessment will rotate through the three essential skills associated with ARTS 1610 with one of these essential skills being assessed each year. In addition, SAAC's policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of art studio faculty. See attached Arts 1610 Assessment Rubric.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

Revised By: Cheryl Dietz 2018

Master Syllabus for ARTS 1610, Drawing I - days/times

NOTE TO FACULTY: The blue text contains instructions and options to choose from to create your syllabus that can be deleted and/or made black.
Do not deviate from the course syllabus format and/or change any black text. You have academic freedom in teaching methods, sequencing, pacing and personal flair with the exception of specified assignments listed under requirements.

I. GENERAL INFORMATION

Instructor: Course/Section:

Office#: Term:

Office Hours: Credit Hours:

Phone/Fax: E-mail:

Homepage (if applicable):

CNM ART DEPARTMENT WEB ADDRESS:
http://www.cnm.edu/depts/chss/programs/art/index.php.

II. COURSE DESCRIPTION

This course introduces the basic principles, materials, and skills of observational drawing. Emphasis is placed on rendering a 3-D subject on a 2-D surface with visual accuracy. Other topics include historical and contemporary references as well as an investigation of linear perspective, line, value, shape, space & composition.

Recommended: ARTH 1101
Prerequisite: RDG 0950 or appropriate placement scores

III. TEXTBOOKS/MATERIALS

Faculty: you may add texts for this course using the standard bibliographic format (alpha by author). The suggested text for this course is Mendelowitz, Daniel M, A Guide to Drawing,8th Edition, Wakeham, Wadsworth Pub., 2007.

STUDENTS ARE REQUIRED TO PURCHASE THE DRAWING I ARTS1106 SUPPLY KIT FOR THIS CLASS AT THE CNM BOOK STORE.

DRAWING I ART KIT from the CNM Bookstore.
Contents of the required kit include:

- Generals Charcoal Pencil Kit: 3 blk., 1 wht. & kneaded eraser
- Pitt Comp Charcoal Stix 3/extra soft
- Charcoal vine thin extra soft box of 6

- Conte crayon white 2B
- Tuff stuff eraser
- Eraser refill tuff stuff
- Blending stumps package of 2
- Tombo Mono drawing pencil set (9 pencils)
- Staedtler eraser soft white vinyl
- Faber Castell Pitt pen black pouch set of 4
- Faber Castell Pitt big brush pen black
- Chamois genuine 3x4
- Alumincolor straight edge center find ruler 18in
- Blue tape for delicate surfaces
- Sumi ink 2oz black
- Princeton #12 round synthetic brush
- T-square clear plastic 12 in
- Economy pencil sharpener
- Foam board 2/16 20x30 white
- Art Alternatives cardboard portfolio 33 x 26

IV. COURSE OUTCOMES

Faculty: do not delete or change the following course objectives

Students will be able to:

1. Produce drawings that demonstrate techniques and mechanics of observational drawing.
2. Demonstrate competency in the following practices: measuring and sighting, gesture, contour line, negative space, shape, value, space, volume, plane and texture.
3. Create drawings primarily from observation with black and white traditional drawing media.
4. Demonstrate effective verbal or written response to one's own art and the art of others.

V. COURSE REQUIREMENTS/ATTENDANCE

Faculty: you must teach the following. Do not delete or change the following course requirements (you may add additional requirements).

A. Course Requirements.

All students are required to:

- Demonstrate how to sight and measure as a foundation for all observational drawing processes.

- Determine effective composition within a still-life through the use of a viewfinder and produce drawings that show objects in spatial relationships to one another.

- Produce drawings with a variety of dry and wet media including but not limited to: graphite, charcoal, conte' /chalk, Ink.

- Produce drawings primarily in black and white, translating color objects into achromatic values.

- Produce drawings primarily in still life. May also include Portrait, landscape/ urbanscape, and figure.

    - Produce the following drawings:
    - Gesture Drawing: mass, line, sustained, simplified shape
    - Organizational Line Drawing(s) showing unit of measure, axis lines, vertical and horizontal sightlines.
    - Positive and Negative Space Drawing.
    - Perspective Drawing(s) showing the use of: 1 and 2-point perspective
    - Continuous Line Contour Drawing: exterior and interior, use of eye hand coordination.
    - Contour Line Drawing: showing use of line variation/ calligraphic line.
    - Minimum of 2 Full value renderings one in graphite and one in charcoal showing the use of: high/medium/low key values, open/closed values, high/ medium/low contrast, and the types of light: highlight, core shadow, reflected light and cast shadow.
    - Full Value Ink Wash Drawing.
    - One Grid Drawing from full value image.

- Participate in a minimum of three group critiques utilizing art vocabulary.

- Execute projects with attention to craftsmanship and presentation.

- Have a high degree of work ethic

- Submit a final portfolio

- Present a minimum of one completed portfolio

- Participate in end of term and daily clean up

- Attend A Final Exam. It is a Communication, Humanities and Social Sciences (CHSS) policy that all courses require Final Evaluations. In this class the final portfolio review is considered your final examination.

B. Attendance Policy

CNM Attendance Policy: https://www.cnm.edu/student-resources/academic-records/academic-records-list/attendance

OR

Students enrolled for credit, credit/no credit, or audit are expected to attend all class sessions. The instructor will take attendance. A student with excessive absences—15% of total class hours—may be dropped from the class. Students should not assume they will be dropped from the class automatically. Absences do not relieve students of the responsibility for missed assignments and exams. Students must take the initiative in arranging with their instructor to make up missed work.

Students who are dropped by an instructor for non-attendance will be notified at their CNM e-mail address. If the student believes a mistake has been made, he or she must contact the instructor within two working days of receipt of the drop notification.

May Include:
Students are expected to attend all class sessions.
Instructors may drop students with excessive absences from courses.
Enrolled students who miss the first class meeting and have not contacted the instructor or who miss two consecutive class meetings in the first week may be dropped from the course.
Students dropped for attendance reasons from courses that have co-requisites also must drop the co-requisite courses.
Students should not expect instructors to drop them if they stop attending classes. (Registration policy)

Note: instructor may have modified version of these statements as long as the attendance policy with regards to total absences allowed is clearly articulated. Instructors should also state students "will be dropped" from the class if this would be the action of the instructor when a student exceeds maximum allowed absences.

C. Special Needs Statement:
Students with documented disabilities who need special accommodation in the classroom should contact the Disability Resource Center for assistance, 224-3259. Also, students should tell the instructor if they have special needs because of learning or other disabilities. For personal counseling, contact Merry Guild in the Counseling Office at Main campus, 224-3271.

VI. GRADING
CHSS grading scale.

90-100%=A
80-89%=B
70-79%=C
60-69%=D
below 60%=F

Include the specifics for computation of the grade. If assignments are weighted by percentage of the final total, list these (1 research project @ 30%, 2 quizzes @ 10%=20…final exam @ 20%). If assignments are based on points, list these (1 research project=200 points, 2 quizzes=50 points…final exam=100 points). If participation is part of the course grade, the method for evaluating participation must be explained clearly. If attendance is figured into your grading policy, indicate specifically how that figure is to be derived.

In the event CNM closes during the final week of classes, final grades for students will be calculated based on all work assessed up to that point in the course.

Academic Dishonesty Policy:
https://www.cnm.edu/depts/dean-of-students/academicdishonesty.html
(See sample Master Syllabus policies for options).

VII. ART DEPARTMENT POLICIES

Studio Etiquette

(Example phone policy) The use of cell phones is not permitted in the classroom (before, during or after class). Phones must be turned to vibrate or to silent mode. Texting and phone calls can be done during break, outside of the classroom. Students must leave the classroom to talk on the phone and not return until the call is completed. Headphones can only be used with permission of instructor and only if the volume is low enough that music does not interfere with hearing the instructor and cannot be heard by anyone else. Students are asked to respect the facilities, our staff and other students by cleaning up after yourself and returning clean drawing boards, easels and drawing horses, tables, chairs, etc. to their designated storage places. Replace all tools, materials, equipment, etc. to their designated storage places. All Classes must participate in the End of Semester Clean up, as assigned by the studio tech.

Open studio Usage

There are specific schedules at each campus for open studio times. Students who access these must sign in on the open studio form provided by the tech. Students are responsible for clean up and room closure.

Studio Safety Policy

Students agree to follow the safety standards described below in order that all users of CNM art classrooms will be protected against avoidable injury.

- Acquire and wear approved safety equipment (goggles and gloves) when an assigned project specifically requires or when told to do so by the instructor and/or tech.
- Wear appropriate clothing when using tools: no loose, baggy clothing, shirts with very long sleeves, open-toed shoes, jewelry that might interfere with the safe operation of tools or equipment as necessary.

- Tie up or cover long hair, while working around power equipment or when told to do so by the instructor and/or tech.
- Conduct oneself in a safe and responsible manner in order to minimize potential injury or damage to oneself, others or property including: no yelling or distracting loud conversations, no distractions or unwarranted interruptions of people using equipment, no rapid movement in the classroom, no personal items in pathways and no use of earphones for personal sound systems that might prevent users from hearing verbal warnings or instructions while using tools and equipment.
- Attend all group demonstrations of hand and power tools, and follow specific safety procedures outlined by the instructor and/or tech.
- Understand that students will not be allowed to use designated hand and power tools until individually approved by the instructor and/or tech.
- Agree to provide an emergency contact with phone number at the beginning of the term.

MSDS statement

- SAFETY is an important consideration for all art courses. At CNM we practice "safe" art making by using "non-toxic" materials when necessary. MSDS (Material Safety Data Sheets) are posted in each art room, stationed by the door. All materials stored in the fire cabinet must be labeled. All products stored in the Art studios must be taken to the Studio Lab Technician for identification, labeling and procedure.

Waste disposal

- Students agree to dispose of waste materials appropriately. No pouring of paint, ink, plaster, clay, solvent or other particulates down the sink. All flammable materials are to be disposed in the fire can or stored in the fire cabinet.

*** Failure to adhere to these safety rules may result in the student having to meet with the Dean of Students before attending the following class session**.

Art Exhibition and Use of Images of Student Artwork

The Art Department exhibits student work throughout the CNM Community, for the purpose of teaching and promoting our student's accomplishments.
Students understand the following:

- CNM may display work at various locations at CNM's campuses and that artwork may be reproduced or published for promotional use online and in print.
- Artwork may or may not be selected for display.
- Reasonable care will be used in the handling of artwork but CNM cannot be held responsible for any work that is damaged or stolen.
- In the event that student work is on display any time during the semester, the student alone is responsible for its retrieval.
- Unclaimed artwork will only be stored one additional term. After the additional term, artwork becomes the property of CNM and may be discarded, used as a teaching tool or sold for the Art Scholarship.

- In order to retrieve artwork that has been on display, students will be responsible for contacting their instructor and the Art Studio Lab Tech at the campus the course was held (Montoya Campus: 224-4594, Main campus: 224-3697, Westside Campus: 224-5409).

*Students who wish to opt out of the use of their artwork for display or for Art Department promotion should see the instructor to sign and date the opt out form.

VII. SCHEDULE OF ASSIGNMENTS/READINGS

Faculty: Schedule of assignments and activities should address the objectives for the course. Include specific dates and week # for readings, assignments and examinations Include the finals day and any holidays.

Example schedule:

SCHEDULE OF ASSIGNMENTS BY WEEK & DATE DRAWING I

Subject to change at any time

Week 1

T / Aug 28 Syllabus, overview of materials, tools and clean up procedures
Drawing exercises

R / Aug 30 Drawing exercises

Week 2

T / Sept 4 ***homework #1 due**
The academics of Contour: bring ruler, pencils, erasers and micron pens.

R / Sept 6 Contour: bring ruler, pencils, erasers and micron pens.

Week 3

T / Sept 11 The academics of Linear Perspective: bring ruler, blue tape, t-square, pencils, erasers & pens

R / Sept 13 Linear Perspective: bring ruler, blue tape, t-square, pencils, erasers & pens

Week 4

T / Sept 18 ***homework #2 due**
The academics of Measuring, sighting & hatching: bring 2B pencil, erasers, and micron pens

R / Sept 20 Measuring, sighting & hatching: bring 2B pencil, erasers, and micron pens

Week 5

T / Sept 25 The academics of Negative space: bring ruler, pencils, erasers and micron & big brush pens.

R / Sept 27 Negative space: bring ruler, pencils, erasers and micron & big brush pens.

Week 6

T / Oct 2 The academics of Value / charcoal: Bring, ruler, pencils, blue tape, black & wht. charcoal pencils, rags, chamois, blending stomps and all erasers.

R / Oct 4 Value / charcoal: Bring, ruler, pencils, blue tape, black & wht. charcoal pencils, rags, chamois, blending stomps and all erasers.

Week 7

T / Oct 9 ***Homework #3 Due**
Plastic Space charcoal **Bring photo you have taken on a thumb-drive we will be going to the Computer Lab 10:30 – 11:45**

R / Oct 11 Plastic Space / charcoal Continuation **Computer Lab 10:30 – 11:45**

Week 8 **MIDTERM**

T / Oct 16 Grid drawing
R / Oct 18 Grid drawing continuation

Week 9

T / Oct 23 Grid drawing continuation
R / Oct 25 Grid drawing continuation

Week 10

T / Oct 30 Subtractive still-life (charcoal): Bring prepped charcoal paper, ruler, blue tape, black charcoal pencil, rags, chamois, blending stomps and all erasers.

R / Nov 1 Graphite drawing: Bring pencil set, ruler, blue tape, erasers, blending stomps, chamois, and rags

Week 11

T / Nov6 Graphite drawing

R / Nov 8 ***Homework #4 Due**
Graphite drawing continuation

Week 12

T / Nov13 Graphite drawing continuation
R / Nov 15 The academics of Brush and Ink: bring Kit

Week 13

T / Nov 20 Brush and Ink: bring Kit
R / Nov 22 THANKS GIVING

Week 14

T / Nov 27 Final Project
R / Nov 29 Final Project

Week 15

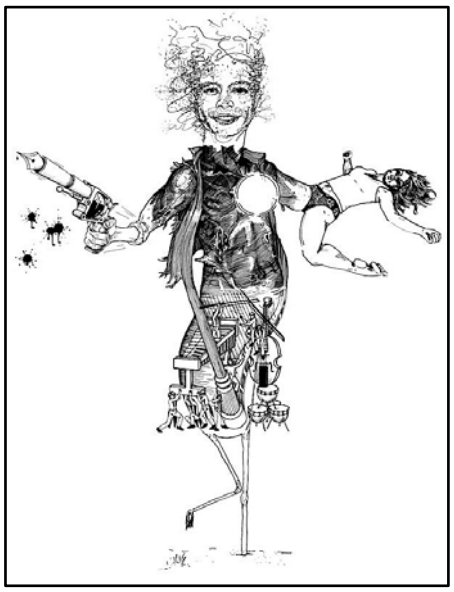
T / Dec 4 Final Project
Resubmissions Due (resubmissions not accepted after today)

R / Dec 6 **FINAL EXAM: 9:30 – 11:30 (final project due)**
Attendance Required for Critique of Final Project and Studio Clean-up

ARTS 1610, Drawing I, Surrealist Project

The History of the Exquisite Corpse

Also known as exquisite cadaver (from the original French term cadavre exquis) or rotating corpse, is a method by which a collection of words or images is collectively assembled. The technique was invented by surrealists and is similar to an old parlor game called Consequences in which players write in turn on a sheet of paper, fold it to conceal part of the writing, and then pass it to the next player for a further contribution. Surrealism's principal founder André Breton started this game with several artist friends for fun in 1925. It eventually became more serious for it's creative, playful possibilities for tapping the subconscious mind.



Collaborative Drawing Assignment Objectives:

- Explore contradictory conditions of perception, dream and reality
- Draw unnerving, illogical scenes
- Create strange creatures from everyday objects
- Develop techniques that allowed the unconscious to express itself
- Feature the element of surprise & unexpected juxtapositions
- Conceptualize the complexity of many diverse cultural voices/visuals through assemblage and collaboration of images.

Assignment Part I:

- Based on the Surrealism lecture, the examples and the ink techniques you have learned take the four pre-cut individual panels of paper that are numbered 1 through 4 and sketch and ink a segment of the body that connects to the start and stop marks of each panel (#1 head, #2 upper torso, #3 lower torso, #4 shins and feet). See example and demo.

- Use the attached list of words and the collection of still life objects as inspiration for each section of the body replacing that section with a drawn cultural object or invented form.

- Pull inspiration from different cultures and viewpoints, making each panel as different as possible in style and object from the others. Submit all of the finished panels.

Assignment Part II:

- Every student's completed panels will be shuffled and assembled to create 20 individual collaborated figure compositions that will be pinned on the display wall.

- From the assembled compositions select one that you feel you could improvise and improve upon both conceptually and technically.

- Using your selected assembled composition as a reference, develop your own large figure on the provided sheet of watercolor paper.

- Dived the sheet into four equal sections with a pencil line, copy the original design while unifying the four sections, make adjustments to create emphasis and unify the figure, Make additions and changes of scale to create your own unified figure. See example and demo.

- Develop the figure fully with brush and ink techniques and ink pen line techniques.

Critique:

Present your completed figure in critique and include the following information.

Provide an imagined/invented cultural proto-type of your character and include the following

- Physical environment this creature came from (Example: climate, terrain, population, urban, rural, etc.)
- Social structure, social norms (Example: Religious practices, clan or cultural practices, etc.)
- Personal life of your figure (Example: Family life, age, personal environment and practices, things this being feels deeply, their personal story)

Words:

Doodle
Organic
Mechanical
Animal
Machine made tool
Rectilinear
Curvilinear
Biomorphic
Biological
Nature
Architectural
Patterned
Mathematical
Microscopic
Rhythmic flowing
Heavyweight
Lightweight
Growing
Expanding
Gather
Exploding
Moving
Man-made
Dancing
Everyday objects
Functional
Hand
Eye
Nose
Foot

Hair
Horns
Hooves
Monster
Distorted
Celebration
Mutation
Wave
Mouth
Fragments
Sharp
Stacked
Fire
Rippled
Bubbled
Grill
Water
Spiked
Curly
Cluttered
Falling
Hanging
Billowing
Gathered
Prickly
Feather
Tool
Radiant
Bubbles
Sunray

Broken
Windy
Flowing
Draped
Twisted
Angular
Square
Hissing
Symbols
Crooked
Grown Food
Manufactured Food
Bumpy
Rituals
Curley
Victorious
Steep
Wild
Animal Transportation
Mechanical Transportation
Restricted
Clown-like
Crying
Laughing
Spinning
Twisted
Tribal
Worship
Creation
Religion

Central New Mexico Community College
School of Communications, Humanities and Social Sciences
Fall 2018 Student Learning Assessment: ARTS 1610

Assessment Scoring Rubric

Component Skill	Novice (1)	Emerging (2)	Developing (3)	Proficient (4)
Communication				
Two-dimensional work is appropriate for audience, purpose and context.				
Critical Thinking				
Relevant problem/question clearly stated				
Relevant problem/question appropriately described/explained				
Response contains a relevant and logically sound argument				
Personal and Social Responsibility				
Response contains at least one social justice and/or sustainability issue in scenario				
Response explains at least one social justice and/or sustainability issue in scenario				
Response uses aesthetic theory to support or help explain the impact of scenario on social justice and/or sustainability issue				
Response demonstrates the ability to participate in respectful civic dialogue				

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
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DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution Central New Mexico Community College
Department School of Math Science & Engineering
Course Number, Title, Credits ASTR 1010, Introduction to Solar System Astronomy, 3.0
Co-requisite Course Number and Title, if any None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Erica Voges
Email and Phone Number of Contact Person: evoges@cnm.edu, 505-2224-4000 x 52680

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

This course should be designated as "unique".

List all learning outcomes that are shared between course sections at your institution.

- explain the causes of the daily and seasonal motions of the various celestial objects
- determine the phase of the Moon based upon the relative positions of the Sun, Earth and Moon
- list the basic tenets of the geocentric cosmological models
- list the basic tenets of the heliocentric model of Copernicus
- apply Newton's laws of motion and Newton's law of gravitation
- solve simple problems by employing Kepler's laws of planetary motion
- compare and contrast the properties of the different types of electromagnetic radiation
- analyze blackbody curves by using Wien's law and Stefan's law
- use the principles of quantum mechanics to:

- explain how atoms emit and absorb electromagnetic radiation (photons)
- interpret the spectra of celestial objects

- describe the various functions of a telescope
- explain the rationale for using different types of telescopes for observing various celestial objects and phenomena
- classify the objects within our solar system as being either planets, dwarf planets, asteroids, meteoroids or comets
- name the planets of our solar system
- describe the process by which planetary magnetic fields are generated according to the dynamo model
- compare and contrast the atmospheres, surfaces and interiors of the terrestrial planets
- compare and contrast the atmospheres and interiors of the jovian planets
- outline the stages involved in the formation of our solar system
- explain the difference between the greenhouse effect and global warming
- explain the impact our actions have on climate change

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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

In this box, provide a narrative that explains how the proposed course addresses the outcomes of the first essential skill. 250 – 500 words.

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

Introduction to Solar System Astronomy provides countless opportunities for students to practice the essential skill of critical thinking. An important step in the critical thinking process included in this course is problem setting. As one example, students are asked to state the problems with the Greek geo-centric model of the solar system. Possible assessments include class discussion, group work, homework questions, quiz questions, or exam questions. The next step is evidence acquisition—identify and gather the information necessary to address the problems associated with the geo-centric model. Students gather qualitative data about Galileo's telescopic observations. Possible assessments include class discussion, group work, homework questions, quiz questions, or exam questions. Students then use Galileo's observations and reasoning to develop a conclusion about whether or not the geo-centric model of the solar system is valid. Possible assessments include class discussion, group work, homework questions, quiz questions, or exam questions. Finally, evidence evaluation is included in the course through discussion of the credibility of sources (Who wrote this article? Why? Was it evaluated by another expert in the field?) Students are asked to bring in articles of new findings in astronomy for class discussion. Assessment is in the form of either a homework or test question asking students to describe appropriate sources.

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

Introduction to Solar System Astronomy includes the essential skill of quantitative reasoning throughout the course. Students are required to translate mathematical symbolism into written or oral language and vice-versa every time they encounter an equation that describes a relevant physical process (gravity, Kepler's 3rd Law, blackbody radiation, and more). Possible assessments include class discussion, group work, homework questions, quiz questions, or exam questions. Students develop the essential skill of analysis of quantitative arguments by critiquing lines of reasoning presented by astronomers arguing both for and against Pluto having the status of

"planet". Students summarize the quantitative arguments presented by the astronomers and discuss whether their argument is valid. Possible assessments include class discussion, group work, homework questions, quiz questions, or exam questions. Finally, the course addresses application of quantitative models by asking students to identify the correct mathematical model and apply the model to generate numerical predictions. Students are given a contextual question about gravity, orbital periods, or the like, and they must determine which equation to use and apply it correctly to answer the question. Possible assessments include class discussion, group work, homework questions, quiz questions, or exam questions.

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*

Introduction to Solar System Astronomy provides students the opportunity to use the essential skill of personal and social responsibility throughout the course. We include the study of our planet, which is a natural platform to discuss sustainability and the natural and human worlds. Students explain the impact of our actions on the sustainability of the natural and human worlds during their study of Earth's natural greenhouse effect versus human-caused global warming. Possible assessments include class discussion, group work, homework questions, quiz questions, or exam questions. Students develop the essential skill of civic discourse and civic knowledge during their study of global warming and climate change. There are many different perspectives on how to deal with global warming (including denial of its existence) and students discuss the use of resources, alternatives to coal and why they are important, and ways to reduce, reuse, recycle. Possible assessments include class discussion, group work, homework questions, quiz questions, or exam questions.

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

In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

E. Supporting Documents (required).

☒ Syllabus Attached ☒ Sample Assessment Attached

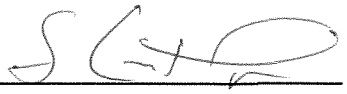
F. Assessment (Must be on file with HED by August 1, 2019)

https://www.cnm.edu/depts/academic-affairs/saac/gen-ed-assessment-plan

G. Relationship between Institutional Assessment Plan and this Course

CNM's Student Academic Assessment Committee (SAAC) requires annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the assessment will rotate through the three essential skills associated with ASTR 1010 with one of these essential skills being assessed each year. In addition, SAAC's policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of astronomy faculty.

This course meets institutional standards for general education.



Signature of Chief Academic Officer

8/16/18

Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

Revised August 2018
For use beginning Fall 2019

Master Syllabus for Astronomy 1010 – Introduction to Solar System Astronomy

INSTRUCTORS: This master syllabus contains all the departmentally agreed upon policies and information about this class. It also acts as a contract for the course, and so this is the place to list the things that will be required of students. Text that is not highlighted must be included in your syllabus unless otherwise stated. You will find information for you that is highlighted in RED. Please edit the red text to include information about you and your class in the appropriate fields and delete the remaining red comments meant for instructors only.

Instructor: INSERT
Office Number: INSERT
Phone Number: INSERT
E-mail: INSERT
Office Hours: INSERT

Course Number: ASTR 1010
Section Number: INSERT
Semester: INSERT
Credit Hours: 3
Voice Mail ext: INSERT

COURSE DESCRIPTION

Astronomy 1010 provides a historical introduction to the science of astronomy, with an emphasis on the nature and evolution of models of the solar system. We spend time on the fundamentals of modern astronomy, including motion, forces, gravity, and the nature of light. We focus on the dynamics and physical properties of solar system objects, including planets, moons, asteroids, and comets. Finally, our study culminates with an investigation of the origin of the solar system. Additional topics may include recent advances in astronomical research and findings from current solar system exploration by automated spacecraft.

Astronomy 1010 is a course designed for students having little or no background in astronomy or physics. The course focuses on interpretation of the nature of the solar system based on modern observational techniques and the properties of light and matter.

PREREQUISITE: IRW 0980, OR Pre- or Co-requisite of CSE 1101. Any student not meeting this prerequisite may be dropped from the course at any time.
Recommended course: MATH 0980.

TEXT

Good news: your textbook for this class is available for free online, in web view and PDF format! You can also purchase a print version, if you prefer, via the campus bookstore or from OpenStax on Amazon.com.

You can use whichever formats you want. Web view is recommended – the responsive design works seamlessly on any device. If you buy on Amazon, make sure you use the link on your book page on openstax.org so you get the official OpenStax print version. (Simple printouts sold by third parties on Amazon are not verifiable and not as high-quality.)

Astronomy from OpenStax, ISBN 1938168283, www.openstax.org/details/astronomy

LEARNING OUTCOMES

By the end of the course, the student should be able to:

- explain the causes of the daily and seasonal motions of the various celestial objects
- determine the phase of the Moon based upon the relative positions of the Sun, Earth and Moon
- list the basic tenets of the geocentric cosmological models
- list the basic tenets of the heliocentric model of Copernicus
- apply Newton's laws of motion and Newton's law of gravitation
- solve simple problems by employing Kepler's laws of planetary motion
- compare and contrast the properties of the different types of electromagnetic radiation
- analyze blackbody curves by using Wien's law and Stefan's law
- use the principles of quantum mechanics to:
    - explain how atoms emit and absorb electromagnetic radiation (photons)
    - interpret the spectra of celestial objects
- describe the various functions of a telescope
- explain the rationale for using different types of telescopes for observing various celestial objects and phenomena
- classify the objects within our solar system as being either planets, dwarf planets, asteroids, meteoroids or comets
- name the planets of our solar system
- describe the process by which planetary magnetic fields are generated according to the dynamo model
- compare and contrast the atmospheres, surfaces and interiors of the terrestrial planets
- compare and contrast the atmospheres and interiors of the jovian planets
- outline the stages involved in the formation of our solar system
- explain the difference between the greenhouse effect and global warming
- explain the impact our actions have on climate change

COURSE REQUIREMENTS

ATTENDANCE: According to CNM regulations, students enrolled for credit or audit are expected to attend all class sessions. [Faculty, please describe to students how you will take attendance.] Students who miss the equivalent of 15% of contact time may be dropped from the course by the instructor. Students must keep in mind, however, that it is ultimately their responsibility to withdraw from the course. [Instructors: It is your responsibility to protect the financial interests of the college by not allowing students to receive financial aid for classes not attended. Please keep your class list current with regard to attendance.] Absences from class do not relieve students from responsibility for missed assignments, material covered in class or exams.

The last day to drop or change the grade option for this course is _____. [The date is published in the Course Schedule.]

HOMEWORK: Weekly assignments of chapter-end questions and selected math problems. Students must keep in mind, that it is ultimately their responsibility to turn in ALL homework on time.

TESTS: There are (at least) two tests given during the course of the term.

FINAL EXAM: A mandatory final exam will be given during the last week of class.
In the event CNM closes on the day of the final exam, final grades for students will be calculated based on all work assessed up to that point in the course.

COURSE GRADING

[The above course requirements are suggested elements for your course that you are free to change. Instructors may opt to utilize other types of assessment measures including research papers, projects, quizzes, etc. However, your grading policy does need to adhere to the following requirements:

- *Participation and/or attendance CANNOT count for more than 10% of a student's total course grade.*
- *At least 50% of the course grade must be determined by in-class (proctored) work (ex: tests).*
- *At least 50% of the final exam must be done in class, individually.*
- *At least two exams must be administered during the semester, PLUS the final exam.*

CNM grade scale:
(A ‣ 90%-100%) (B ‣ 80%-89.9%) (C ‣ 70%-79.9%) (D ‣ 60%-69.9%) (F ‣ below 60%)

Academic Honesty: Academic dishonesty will not be tolerated. As a CNM student you agree to adhere to the CNM Dishonesty Policy, please see the following link for details https://www.cnm.edu/depts/dean-of-students/documents/ACADEMIC_DISHONESTY_POLICY_03-28-08.pdf

Special Needs Accommodations: Qualified students with special learning needs are encouraged to work with the Disability Resource Center, and notify the instructor at the beginning of the class about any specific assistance that may be required to support the student's learning. It is the instructor's intent to assist qualified students with special learning needs by making course modifications that will ensure a successful learning experience for the student.

Students are asked to contact the **CNM Disability Resource Center** (DRC) program office in order for support staff to assist the instructor with course modifications. The DRC webpage may be reached from the main CNM web page. DRC contact information is: Phone (505) 224-3259 or 1-888-453-1304; TTY Line 224-3262; Fax 224-3261. When students are assigned to a support counselor, individual email contact information is also provided.

PaperCut: PaperCut is an element of the sustainability effort at CNM. Its purpose is to reduce paper usage. Each student has an online account with an allotment of 150 free printer pages per term. If this allotment runs out, additional pages may be purchased by the student. For more information, go to the PaperCut website: http://cnm.edu/papercut.

Commit to graduate! **Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime.** Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Set your graduation date today! Learn more at http://cnm.edu/graduation.

Smoke-free campus: In an effort to respect all students, CNM has created smoke-free zones as well as designated smoking areas at all CNM locations. The use of tobacco products, including the use of chewing tobacco and e-cigarettes is limited to the designated smoking areas and banned from all other areas. View CNM's policy on smoking at http://www.cnm.edu/about/smoke-free-campus. View a map of the designated smoking areas at http://www.cnm.edu/about/smoke-free-campus/designated-smoking-areas.

Use of the faculty feedback system is encouraged, but optional, and you may choose to delete the following statement from your syllabus. For instructions on its use and best practices. If you have further questions, contact facultyfeedback@cnm.edu.

Faculty Feedback: The Faculty feedback system allows your instructor to securely provide feedback on your performance in this course. If your instructor uses it, you may be contacted by a CNM Academic/Achievement Coach to follow up on the feedback.

Instructors, if you have any questions regarding the syllabus please do not hesitate to contact the course coordinator, Ala Gabryszewska - Kukawa, agabryszewskak@cnm.edu, or the department chair, Carol Martinez, camartinez@cnm.edu.

15-WEEKS COURSE OUTLINE (Suggested)
(Changes will be announced in class)

WEEK	CHAPTER AND TOPIC
1	CH.1 – Science and the Universe: A Brief Tour CH.2 – Observing the Sky: The Birth of Astronomy
2	CH.3 – Orbits and Gravity
3	CH.5 – Radiation and Spectra
4	CH. 6 – Astronomical Instruments Test 1
5	CH.7 – Other Worlds: An Introduction to the Solar System CH. 14 – The Origin of the Solar System
6	CH.8 – Earth as a Planet
7	CH.9 – Cratered Worlds: Moon (with no Mercury)
8	CH.4 – Earth, Moon, and Sky
9	Test 2 CH.9 – Cratered Worlds: Mercury
10	CH.10 – Earthlike Planets: Venus and Mars
11	CH.11 – The Giant Planets (Jupiter and Saturn)
12	CH.11 – The Giant Planets (Uranus and Neptune)
13	Dwarf Planets Test 3
14	CH.13 – Comets and Asteroids: Debris of the Solar System CH.14 – Cosmic Samples (with no The Origin of the Solar System)
15	Final Exam Review Final Exam

12-WEEKS COURSE OUTLINE (Suggested)

(Changes will be announced in class)

WEEK	CHAPTER AND TOPIC
1	CH. 1 – Science and the Universe: A Brief Tour CH. 2 – Observing the Sky: The Birth of Astronomy
2	CH. 3 – Orbits and Gravity
3	CH. 5 – Radiation and Spectra CH. 6 – Astronomical Instruments
4	Test 1 CH.7 – Other Worlds: An Introduction to the Solar System CH.14 – The Origin of the Solar System
5	CH. 8 – Earth as a Planet CH. 9 – Cratered Worlds: Moon (with no Mercury)
6	CH. 4 – Earth, Moon, and Sky
7	Test 2 CH. 9 – Cratered Worlds: Mercury
8	CH.10 – Earthlike Planets: Venus and Mars CH.11 – The Giant Planets (Jupiter)
9	CH.11 – The Giant Planets (Saturn) CH.11 – The Giant Planets (Uranus and Neptune)
10	Dwarf Planets Test 3
11	CH.13 – Comets and Asteroids: Debris of the Solar System CH.14 – Cosmic Samples (with no The Origin of the Solar System)
12	Final Exam Review Final Exam

Sample Assessments for ASTR 1010 – Introduction to Solar System Astronomy

The following could be used as discussion prompts or homework, quiz, or exam questions.

Essential Skill: Critical Thinking
Component Skill: Evidence Acquisition

List at least three ways the Greek geocentric model of the solar system failed to replicate observations of the planets.

Essential Skill: Quantitative Reasoning
Component Skill: Application of quantitative models

Calculate the gravitational force between the Sun and Jupiter. For full credit you must show your work and include units.

Essential Skill: Personal and Social Responsibility
Component Skill: Sustainability and the natural and human worlds

Explain the difference between Earth's natural greenhouse effect and human-caused global warming.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution Central New Mexico Community College
Department School of Math Science & Engineering
Course Number, Title, Credits ASTR 1092, Introduction to Solar System Astronomy Laboratory. 1.0
Co-requisite Course Number and Title, if any None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Alina Gabryszewska-Kukawa
Email and Phone Number of Contact Person: agabryszewskak@cnm.edu, 505-224-4000 x 53215

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

This course should be designated as "unique".

List all learning outcomes that are shared between course sections at your institution.

- perform astronomical calculations (including Newton's Laws of Motion and Kepler's Laws of Planetary Motion) and express their answers using appropriate units and scientific notation;
- analyze the geocentric model of the universe and follow the early methods of measurements (the Earth's size) based on the astronomical observations and geometrical measurements;
- become familiar with astronomical tools (sky maps and telescopes), their various types and destinies;
- perform astronomical measurements of objects observed in the sky;
- perform and document local sky observations (both by eye and with a telescope) and changes in the sky (seasonal changes caused by the Earth's orbital motion and daily changes caused by the Earth's rotational motion) through the celestial objects identification;

- analyze geographical and celestial poles of the Earth (celestial sphere) through the location of North Star in the local sky and analyze magnetic poles of the Earth using the compass;
- analyze the heliocentric model of the universe and perform telescopic observations (plus calculations based on these results) of planetary motion;
- summarize the major planets of the Solar System: scale their sizes and distances to the Sun, understand their properties, and make telescopic observations;
- observe the Moon's rise and set and relate their observations to the analysis of the relative motion of the Earth-Moon-Sun system;
- observe and analyze the lunar phases and explain eclipse phenomena to the relative motion of the Earth-Moon-Sun system;
- explain the observational effects (the cause of tides) of the relatively short distance between the Earth and the Moon;
- explore the surface of the Moon through astronomical observations and explain why only one of its sides can be observed from the Earth
- visit the planetarium and summarize the basics of the sky-view projection on the dome;
- extend the understanding of annual and daily changes in the sky based on the projections on the planetarium dome;
- perform the sky observations with more professional (than school's) telescopes and compare their results (CNM telescope and planetarium settled telescope);
- analyze the brightness of observed objects and understand the light pollution problem in astronomical observations;
- understand the basics of our daily time measurements and summarize the origins of time zones;
- observe and analyze the apparent shift in position of the celestial objects due to astronomical refraction and explain the reason of this phenomenon (Sun-set and stellar-set observations);
- participate in the international campaign of searching for the new asteroids;
  explain the observed phenomena caused by Solar System debris;

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*
In this box, provide a narrative that explains how the proposed course addresses the outcomes of the first essential skill. 250 – 500 words.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
The Introduction to Solar System Astronomy Lab course gives students many opportunities to practice the essential skill of critical thinking. The course emphasizes the student's ability to delineate a problem or question. Each week begins with a discussion of what problem or question guides the week's exercises. For example, early in the semester students ask how one might calculate the circumference of the Earth without modern technology, as the Greek's did. Students develop the skill of evidence acquisition by gathering qualitative and quantitative data throughout the semester. For example, students are asked why and how our local sky changes, and then, as a critical part of answering the question, the students go outside to make observations regarding which constellations are currently visible in the night sky. Evidence evaluation is practiced by differentiating fact from opinion regarding the geocentric or heliocentric models of the Solar System. The Greek's based their geocentric model not only on observations, but also on philosophical considerations that clouded their scientific judgement. Students use telescopes to observe the phases of Venus and determine how observing phases of Venus supports the fact that the heliocentric model is correct over the opinion that the geocentric model is correct. Finally, students practice the skill of developing conclusions based on experiments every week as they reflect on their data

and observations and determine the probable conclusion. All of these skills will be assessed through evaluation of the lab reports that are turned in at the end of each lab meeting.

Quantitative Reasoning. *Communication/Representation of Quantitative Information; Analysis of Quantitative Arguments; and Application of Quantitative Models*
Quantitative reasoning is pervasive throughout the Introduction to Planetary Astronomy Lab course. Students develop the ability to express quantitative information symbolically because each week's exercises require them to explain the meaning of graphics, numbers, and algebraic symbols. The students must understand and use notation related to scientific notation, units, unit conversions, geometry, longitude, latitude, and the stellar magnitude system, as well as interpret scientific illustrations. Students practice the skill of analysis of quantitative arguments by summarizing quantitative arguments presented by others. For example, they follow the reasoning provided by the Greek philosopher Eratosthenes defending his estimation for the circumference of the Earth and then summarize how his estimation worked and why it's a valid method. Then they compare his results with those found using modern tools and determine his percentage error. Finally, students learn the application of quantitative models by identifying the appropriate mathematical model for the problem at hand and applying that model to generate numeric predictions. For example, in lab the students are asked to plot the relative positions of Earth and Venus on a particular date, given the date of the most recent inferior conjunction. The students have to identify what quantitative models they need, make simplifications when appropriate (circular orbits, instead of elliptical ones, for example) and predict the answer. All of these skills will be assessed through evaluation of the lab reports that are turned in at the end of each lab meeting.

Personal & Social Responsibility. *Intercultural reasoning and intercultural competence; Sustainability and the natural and human worlds; Ethical reasoning; Collaboration skills, teamwork and value systems; and Civic discourse, civic knowledge and engagement – local and global*
The Introduction to Planetary Astronomy Lab includes an emphasis on personal and social responsibility. Students learn about light pollution and explain the impact light pollution has both on the natural world (disturbing animals' nocturnal activities, reducing populations) and the human world (restricting our ability to observe at night, as well as having possible negative effects on health). Students also develop their collaboration skills—each week the students work in groups of 2 – 3 on their exercises. The students demonstrate mutual accountability and make use of individual strengths in meeting the group objective of understanding the week's exercises as well as producing high quality lab reports. All of these skills will be assessed through evaluation of the lab reports that are turned in at the end of each lab meeting.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*
In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/gen-ed-assessment-plan

G. Relationship between Institutional Assessment Plan and this Course

CNM's Student Academic Assessment Committee (SAAC) requires annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a

six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the assessment will rotate through the three essential skills associated with ASTR 1092 with one of these essential skills being assessed each year. In addition, SAAC's policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of astronomy faculty.

This course meets institutional standards for general education.

S [illegible]

Signature of Chief Academic Officer

8/16/18

Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

Revised July 2018

Master Syllabus for Astronomy 1092 – Introduction to Solar System Astronomy Laboratory

INSTRUCTORS: This master syllabus contains all the departmentally agreed upon policies and information about this class. It also acts as a contract for the course, and so this is the place to list the things that will be required of students. Text that is not highlighted must be included in your syllabus unless otherwise stated. You will find information for you that is highlighted in RED. Please edit the red text to include information about you and your class in the appropriate fields and delete the remaining red comments meant for instructors only.

Instructor: INSERT
Office Number: INSERT
Phone Number: INSERT
E-mail: INSERT
Office Hours: INSERT

Course Number: ASTR 1092
Section Number: INSERT
Semester: INSERT
Credit Hours: 1
Voice Mail ext: INSERT

COURSE DESCRIPTION

This is an optional laboratory course for the exploration of the principles and phenomena discussed in the Introduction to Solar System Astronomy lecture course. This course includes laboratory activities (indoor and outdoor) investigating the properties of the objects within our Solar System in addition to an analysis of Solar System phenomena. Topics include measuring the properties of Solar System objects (their sizes, distances, etc.), analyzing their motions, developing an understanding of the observational effects of Earth's own motion, and an introduction to the methods employed by astronomers to make new discoveries.

PRE- or CO-REQUISITE: ASTR 1010. If a student does not meet this requirement, he or she may be dropped from the class at any time. NOTE: MATH 0980 is a recommended course for ASTR 1010 and the same mathematical background is presumed for ASTR 1092.

TEXT/MATERIALS

The Astronomy 1092 Laboratory Manual, available at the CNM bookstore. A suggested and useful reference is the assigned text for Astronomy 1010.

Students will need a scientific calculator for this course.

LEARNING OUTCOMES

The fundamental outcome for students of this course is to perform various laboratory exercises and activities plus investigations in order to deduce the nature and properties of celestial objects and phenomena. Specifically, students will:

- perform astronomical calculations (including Newton's Laws of Motion and Kepler's Laws of Planetary Motion) and express their answers using appropriate units and scientific notation;
- analyze the geocentric model of the universe and follow the early methods of measurements (the Earth's size) based on the astronomical observations and geometrical measurements;
- become familiar with astronomical tools (sky maps and telescopes), their various types and destinies;

- perform astronomical measurements of objects observed in the sky;
- perform and document local sky observations (both by eye and with a telescope) and changes in the sky (seasonal changes caused by the Earth's orbital motion and daily changes caused by the Earth's rotational motion) through the celestial objects identification;
- analyze geographical and celestial poles of the Earth (celestial sphere) through the location of North Star in the local sky and analyze magnetic poles of the Earth using the compass;
- analyze the heliocentric model of the universe and perform telescopic observations (plus calculations based on these results) of planetary motion;
- summarize the major planets of the Solar System: scale their sizes and distances to the Sun, understand their properties, and make telescopic observations;
- observe the Moon's rise and set and relate their observations to the analysis of the relative motion of the Earth-Moon-Sun system;
- observe and analyze the lunar phases and explain eclipse phenomena to the relative motion of the Earth-Moon-Sun system;
- explain the observational effects (the cause of tides) of the relatively short distance between the Earth and the Moon;
- explore the surface of the Moon through astronomical observations and explain why only one of its sides can be observed from the Earth
- visit the planetarium and summarize the basics of the sky-view projection on the dome;
- extend the understanding of annual and daily changes in the sky based on the projections on the planetarium dome;
- perform the sky observations with more professional (than school's) telescopes and compare their results (CNM telescope and planetarium settled telescope);
- analyze the brightness of observed objects and understand the light pollution problem in astronomical observations;
- understand the basics of our daily time measurements and summarize the origins of time zones;
- participate in the international campaign of searching for the new asteroids;
- explain the observed phenomena caused by Solar System debris;

COURSE REQUIREMENTS [The following are suggested course requirements. Instructors may opt to utilize other types of assessment measures including research papers, presentations, projects, quizzes, etc. However, these would be in addition to the lab activities published in the lab manual.]

ATTENDANCE: According to CNM regulations, students enrolled for credit or audit are expected to attend all class sessions. [Faculty, please describe to students how you will take attendance.] Students who miss the equivalent of 15% of contact time may be dropped by the instructor. Students must keep in mind, however, that it is ultimately their responsibility to withdraw from the course. [Instructors: It is your responsibility to protect the financial interests of the college by not allowing students to receive financial aid for classes not attended. Please keep your class list current with regard to attendance.] Absences from class do not relieve students from responsibility for missed assignments, material covered in class or exams.

The last day to drop or change the grade option for this course is _____. [The date is published in the Course Schedule.]

LAB REPORTS: The lab exercises are conducted in an interactive group learning format. Each student will then complete a lab report for the activity/exercise, analyzing the collected data and reflecting on the lab experience. These lab reports will be collected at the end of each lab session.

In addition to the lab exercises conducted during every meeting, there will be one assignment to be completed the course. These will be Paper Presentation in the last scheduled day of class. The subjects for the presentation will be introduced/discussed during one of the first month's class-meetings:

In the event that CNM closes on the last day of class when students are scheduled to give their presentations, students need only submit their research papers to the instructor by the Friday of the 15th week of class (12th week in the summer). Students will not be required to give presentations in the classroom.

GRADING [The following is just a suggested grading scheme. If you make changes to it, please provide a complete breakdown of the method used to determine students' overall course grades. Participation may count for no more than 10% of a student's course grade.]

The course grade is based on the lab reports and the paper presentation as follows:

Lab Reports	- 6.5 points each	(14 × 6.5)
Paper Presentation	- 9.0 points	(1 × 1)
	Total: 100 points = 100%	

CNM grade scale: (A…90%-100%) (B…80%-89.9%) (C…70%-79.9%) (D…60%-69.9%) (F…below 60%)

Academic Honesty: Academic dishonesty will not be tolerated. As a CNM student you agree to adhere to the CNM Dishonesty Policy, please see the following link for details.
https://www.cnm.edu/depts/dean-of-students/documents/ACADEMIC_DISHONESTY_POLICY_03-28-08.pdf

Special Needs Accommodations: Qualified students with special learning needs are encouraged to work with the Disability Resource Center, and notify the instructor at the beginning of the class about any specific assistance that may be required to support the student's learning. It is the instructor's intent to assist qualified students with special learning needs by making course modifications that will ensure a successful learning experience for the student.

Students are asked to contact the **CNM Disability Resource Center** (DRC) program office in order for support staff to assist the instructor with course modifications. The DRC webpage may be reached from the main CNM web page. DRC contact information is: Phone (505) 224-3259 or 1-888-453-1304; TTY Line 224-3262; Fax 224-3261. When students are assigned to a support counselor, individual email contact information is also provided.

PaperCut: PaperCut is an element of the sustainability effort at CNM. Its purpose is to reduce paper usage. Each student has an online account with an allotment of 150 free printer pages per term. If this allotment runs out, additional pages may be purchased by the student. For more information, go to the PaperCut website: http://cnm.edu/papercut.

Commit to graduate! **Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime.** Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Set your graduation date today! Learn more at http://cnm.edu/graduation.

Smoke-free campus: In an effort to respect all students, CNM has created smoke-free zones as well as designated smoking areas at all CNM locations. The use of tobacco products, including the use of chewing tobacco and e-cigarettes is limited to the designated smoking areas and banned from all other areas. View CNM's policy on smoking at http://www.cnm.edu/about/smoke-free-campus. View a map of the designated smoking areas at http://www.cnm.edu/about/smoke-free-campus/designated-smoking-areas.

Faculty Feedback: The Faculty feedback system allows your instructor to securely provide feedback on your performance in this course. If your instructor uses it, you may be contacted by a CNM Academic/Achievement Coach to follow up on the feedback.

SCHEDULE OF LABS BY WEEK (FALL SEMESTER)

WEEK	LAB INVESTIGATION
1	Math Review (astronomical calculations).
2	Circumference of the Earth (by Eratosthenes).
3	Sky Maps Telescopes.
4	The Sky Above Us.
5	The North Star (Polaris).
6	Planets of the Solar System.
7	Phases of Venus.
8	First Visit to the Planetarium.
9	Meteor Shower.
10	How Bright Are They?
11	Second Visit to the Planetarium
12	Time Zones.
13	The Moon.
14	Searching for New Asteroids.
15	Presentations.

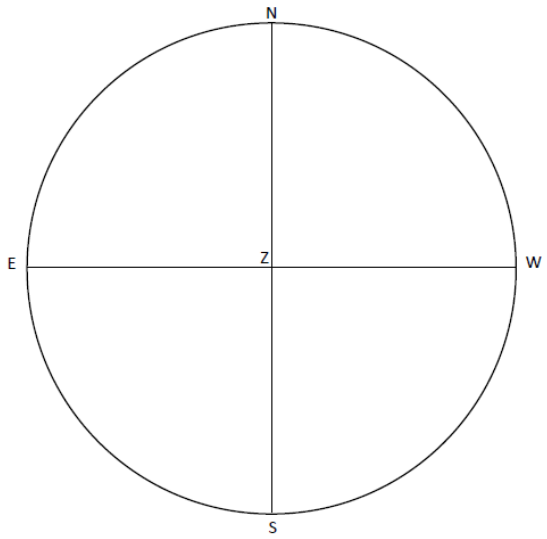
Sample Assessments for ASTR 1092 – Introduction to Solar System Astronomy Lab

The following are examples of questions students must answer in their lab reports.

Essential Skill: Critical Thinking
Component Skill: Evidence Acquisition

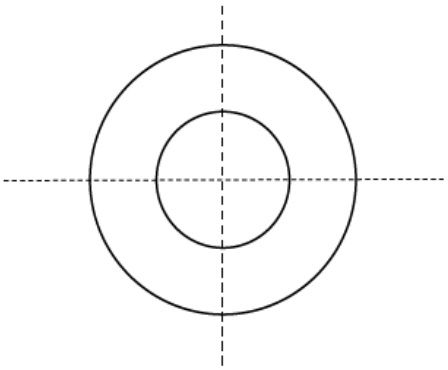
(Before conducting these observations, students are given a table of names of constellations. Based on a current sky-map, they must predict which constellations will be visible during their lab, and which constellations are circumpolar.)

Observe the local sky by naked eye. On the sky map below, plot the constellations you were able to locate. Underneath the sky map, list them in the order in which they must have risen above your eastern horizon.



Essential Skill: Quantitative Reasoning
Component Skill: Application of Quantitative Models

Plot the position of Earth and Venus on the diagram below for the date July 4th, 2017. What was the phase of Venus on that day? Was Venus visible from Earth? If so, was Venus up in the morning or evening? (The most immediate inferior conjunction occurred on March 25th, 2017.)



Essential Skill: Personal and Social Responsibility
Component Skill: Sustainability and the natural and human worlds

Describe the light pollution problem in astronomical observations. How has the "naked-eye limit" changed over time?

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: Business & Information Technology (BIT)
Course Number, Title, Credits: BA 1105, Intro to Entrepreneurship, 3 cr.
Co-requisite Course Number and Title, if any: NA
Is this application for your system (ENMU, NMSU, & UNM): NA
Name and Title of Contact Person: Theresa Torres – full time faculty and chair
Email and Phone Number of Contact Person: ttorres57@cnm.edu, 224-4000 x 52437

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

NA Unique Course

List all learning outcomes that are shared between course sections at your institution.

1. Describe the characteristics of entrepreneurs, entrepreneurship and small business
2. Generate and evaluate ideas for businesses
3. Identify a business's competitive advantage and keys to success
4. Demonstrate market research skills
5. Analyze target markets
6. Establish and enhance entrepreneurial attitudes, behaviors, and skills
7. Experience the entrepreneurial process
8. Identify social and situational factors that encourage or inhibit entrepreneurial behavior
9. Establish a network of mentors and advisors who can provide ongoing support

10. Select leadership and management strategies to develop a successful entrepreneurial team 11. Develop a feasibility analysis

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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. Students communicate in various genres and mediums (i.e. oral, written and digital). Students use strategies that are appropriate for the entrepreneurship situation. Students must be able to think and communicate their ideas as prospective small business owners/operators. **Project**: Participate in class discussions and problem solving exercises. Present arguments and findings. Objectively critique findings of fellow students. In-person and online. **Strategies for Understanding and Evaluating Messages.** Students apply the strategies they've learned in their readings and research findings. They are able to use their entrepreneurial lens when framing their discussions and thinking about future discussions. They also have to be able to research and know their audience. **Project**: Establish a network of mentors and advisors who can provide ongoing support. – Students interview a local entrepreneur or local entrepreneurs visit the classroom. Students are required research the person or company before you go – evaluate the market – prior knowledge. **Evaluation of Production of Arguments.** As students write and research a feasibility analysis on a potential business venture, they are required to evaluate their sources of information and find information that supports or does not support their claim for the new business venture. **Project**: Students write a feasibility analysis report on a new business venture. They present an electronic and oral presentation to present their entrepreneurial ventures and findings.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
Problem Solving. Students begin to transform their mindset to an entrepreneurial mindset. **Project**: Students will find a problem they want to solve by creating the solution via a new business venture. Students will conduct research on a new business venture. The research will include, internet research, library research, consulting current business owners, and conducting in-person survey's. Exercise the powers of inquiry, logical thinking and critical analysis. Interpret and evaluate theoretical arguments and empirical evidence. Students will use the Discovery Canvas/Feasibility Study assignment that will walk them through these steps. **Evidence Acquisition.** Students will gather information and data they need to begin to look at and solve their problem (via a new business venture). **Project**: Students will analyze target markets and conduct market research on a new business venture. They will also look at a start-up business analysis and assessment and evaluation. Students will use the Discovery Canvas/Feasibility Study assignment that will walk them through these steps. **Evidence Evaluation.** **Project**: Essential element of this introductory course is to assess a business opportunity and a business development process. Meeting and interviewing entrepreneurs, the students have an opportunity to analyze real business cases, understand and assess business ideas, entrepreneurial teams, and real life business situations. Students will use the Discovery Canvas/Feasibility Study assignment that will walk them through these steps. **Reasoning/Conclusion.**

Project: Students wrap up their research using the Discovery Canvas/Feasibility Study assignment and present their findings on their new business venture. Through research and evaluation, students can start to identify if their business venture (as they've originally laid out) is something that they will be able to put into motion, or will it need additional research and a new direction to get it up and running.

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

NA

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*

NA

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

Authority and Value of Information. Students conduct individual and/or group research, using publicly available online sources. Students recognize what online sources are trusted and should be used for this research.
Project: Students use the Discovery Canvas/Feasibility Study assignment. During a particular week, students are asked to: Research any information online that will help strengthen the information in your canvas (use online resources (from accredited information websites, online academic journals, newspaper articles, reputable blogs), as well as, print resources (books, manuals, encyclopedias).

Digital Literacy. Students understand, communicate, compute, create, and design in digital environments.
Project: Students who take this class are required to use our learning management system (BlackBoard). Students are required to log in several times a week to complete their assignments (using the following tools in the LMS system: assignments, quizzes, discussion boards). Students often need to use software products, such as Microsoft Word and PowerPoint, to complete their assignments. They also use various devices to complete their assignments (smart phones, tablets, laptops, desktops, etc.), in and out of the classroom.

Information Structures. Select, use, produce, organize, and share information employing appropriate information formats, collections, systems and applications.
Project: Throughout the semester, students are required to submit their work and interact with their peers through our learning management system (BlackBoard). They are required to use tools such as: assignments, quizzes, discussion boards.
Research as Inquiry.
Project: Students use the Discovery Canvas/Feasibility Study assignment that walks them through the necessary steps. Students will find a problem they want to solve by creating the solution via a new business venture. Students will conduct research on a new business venture. The research will include, internet research, library research, consulting current business owners, and conducting in-person survey's and interviews.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM's Student Academic Assessment Committee (SAAC) requires annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the essential skills for BA 1105 will be as part of a six-year schedule, defined by the Business Administration department assessment team, in which each essential skill is included in assessment reports at least two times. The assessment data is reported using CNM's Annual Assessment Reporting Form. In addition, SAAC's policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while a sample assessment has been provided with this certification document, the actual assessments will be designed and updated by a committee of Business Administration faculty.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/21/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

SCHOOL OF BUSINESS & INFORMATION TECHNOLOGY (BIT)
BA 1105 COURSE SYLLABUS - Fall 2018
August 27 - December 4

LOCATION/Time: H-104 Montoya Campus, T/R, 12:00-1:15 p.m.
COURSE TITLE: Introduction to Entrepreneurship
COURSE NUMBER:BA 1105 - 201 (Onsite)
CRN: 75328
COURSE CREDITS: 3
PRE-REQUISITE: RDG 950 and ENG 0950 or Accuplacer Reading score of 80 or equivalent and Accuplacer Sentence Skills score of 85 or equivalent or BIT approval
INSTRUCTOR: Linda Shul
TELEPHONE: 224-4000 x50021
E-MAIL: shul@cnm.edu
OFFICE LOCATION: JMMC -- G-201
OFFICE HOURS: ***T/R 1:15 - 5:15 p.m.***

Texts & Supplies

Required Text:

*Ice House Entrepreneurial Mindset Program Blended Classroom Kit***, Edition: N/A, Schoeniger and Taulbert, copyright 2014, ELI Press LLC, ISBN: 9780986303401**

Supplies: Personal computer with Internet access.

Course Description

Introduces students to the concept of entrepreneurism and to the fundamentals of the business process. Students study basic topics such as idea generation and evaluation, basic marketing concepts, financial management, small business management, small business organization and financing.

Student Learning Outcomes

Students completing this course will:

1. Describe the characteristics of entrepreneurs, entrepreneurship and small business
2. Generate and evaluate ideas for businesses
3. Identify a business's competitive advantage and keys to success
4. Demonstrate market research skills
5. Analyze target markets
6. Establish and enhance entrepreneurial attitudes, behaviors, and skills
7. Experience the entrepreneurial process
8. Identify social and situational factors that encourage or inhibit entrepreneurial behavior
9. Establish a network of mentors and advisors who can provide ongoing support

10. Select leadership and management strategies to develop a successful entrepreneurial team
11. Develop a feasibility analysis.

Attendance/Tardy/Withdrawal/Drop Policies

Attendance Policy:

Students enrolled for credit or audit are expected to attend all class sessions. Instructors will take attendance. Absences do not relieve students of the responsibility for missed assignments and exams. A student with excessive absences (3) may be dropped from a course (See withdrawal/drop policy). Also, if a student does not complete the online work required, the student will be dropped after two missed assignments if they are failing the course.

Students **auditing** a class must meet course prerequisites, are expected to attend all class sessions, but are not required to complete assignments. Audit Courses are not eligible for Financial Aid. Audit students are required to notify the instructor of their AUDIT status to avoid being dropped. For more on auditing a class can be found at https://www.cnm.edu/student-resources/academic-records/academic-records-list/grademode.html.

If the CNM District is impacted by snow or other weather that can make travel dangerous, the most timely ways to receive information on whether the college is closed or delayed is the "AttentionCNM" emergency text messaging system, the weather line at 224-4SNO (4766) and the CNM website. Emails will also be sent to all CNM email accounts -- personal email accounts can be added through the Attention CNM system. For more information, go to http://www.cnm.edu/depts/marketing/weather

Tardy Policy:

To avoid interrupting or distracting the class, students are expected to be prompt for each class. Class will begin promptly at the time scheduled.

Students who arrive to class more than 5 minutes late will be marked tardy. 5 tardies will equal one absence.

Withdrawal/Drop Policy:

- Students who miss the first class or the first week of the semester and have not contacted the instructor may be dropped from the course.
- Students who are absent a total of 5 class sessions may be dropped from the course.

Students dropped from a course for non-attendance will also be dropped from co-requisite courses. A student should not assume he/she will be dropped automatically. It is their responsibility to drop/withdraw from the course in order to avoid a grade of “F.”

Students who are dropped by an instructor for non-attendance will be notified at their CNM e-mail address. The instructor's decision is final, but if the student disagrees with the action he or she must contact the instructor within two ***working days*** of receipt of the notification.

Important dates, deadlines and the last day to drop this course can be found at https://www.cnm.edu/student-resources/class-schedule/important-dates-and-deadlines

Grading

Quizzes	33%
Assignments	33%
Final Project	34%
Total	**100%**

Note: A final grade of "D" or "F" is not acceptable for this course if it is required for graduation or as a prerequisite for other courses. A final grade of "D" or "F" requires repeating this course.

Late/Make-up/Re-take Policies

I do not accept late work for any reason. (Entrepreneurs know better than to miss deadlines! It could cost you millions.)

Course Codes & Policies

Course Communication:

All official email communication to students are sent within CNM Learn/Blackboard. By becoming a student at CNM, students agree to follow the technology use policies outlined in the Information Technology Use Administrative Directive at http://www.cnm.edu/depts/hr/policies-and-procedures/the-source/is-1002/IS-1002-policy

Student Behavior:

As a member of this classroom, students are expected to behave in a professional manner. Students are responsible for understanding and adhering to the CNM codes and policies that govern and prescribe acceptable student behavior. The codes and policies of this course are governed by the Student Code of Conduct at http://www.cnm.edu/depts/dean-of-students/student-code-of-conduct

If a student behaves in a manner that is disruptive to the educational process or violates any other

provisions of the Code of Conduct, this behavior will (generally) first be addressed by the instructor. If the behavior continues, or escalates, this behavior will be reported to the Dean of Students for appropriate disciplinary action. If a student demonstrates behavior that is a violation of the Code of Conduct, CNM instructors may require the student to leave the classroom. Should this occur, the incident will be reported to the Dean of Students at http://www.cnm.edu/depts/dean-of-students for further disciplinary action.

Academic Dishonesty:

Students in this course and in all college classes are expected to complete their course work in accordance with a high level of honesty and integrity. Academic dishonesty on the part of a student, such as cheating on a test or aiding other students' cheating, plagiarism, falsification, fabrication, unauthorized collaboration, or submitting a piece of work from another course for credit, will be subject to academic sanctions. Students committing these offenses are subject to penalty ranging from a "0" on the assignment or test, to an "F" for the course.

For more detailed information about academic dishonesty and how such incidents will be handled by your instructors and by the Institute, read the Codes & Policies section of the CNM Catalog. The Dean of Students will be notified of any instances of academic dishonesty at http://www.cnm.edu/depts/dean-of-students/academicdishonesty.html

Emergency Procedures:

An emergency is any state requiring immediate action to prevent dire consequences, usually immediate threat to life, limb or property. To report an emergency, call 911 from any CNM phone. If a CNM phone is not available, call 224-3001 from a cell or pay phone. More information on Emergency procedures can be found at http://www.cnm.edu/depts/security/Emergency-Procedures.html

Electronic Devices in Class:

When students are in class or a lab, cellular telephones, pagers and beepers must be turned off or switched to silent or vibration mode. Electronic entertainment devices are to be turned off and headphones removed.

Smoke Free Campus

In an effort to respect all students, CNM has created smoke-free zones as well as designated smoking areas at all CNM locations. The use of tobacco products, including the use of chewing tobacco and e-cigarettes, is limited to the designated smoking areas and banned from all other areas. View CNM's policy on smoking at https://www.cnm.edu/about/smoke-free-campus. View a map of the designated smoking areas at https://www.cnm.edu/about/smoke-free-campus/designated-smoking-areas.

PaperCut:

PaperCut is part of the college's sustainability efforts and provides students with an initial allowance of 150 sheets of paper for printing each term (300 if double-sided). If this allotment runs out, additional pages may be purchased by the student. More information on PaperCut guidelines can be found at https://www.cnm.edu/depts/academic-affairs/papercut.

Student Resources/Advisement/Graduation

CNM Information Technology Services (ITS):

For technical support on all CNM computers, printers, email, passwords, networks, myCNM, you may contact ITS at 224-HELP or ITS Service Desk [itsservicedesk@cnm.edu]. For all inquiries regarding Blackboard /CNM Learn, contact the Embanet 24 hour help desk at https://embanet.frontlinesvc.com/app/home/p/67

Disability Resources:

Students with disabilities, including dual enrollment and high school age students, are encouraged to contact the Disability Resource Center to arrange for academic adjustments, including auxiliary aids, i.e., accommodations.

Main or Westside Campus 224-3259, e-mail: disability_resource_center@cnm.edu;

Montoya Campus 224-5946, e-mail: disability_resource_center_jmmc@cnm.edu;

Website: http://www.cnm.edu/depts/disability-resource-center

Veteran Services:

We appreciate the services provided by our Armed Forces and want to make sure eligible students are aware of their benefits and the services that are available. Information about these benefits and services can be accessed at http://cnm.edu/depts/fass/veterans/ or students can swing by the VA Certifiers office located on the main campus inside the financial aid office.

Assistance Centers for Education (ACE):

These are locations available to students for tutoring, to work on distance learning, homework assignments, class projects, and for one-on-one assistance. Additional information is available at the ACE website at http://www.cnm.edu/depts/tutoring

BIT Advisor:

The School of Business & Information Technology (BIT) school advisor is located within the BIT Main Office (505-224-3811). The BIT advisor specializes in the programs offered through BIT and is available to assist you in planning your schedule, evaluating your program of studies

and completing graduation audits/checklists. It is highly recommended that students meet with the BIT advisor at least once a year to discuss your program of study and develop a degree plan. More information about the graduation audits/checklists can be found at http://www.cnm.edu/student-resources/academicrecords/graduation/graduationprocessguide.html

BIT Achievement Coach:

The Achievement Coach (505-224-3811) is available to all BIT students. The Achievement Coach assists students with finding answers to questions involving college and life. The Achievement Coach helps with the following: campus and community supports, balancing school, family and work, life changes and obstacles. More information can be found at https://www.cnm.edu/depts/achievement-coach/contact-a-coach

Graduation:

Commit to graduate! Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime. Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Set your graduation date today! Learn more at http://www.cnm.edu/student-resources/academicrecords/graduation

Additional questions regarding graduation can also be answered by our school advisor, faculty advisors, and achievement coach. (505-224-3811)

Course Evaluations

Students are expected to complete their course evaluations by the due date stated in the course evaluation notification email. Students can obtain access to their course evaluations through the email notification link or through the Course Evaluations link under the Students Tab in myCNM.

Class Schedule

Week	Lesson	Notes / Work Due
1	Introduction	Watch videos; Quiz and Assignment
2	Incubators	Research and Sharing (= a place, especially with support staff and equipment, made available at low rent to new small businesses)
3	1 - Choice	Online/classroom discussion. Watch videos; Quiz and Assignment. Work on Discovery Canvas Project/Feasibility Study, Sections 1-3.
4	2 - Opportunity	Online/classroom discussion. Watch videos; Quiz and Assignment - Interview local entrepreneur
5	3 - Action	Online/classroom discussion. Watch videos; Quiz and Assignment – Local Entrepreneur guest speaker
6	4 - Knowledge	Online/classroom discussion. Watch videos; Quiz and Assignment. Work on Discovery Canvas Project/Feasibility Study, Sections 4 – 6.
7	5 - Wealth	Online/classroom discussion. Watch videos; Quiz and Assignment
8	6 - Brand	Online/classroom discussion. Watch videos; Quiz and Assignment – Local Entrepreneur guest speaker
9	7 - Community	Online/classroom discussion. Watch videos; Quiz and Assignment. Finish up work on Discovery Canvas Project/Feasibility Study, Sections 7 – 9.
10	8 - Persistence	Online/classroom discussion. Watch videos; Quiz and Assignment – Local Entrepreneur guest speaker
11	Field Trip!	Ideum Field Trip, Discussion, and Opportunistic Adaptation paper
12	Your Business Venture	Envisioning, Researching, and Creating Your Own Venture – Using the information from the Discovery Canvas/Feasibility Study
13	Your Business Venture	Envisioning, Researching, and Creating Your Own Venture – Using the information from the Discovery Canvas/Feasibility Study
14	Final Project	Work Week – wrap up your research and create your presentation
15	Final Project	Presentation of PPT projects on your own Business Venture

**This sample assessment includes and addresses all three essential skills: Communication, Critical Thinking, and Information & Digital Literacy.

Discovery Canvas/Feasibility Study (Business Idea/Research) – 100 points

Over the next several weeks, you will work with a group or individually to complete this assignment, using the Discovery Canvas tool. The tool was designed to help entrepreneurs that have identified a problem to work through a basic framework to evaluate the feasibility of their solution. Using a series of questions that make up the Discovery Canvas, entrepreneurs can examine the problem in detail, propose a solution, and connect with the customer to help them determine if their idea is worth building a business around.

Week 2 – Start to brainstorm ideas for Canvas project. Discuss business problems/ideas and decide if you want to work in a group or individually.

Week 3 – Begin work on canvas. Complete boxes 1 – 3 and complete the back of the worksheet.

Week 6 – Continue to work on canvas. Complete boxes 4 – 6 and complete the back of the worksheet, as needed.

Week 9 – Continue to work on canvas. Complete boxes 7 – 9, as well as, reviewing boxes 1 – 6 to determine if changes/updates are needed and complete the back of the worksheet.

Week 12 – Peer review of your canvas. Use the peer review information and work with another group or individual to review your business problem/idea.

Week 13 – Use the information from "Finalizing your Canvas" to wrap up your work.

Week 15 – Present your business problem/idea.

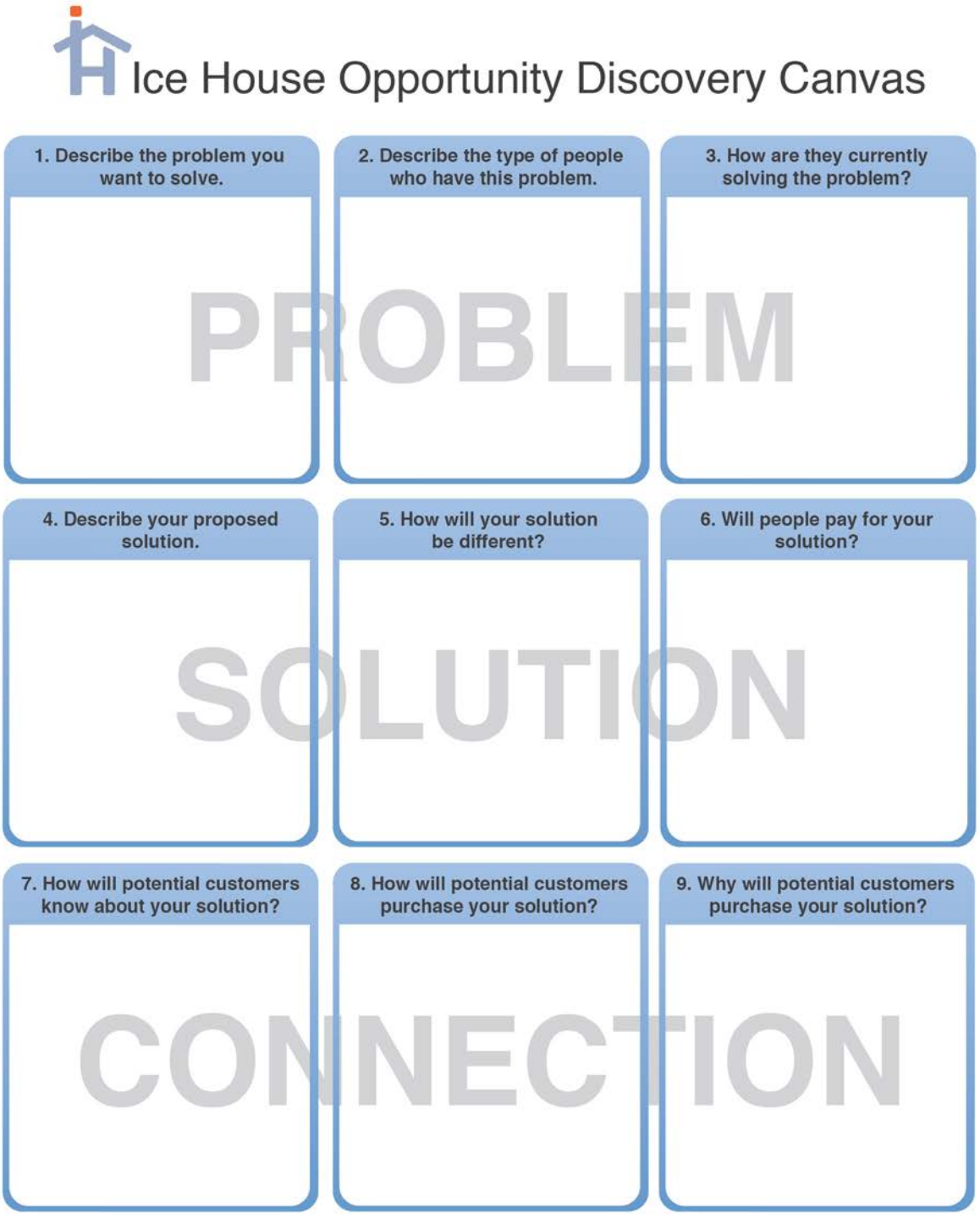
What's due and how will you be graded:

Due Wednesday, April 11th. Please use the standard 12 point Times New Roman font, double space with standard margins.

What's due:

- Completed, typed, version of the Discovery Canvas – 30 points
- Completed, typed, version of the back of the Discovery Canvas – 20 points
- Interviews/surveys with potential customers/clients – 20 points
- Rough draft versions of the Discovery Canvas and back of canvas (should have at least 2 versions) – 10 points
- Research – resources (online), research of other businesses/companies – 10 points

- Present your findings with a PowerPoint presentation – 10 points



NOTES

1. What have you learned and how has your idea changed in the most recent version of your canvas? Which of your assumptions were accurate and which of them have changed?

2. What are your next action steps? Who do you still need to talk to and what knowledge gaps still need to be filled? How can you test your assumptions in the real world with limited time, money, and resources?

3. Additional Analysis

Peer review

Pair up with another group/individual and present your business/idea problem. Give them some background information so that they have a better understanding of your business idea/problem.

1. Share your problem/idea with the other group/individual.
2. Talk about any challenges or opportunities that have come up within your problem/idea.
3. Share your research and findings.
4. Share some of the information you found from conducting your survey's/interviews.
5. What are your initial thoughts about their problem/idea?
6. Ask questions.

Finalize your canvas

Boxes 1- 9 of Canvas

1. Research any information online that will help strengthen the information in your canvas.
    - Use online resources (from accredited information websites – Wikipedia is NOT one of these resources – online academic journals, newspaper articles, reputable blogs).
    - Print resources (books, manuals, encyclopedias).

2. Engage with your Knowledge Source:
    - Evaluate what specific information you can acquire from each source.
    - How do similar businesses communicate with their customer and deliver their solution?
    - How is your idea unique from the products or services of existing businesses?
    - Identify additional knowledge sources (people or other resources) you know of that might be able to help you accomplish your goals.

3. Revise your information in boxes 1 – 9 as needed.

4. Complete the back of your canvas (for the 3rd time) taking into consideration any additional changes that have been made.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Business and Information Technology
Course Number, Title, Credits: BCIS 1110, Intro to Information Systems, 3 Credits
Co-requisite Course Number and Title, if any: None
Is this application for your system (ENMU, NMSU, & UNM)?N/A
Name and Title of Contact Person: Carol DeWitt, Chairperson
Email and Phone Number of Contact Person: clopez@cnm.edu 224-4000 Ext 50031

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

BCIS 1110 Fundamentals of Information Systems

List all learning outcomes that are shared between course sections at your institution.

1. Describe the social impact of information literacy and systems in relation to education, commerce, and personal activities.
2. Explain how to use information resources legally, safely, and responsibly in relation to ethical, security, and privacy issues.
3. Evaluate bias, accuracy and relevance of information and its sources.
4. Use productivity tools for communications, data analysis, information management and decision-making.
5. Describe and use current information systems and technologies.

The course Shared Learning Outcomes above cover the Essential Skills Outcomes (Communication, Information & Digital Literacy, Personal & Social Responsibility).

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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

Essential Skill Rubric Components: *Students communicate in various genres and mediums. Students describe the central idea of the message. Students evaluate messages in terms of the rhetorical situation (audience, purpose, and context).*

Learning Activities: Students complete a "Getting Started" project, in which they explore the meaning of audience and purpose in communication media. Students are required to identify the audience and purpose of their Word, Excel, and PowerPoint project documents. Students must evaluate the effectiveness of the communication method, listing strengths and weaknesses and suggested improvements.

Assessment: For each application project (Word, Excel, PowerPoint), students submit a report detailing their analysis, which is assessed using a rubric. This assessment measures whether students are able to effectively evaluate and analyze audience.

Essential Skill Rubric Components: *Students understand that sources have varied validity and authority and that claims can be facts, opinions, inferences, and supported or unsupported. Students distinguish among facts, opinions, and inferences; and identify claims that are supported and unsupported.*

Learning Activities: In the "Fake News Detector Activity", students are required to research the differences between facts and opinions and identify supported versus unsupported claims. Students then practice evaluating sources and fact-checking claims.

Assessment: Students post the results of their claim evaluations in a discussion forum. The forum is assessed by an online rubric. This assessment measures whether students can differentiate between facts and opinions as well as supported and unsupported claims and whether they can determine source validity and fact-check claims.

Essential Skill Rubric Components: *Students evaluate a source's authority.*

Learning Activities: In a component of the "Concepts Project: Computer Security" (attached to this application), students are required to research computer security threats, identify online sources of information, and use the C.R.A.A.P. test to determine source validity and evaluate authority regarding those sources. (Currency, Relevance, Authority, Accuracy, Purpose)

Assessment: Students submit their C.R.A.A.P. tests evaluating the online sources they used. The source evaluation submissions are assessed using an online rubric, which measures whether students can determine source validity and evaluate authority.

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

In this box, provide a narrative that explains how the proposed course addresses the outcomes of the second essential skill. 250 – 500 words.

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

In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

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*

Essential Skill Rubric Components: *Students describe a range of personal and social justice issues as they relate to specific contexts. As a group member, students demonstrate shared ethical obligations and intercultural sensitivity.*

Learning Activities: In the Networking Concepts Project, students complete a group project where they evaluate broadband Internet access in countries around the world. They develop intercultural awareness by exploring the international and cultural consequences of broadband Internet access and making comparisons to access in the United States. Students also develop intercultural awareness and sensitivity by comparing and discussing the availability of technology and the range of Internet access between each individual of the student group.

Assessment:
Each group prepares a detailed report on Internet access in countries around the world using comparative evaluation. The report is then assessed through an online grading rubric. Students also complete a discussion assignment that captures the differences, if any, between individual group members in term of personal access to technology and the Internet. This discussion is assessed with an online grading rubric.

Essential Skill Rubric Components: *Students explain the impact our actions have on the sustainability of the natural and human worlds.*

Learning Activities: In the Sustainability Concepts Topic, students learn (through online articles and an online video) about the disposal, recycling, and reprocessing of electronic waste. They also learn how to save energy and reduce the e-waste they produce. Students are then required to produce a report identifying and describing energy-saving components of IT systems through a real-world analysis (either their own computer systems or a school computer lab environment).

Assessment: Students complete an objective assessment (quiz) covering the content of the articles and video concerning e-waste. Students post to a discussion forum with a description of their computer system(s) or school computer lab environment with suggestions for potential changes that could save energy or reduce e-waste. The discussion forum is assessed using an online grading rubric that measures student understanding of the environmental impact of computer systems.

Essential Skill Rubric Components: *Students recognize a variety of ethical theories and place them in specific contexts.*

Learning Activities: The Information Literacy and Systems Concepts Project requires students to explore the civic value of social media, online privacy, and the value of our personal data by learning about data harvesting, aggregation, and monetization that Facebook and other social media platforms practice. Students learn by watching a TED talk video about data privacy and completing a practical exercise where they visit and describe the privacy policies of multiple social media platforms.

Assessment: Students complete an objective assessment (quiz) covering the content of the video. In a discussion forum, students describe the privacy policies and discuss civic responsibilities in the age of social

media, describe the major differences between Facebook and Twitter, and explore the ethical implications of privacy vs convenience and connectedness. The discussion forum is assessed using an online rubric.

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

Essential Skill Rubric Components: *Understand, communicate, compute, create, and design in digital environments.*

Learning Activities: The Information Literacy and Systems Concepts Project require students to design and create a website using site-template technology. Students also learn how to use the Internet for lifelong learning by engaging online tutorials on common technology and digital tools topics (topics include digital ethics, plagiarism, copyright and fair use, the sharing economy, and online commerce).

Assessment: Students share a link to the sites they created for review by other students who provide constructive feedback. An online rubric is used to assess the student's ability to design a basic website. The assessment evaluates the elements of the website's purpose, message, and use of visual communication. For the lifelong learning component, students share their experiences learning online and discuss the differences between learning in a classroom and learning online. The discussion forum is assessed using an online rubric.

Essential Skill Rubric Components: *Select, use, produce, organize, and share information employing appropriate information formats, collections, systems, and applications. Recognize the interdependent nature of the authority and value of information and use this knowledge ethically when selecting, using, and creating information.*

Learning Activities: The Computer Security Concepts Project requires students to use the Internet to identify computer security threats and respond to classmates by offering practical, useful steps to counter those security threats. Students determine source validity and evaluate authority using the C.R.A.A.P. test method (Currency, Relevance, Authority, Accuracy, and Purpose).

Assessment: Discussion forums are used to measure the student's ability to identify [3] computer security threats and understand protection options for threats. The discussion is assessed using an online rubric. Students must also submit a report that evaluates the [3] online sources they found during their research. The report measures the student's ability to use the C.R.A.A.P. test method to score a source's validity and authority. The report's accuracy and completeness is assessed using an online rubric.

Essential Skill Rubric Components: *Select, use, produce, organize, and share information employing appropriate information formats, collections, systems, and applications.*

Learning Activities: The Library Database activity requires students to search online library collections and systems using keywords and filtering strategies and then describe differences between peer reviewed and non-peer reviewed sources.

Assessment: Students complete a worksheet that requires them to use keywords to search and filter by peer reviewed status. The worksheet's accuracy and completeness is assessed using an online rubric.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan

https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM's Student Academic Assessment Committee (SAAC) requires annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the essential skills for BCIS 1110 will be as part of a six-year schedule, defined by the Information Technology department assessment team, in which each essential skill is included in assessment reports at least two times. The assessment data is reported using CNM's Annual Assessment Reporting Form. In addition, SAAC's policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while a sample assessment has been provided with this certification document, the actual assessments will be designed and updated by a committee of Information Technology faculty.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18

Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

Concepts Project: Computer Security

===Sample Assessment Evaluation Notes===

Note: This project develops the Essential Skills of Communication and Information & Digital Literacy

Learning Activities: The Computer Security Concepts Project requires students to use the Internet to identify computer security threats and respond to classmates by offering practical, useful steps to counter those security threats. Students determine source validity and evaluate authority using the C.R.A.A.P. test method (Currency, Relevance, Authority, Accuracy, and Purpose).

Assessment: Discussion forums are used to measure the student's ability to identify [3] computer security threats and understand protection options for threats. The discussion is assessed using an online rubric. Students must also submit a report that evaluates the [3] online sources they found during their research. The report measures the student's ability to use the C.R.A.A.P. test method to score a source's validity and authority. The report's accuracy and completeness is assessed using an online rubric.

==========

This Handout Contains:

____ Assignment Instructions
____ 3 x Fillable Forms for Source Evaluation (C.R.A.A.P. Report Form)

Assignment Instructions:

This Concepts Project contains multiple parts – to earn full credit, all parts must be completed.

Part 1: Learn about malware, protecting your computer & data. Google yourself to determine available information (if any). Assessment: Capture screenshot of results and submit to Blackboard.

Part 2: Learn about computer security threats – view Ted Talk (James Lyne: Everyday Cybercrime).
Assessment: Complete quiz in blackboard.

Part 3: Research additional common computer security threats. Perform a Google search to find 3 sources of credible information. Describe the threats via discussion posts (1 initial post and 2 replies to other students) and cite your sources. Assessment: Post and reply in online discussion forum.

Part 4: Complete and submit source evaluations by completing a C.R.A.A.P. report for each source used in Part 3.
Assessment: Submit source evaluations.

Part 1: Malware and your Private Data

According to the government census in 2015, 87% of American households have a computer (source). As those numbers increase every year, it's hard to imagine life without computers. That's why it is very important to understand viruses, and how to protect our computers.

This video will give you a basic idea of the risks and how to protect your computer:
Protect Your Computer from Malware

So much of what we do is on the Internet. Our social lives, banking, working, etc. Not being careful and protecting ourselves in the virtual world can be as dangerous as asking a stranger to hold your wallet, phone and a map to your house while you go to the restroom — something you would never do!

Watch this video to get an idea of how dangerous exposing our information online can be: The Mind Reader

Now, Google yourself (first and last name; then first name, middle initial, last name; then name + city where you live) and see how much (if any) of your personal information is already online. Make sure to also click on the Images tab.

In the "Attach Files" section in the Blackboard learning module, click [Browse My Computer] to Submit a screenshot of the first page of results (5 points)

Follow this link for How to Upload an Assignment in Blackboard

Please note: If you have material you consider to be private or would prefer to not share, please just take a picture that shows enough that I can tell you did the Google search on your name. You don't need to include the results if you'd prefer not to. Thank you.

Part 2: Computer Security Threats

View the (video) Ted Talk - James Lyne: Everyday Cybercrime **BEFORE** completing the Ted Talk Quiz.

Click the link in the Blackboard learning module to complete the Ted Talk Quiz.

Part 3: Research and Share Computer Security Threat Defense

Now that you've identified some threats and understand them better, perform a Google search for the most "common computer security threats" to learn about cyber threats and how to protect yourself and your data. After completing your research, complete the discussion requirement in Blackboard, discussions section:
Part 3 - Discussion Link Project Computer Security.

To get full credit on the discussion, make sure to describe three (3) threats citing three (3) sources. Cite your sources in your discussion post and reply to two other students' posts with practical, valid advice (gathered from your research) on protecting against computer security threats. You must submit your completed C.R.A.A.P. reports (included in the handout) to the submission link for this project.

In your discussion post, name three (3) of the threats you found in your research, and describe how each is a threat to your computer and/or your personal information. Cite your sources for each threat in your discussion post and evaluate each source using the C.R.A.A.P. Test Worksheet (fillable form included in the handout). You MUST use at least three (3) sources when researching three (3) computer threats.

The C.R.A.A.P. reports must be submitted separately from your discussion using the submission link for this project.

Additionally, you must reply to posts from two (2) other students. In your reply, you will offer advice to your classmates describing how they can protect themselves against one of their listed computer security threats. The responses need to be valid (obtained during your research), practical, and useful in order to receive credit (offer steps, a website, a specific program, etc.).

Follow this link for Discussion Forum Help: Discussion Forum Steps

Part 4: Evaluate Your Sources to Determine Validity

Watch the C.R.A.A.P. video to become familiar with this method of source evaluation.

Submit your completed C.R.A.A.P. Source Evaluations to the submission link in Blackboard - the fillable forms are found in Blackboard learning modules. You should enter information concerning each of your 3 sources and rank them (both sub- and total-rankings).

Complete the forms and "Save As": **Lastname Source Evaluations.docx**

C.R.A.A.P. Test Worksheets

The CRAAP Test is a list of questions to help you evaluate the information you find. For each source, answer the questions below and then rank each of the 5 parts from 1 to 10 (1 = unreliable, 10 = excellent). Add up the scores to give you an idea of the quality of the resource.

SOURCE 1 OF 3

Provide the URL address for your source:

1. Currency: *the timeliness of the information* **Rank (1-10): _____**

How recently has the website been updated?	
Is it recent enough to be relevant to your thesis? Why or why not?	☐Yes ☐No Explain:

2. Relevance: *the importance of the information for your needs* **Rank (1-10): _____**

Does the information relate to your topic or answer your question?	☐Yes ☐No Explain:
Is the information at an appropriate level?	☐Yes ☐No Explain:
Would you be comfortable using this source for a research paper?	☐Yes ☐No Explain:

3. Authority: *the source of the information* **Rank (1-10): _____**

Who is the creator or author?	
What are the author's credentials or organizational affiliations?	
What are the author's qualifications to write on this topic?	
Does the URL reveal anything about the author or source? (examples: .com, .edu, .gov, .org, .net)	

4. Accuracy: *the reliability, truthfulness, and correctness of the content* **Rank (1-10): _____**

Is the information supported by evidence?	☐Yes ☐No Explain:
Are there citations or a bibliography included?	☐Yes ☐No
Are there spelling, grammar, or other typographical errors?	☐Yes ☐No
Do all the links work?	☐Yes ☐No

5. **Purpose:** *the reason the information exists* **Rank (1-10): _____**

Do the creator(s) make their intentions or purpose clear?	☐Yes ☐No
Does the point of view appear objective and impartial?	☐Yes ☐No Explain:
Are there any political, ideological, cultural, religious, or personal bias?	☐Yes ☐No
Is the creator/author trying to sell you something?	☐Yes ☐No

Total C.R.A.A.P. Add up Total Ranking: _____

50 - 45 Excellent | 44 - 40 Good | 39 - 35 Average | 34 - 30 Borderline Acceptable | Below 30 Unacceptable

SOURCE 2 OF 3

Provide the URL address for your source:

1. Currency: *the timeliness of the information* **Rank (1-10): _____**

How recently has the website been updated?	
Is it recent enough to be relevant to your thesis? Why or why not?	☐Yes ☐No Explain:

2. Relevance: *the importance of the information for your needs* **Rank (1-10): _____**

Does the information relate to your topic or answer your question?	☐Yes ☐No Explain:
Is the information at an appropriate level?	☐Yes ☐No Explain:
Would you be comfortable using this source for a research paper?	☐Yes ☐No Explain:

3. Authority: *the source of the information* **Rank (1-10): _____**

Who is the creator or author?	
What are the author's credentials or organizational affiliations?	
What are the author's qualifications to write on this topic?	
Does the URL reveal anything about the author or source? (examples: .com, .edu, .gov, .org, .net)	

4. Accuracy: *the reliability, truthfulness, and correctness of the content* **Rank (1-10): _____**

Is the information supported by evidence?	☐Yes ☐No Explain:
Are there citations or a bibliography included?	☐Yes ☐No
Are there spelling, grammar, or other typographical errors?	☐Yes ☐No
Do all the links work?	☐Yes ☐No

5. Purpose: *the reason the information exists* **Rank (1-10): _____**

Do the creator(s) make their intentions or purpose clear?	☐Yes ☐No
Does the point of view appear objective and impartial?	☐Yes ☐No Explain:
Are there any political, ideological, cultural, religious, or personal bias?	☐Yes ☐No
Is the creator/author trying to sell you something?	☐Yes ☐No

Total C.R.A.A.P. Add up Total Ranking: _____

50 - 45 Excellent | 44 - 40 Good | 39 - 35 Average | 34 - 30 Borderline Acceptable | Below 30 Unacceptable

SOURCE 3 OF 3

Provide the URL address for your source:

1. Currency: *the timeliness of the information* **Rank (1-10): _____**

How recently has the website been updated?	
Is it recent enough to be relevant to your thesis? Why or why not?	☐Yes ☐No Explain:

2. Relevance: *the importance of the information for your needs* **Rank (1-10): _____**

Does the information relate to your topic or answer your question?	☐Yes ☐No Explain:
Is the information at an appropriate level?	☐Yes ☐No Explain:
Would you be comfortable using this source for a research paper?	☐Yes ☐No Explain:

3. Authority: *the source of the information* **Rank (1-10): _____**

Who is the creator or author?	
What are the author's credentials or organizational affiliations?	
What are the author's qualifications to write on this topic?	
Does the URL reveal anything about the author or source? (examples: .com, .edu, .gov, .org, .net)	

4. Accuracy: *the reliability, truthfulness, and correctness of the content* **Rank (1-10): _____**

Is the information supported by evidence?	☐Yes ☐No Explain:
Are there citations or a bibliography included?	☐Yes ☐No
Are there spelling, grammar, or other typographical errors?	☐Yes ☐No
Do all the links work?	☐Yes ☐No

5. Purpose: *the reason the information exists* **Rank (1-10): _____**

Do the creator(s) make their intentions or purpose clear?	☐Yes ☐No
Does the point of view appear objective and impartial?	☐Yes ☐No Explain:
Are there any political, ideological, cultural, religious, or personal bias?	☐Yes ☐No
Is the creator/author trying to sell you something?	☐Yes ☐No

Total C.R.A.A.P. Add up Total Ranking: _____

50 - 45 Excellent | 44 - 40 Good | 39 - 35 Average | 34 - 30 Borderline Acceptable | Below 30 Unacceptable

CENTRAL NEW MEXICO COMMUNITY COLLEGE
BIT MASTER SYLLABUS INSTRUCTIONS

PLEASE EDIT AND/OR REMOVE ALL HIGHLIGHTED AREAS AND THIS INSTRUCTION PAGE BEFORE DISTRIBUTING your SYLLABUS to your students during WEEK 1

For Distance Learning Courses, The instructor is required to include distance-learning alternatives for the following sections of the syllabus:

Attendance

DL Attendance Policy Examples (Choose One):

- A student's attendance will be tracked by CNM Learn activity tracking.
- A student must participate in online discussions.
- A student must regularly contact the instructor to discuss required course topics.

Campus Closure Policy Examples (Choose One):

- There will be no adjustment to due dates/times.
- The assignment or exam due dates will be extended 24 hours after the campus reopens.

Student Behavior

Below are suggested distance learning student behavior policies.

Distance Learning Netiquette Policy

How we communicate with each other is very important in this course. The Netiquette rules described below are to be followed to provide a supportive learning environment. All students are expected to:

- Show respect for the instructor and for other students in the class
- Respect the privacy of other students
- Express differences of opinion in a polite and rational way
- Maintain an environment of constructive criticism when commenting on the work of other students
- Avoid bringing up irrelevant topics when involved in group discussions or other collaborative activities
- Use plain text when creating an e-mail or Discussion board message

If the instructor feels that a student is violating any of the above guidelines, the student will be contacted to discuss the situation in person. If you, as a student, feel that another student is behaving inappropriately, please send a private e-mail message to your instructor explaining the situation as soon as possible.

E-Mail Etiquette Policy:

- Always include your full name and section number in the e-mail
- Make the subject line meaningful. For example, Word Assignment Chapter 3 question
- Use correct grammar and spelling
- Don't type your message in all-uppercase
- Use words instead of abbreviations
- Avoid public "flames" – messages sent in anger
- Type your reply at the top of the e-mail

Above all else, remember that electronic mail is about communication with other people. When you compose an e-mail message, read it over before sending it and ask yourself what your reaction would be if you received it. Any time spent on making our e-mail clearer is time well-spent, so take the time to do it well.

CENTRAL NEW MEXICO COMMUNITY COLLEGE
SCHOOL OF BUSINESS & INFORMATION TECHNOLOGY (BIT)
COURSE SYLLABUS [*Semester Year*]
Start Date – End Date

COURSE TITLE: BCIS – Intro to Information Systems
COURSE and SECTION #: 1110 and XXX **COURSE CRN#:** XXXXX
CLASS TIME: **CLASS LOCATION:**
COURSE CREDITS:
PRE-REQUISITE:

INSTRUCTOR:
TELEPHONE: 224-4000 Ext. XXXXX
E-MAIL: XXXXX@cnm.edu
OFFICE LOCATION: XXX
OFFICE HOURS: [Please list all of your office hours on each syllabus]

OTHER ELECTRONIC AVAILABILITIES (optional): Some suggestions are web pages, Facebook, twitter or linked in accounts, etc.

Texts & Supplies

Required Materials: ***MyITLab*** Stand Alone Access Code; **ISBN#: 9781323483688** – MyITLab New Design without e-text for Skills College – Standalone Access Card, 1/e

Required Software to work off-campus:
ONLY **Microsoft Office 2013 or MS Office 2016 (Word, Excel, PowerPoint, and Access**) (MS Office 365 loaded on your PC is the same as MS Office 2016) can be used for this course.
ONLY **Microsoft Windows** can be used for this course. *(Windows Versions 7, 8, 8.1, 10, etc.)*
Mac users must have Bootcamp or Parallels to install Microsoft Windows and MS Office 2013 or MS Office 2016.

Students can get MS Office 365 (MS Office 2016) FREE from the following link:
https://www.cnm.edu/depts/its/office-365-and-one-drive-requests/free-microsoft-office-365

Supplies: Headphones, USB Storage Device and Folder/Notebook

Course Description

Examination of information systems and their impact on commerce, education, and personal activities. Utilization of productivity tools for communication, data analysis, information management and decision-making.

Student Learning Outcomes

Students completing this course should be able to:
1. Describe the social impact of information literacy and systems in relation to commerce, education, and personal activities.
2. Explain how to use information resources legally, safely, and responsibly in relation to ethical, security, and privacy issues.
3. Evaluate bias, accuracy and relevance of information and its sources.
4. Use productivity tools for communications, data analysis, information management and decision-making.
5. Describe and use current information systems and technologies.

Attendance/Tardy/Withdrawal/Drop Policies

Faculty MUST clearly state an attendance/tardy/withdrawal/drop policy in their syllabus and follow it consistently.

Students enrolled for credit or audit are expected to attend all class sessions. Instructors will take attendance. To avoid interrupting or distracting the class, students are expected to be prompt for each class. Class will begin promptly at the time scheduled.

Suggested Tardy Policy: Students who arrive to class more than __ minutes late will be marked tardy. _____ tardies will equal one absence.

Absences do not relieve students of the responsibility for missed assignments and exams. A student with excessive absences may be dropped from a course.

The School of Business and Information Technology (BIT) prohibits the use of assignments used solely as a determination of attendance. Choose from the following drop policies below or add your specific policy.

- Students who miss the first class and have not contacted the instructor may be dropped from the course.
- Students who miss two consecutive class meetings in the first week may be dropped from the course.
- Students who are absent a total of ____ class sessions may be dropped from the course.
- Students who are absent _____ % of class sessions may be dropped from the course.

Students dropped from a course for non-attendance will be notified at their CNM e-mail address and will also be dropped from co-requisite courses. If the student disagrees with the action, he or she must contact the instructor within **two working days** of receipt of the notification. A student should not assume he/she will be dropped automatically. It is their responsibility to drop/withdraw from the course in order to avoid a grade of "F."

Students **auditing** a class must meet course prerequisites, are expected to attend all class sessions, but are not required to complete assignments. Audit Courses are not eligible for Financial Aid. Audit students are required to notify the instructor of their AUDIT status to avoid being dropped. To change your grade mode visit Academic Records. URL Address: https://www.cnm.edu/student-resources/academic-records/academic-records-list/grade-mode

If the CNM District is impacted by snow or other weather that can make travel dangerous, the most efficient ways to receive information on whether the college is closed or delayed is the "**AttentionCNM**" emergency text messaging system, the weather line at 224-4SNO (4766) and the CNM website.

Important dates, deadlines and the last day to drop this course can be found here. URL Address: https://www.cnm.edu/student-resources/class-schedule/important-dates-and-deadlines

Grading

The following scale is used to assign course grades:

A – 1000-910 || B – 909-810 || C – 809-710 || D – 709-610 || F – Below 610

Course Requirements	Points
CNM Tools: CNM Learn course navigation, ***myCNM*** services navigation, **CNM** Degree Works profile and planning, **CNM** Library Research Course Enrollment, **CNM** Library Database searching and filtering, **CNM** Job Connection Services.	**50**
Concepts Topics: Computer hardware, operating systems, applications, sustainability. Identify and understand usages, devices, versions, compatibility, productivity tools, energy saving options and e-waste processes.	**50**
Assignments: **Databases** - Intro to database objects. Table and form data entry, form creation **Managing Files and Folders** - Creating and managing files and folders, naming conventions, file type order, preview pane, and file searching. **Applications** - Word, Excel, and PowerPoint templates and writing submissions that identify audience and medium awareness.	**100**
Concepts Projects: **Networking -** Accessing shared drives and identifying files and folder organization cloud storage examples introduced – Google Drive and Docs, OneDrive, SharePoint, international broadband services compared and presented by student groups. **Computer Security** - Researching computer security threats and protection websites. Evaluating online sources using C.R.A.A.P. test worksheet. **The Internet** – Self-search, digital footprints, searching techniques - keywords, narrowing results, Boolean operators, image tools, copyright filtering options, Fake News Detector using Snopes and Fakespot.com. **Information Literacy Social Impacts** - Use a web design application to create individual websites, practice life-long learning using online tutorials, explore social media platforms for personal and business uses. Understand ecommerce web presence and search engine optimization. *These assignments will **NOT** be dropped*	**120**
Skill Builder and Exam Review Projects – MyITLab **3 Word Skill Builders, 2 Word Exam Reviews.** Business letter, APA formatted research paper, Business flyer. Basic commands and effective short cuts, apply references, citations and bibliography features, and format tables and images. **3 Excel Skill Builders, 2 Excel Exam Reviews.** Basic spreadsheet applications editing cells with text and numbers, charting cell ranges, formatting charts, implement formulas, use autofill with relative and absolute cell references, calculate average, minimum, maximum totals using functions, calculate cells in multiple worksheets simultaneously and create summary worksheet consolidating results from multiple worksheets. **1 PowerPoint Skill Builder, 1 PowerPoint Exam.** Review. Input and format slide design, layout, transition, and images that produce effective presentations. *Your lowest Skill Builder **WILL BE** dropped*	**350**

Final Exams Word Exam (100 points) Excel Exam (100 points) PowerPoint Exam (100 points) File Management Exam (3 parts-Part1-15pts, Part2-15pts, Part3-50pts (80 points) *Exams will **NOT** be dropped*	**380**
Total	**1000**

Note: A final grade of "D" or "F" is not acceptable for this course if it is required for graduation or as a prerequisite for other courses. A final grade of "D" or "F" requires repeating this course.

Late/Make-up/Re-take Policies

Late Assignments are **NOT** accepted. To accommodate the unexpected (accident, illness, etc.), one Skill Builder (your lowest score) will be dropped.

Word/Excel/PPT/File Management/: *NO EXAMS WILL BE DROPPED.*

MyITLab*:** You cannot pass this course without a full, ***persistent account in ***MyITLab***.

Exam Make Up Policy:

Word/Excel Exams: ONLY ONE exam can be made up within one week (6 calendar days) of the missed exam. Documentation is required if a student is unable to make contact with the instructor during the 6 calendar days. It is the **student's responsibility** to make arrangements with the instructor to make up the exam. The make-up exam will be assessed a penalty of 10 points.

PowerPoint Exam: This exam cannot be made up – it is given on the last day of class (in face-to-face classes) or the last week of class (in Distance Learning classes). That means there is no time to complete and submit a make-up exam.

File Management Exam Part 3: The File Management Exam (part 3) will be due as indicated on the class schedule. This exam **may** be given as a take-home exam for face-to-face classes. If missed, a student will have 48 hours to make up the exam (with a penalty of 10 points).

Course Codes & Policies

Course Communication

All official email communication to students, originating from CNM, will be sent to a student's assigned CNM email account in MyCNM or within CNM Learn. By becoming a student at CNM, students agree to follow the CNM technology use policies.

Faculty Feedback

Use of the faculty feedback system is encouraged, but optional, and you may choose to delete the following statement from your syllabus. For instructions on its use and best practices contact facultyfeedback@cnm.edu.

The Faculty feedback system allows your instructor to securely provide feedback on your performance in this course. If your instructor uses it, you may be contacted by a CNM Academic/Achievement Coach to follow up on the feedback. You can read more about the system at Faculty Feedback. URL Address: https://www.cnm.edu/depts/academic-affairs/documents/facultyfeedbackstudentinformation.pdf

Student Behavior and Academic Dishonesty

As a member of this classroom, students are expected to behave in a professional and honest manner. Students are responsible for understanding and adhering to the CNM codes and policies that govern and prescribe acceptable student behavior and academic dishonesty URL Address: https://www.cnm.edu/depts/dean-of-students/academic-integrity-policy. The codes and policies of this course are governed by the Student Code of

Conduct URL Address: http://www.cnm.edu/depts/dean-of-students/student-code-of-conduct. If a student demonstrates behavior that is a violation of the Code of Conduct, the incident will be reported to the Dean of Students URL Address: http://www.cnm.edu/depts/dean-of-students for further disciplinary action.

MyITLab includes an integrity violation report to detect the submission of another student's files. It is your responsibility to make sure no one else has access to your files – if someone else submits your file, you will both be guilty of academic dishonesty. Both students will receive a zero on the assignment and will be reported to the Information Technology Chairperson through the IT1010 Academic Dishonesty Incident Form located on SharePoint. Further incidents will be reported directly to the Dean of Students office.

Please discuss your expectations of professionalism as it applies to your course.

Emergency Procedures
An emergency is any state requiring immediate action to prevent dire consequences, usually immediate threat to life, limb or property. To report an emergency, call 911 from any CNM phone. If a CNM phone is not available, call 224-3001 from a cell or pay phone, or see the emergency procedures site. URL Address: https://www.cnm.edu/depts/security/emergency-procedures

Please discuss CNM emergency procedures from the website as they apply to your course.

Electronic Devices in Class
Electronic devices are only allowed for educational purposes as deemed appropriate by your instructor.

Smoke Free Campus
The use of tobacco products, including the use of chewing tobacco and e-cigarettes, is limited to the designated smoking areas and banned from all other areas.

PaperCut
Papercut URL Address: https://www.cnm.edu/depts/academic-affairs/papercut is part of the college's sustainability efforts and provides students with a printing allowance.

Student Resources/Advisement/Graduation

CNM Information Technology Services (ITS)
For technical support on all CNM computers, printers, email, passwords, networks, myCNM, you may contact ITS at 224-HELP or ITS Service Desk [itsservicedesk@cnm.edu]. For all inquiries regarding CNM Learn, contact Embanet URL Address: https://embanet.frontlinesvc.com/app/home/p/67, the 24/7 assistance and support center.

Disability Resources
Students with disabilities, including dual enrollment and high school age students, are encouraged to contact the Disability Resource Center URL Address: http://www.cnm.edu/depts/disability-resource-center to arrange for academic adjustments, including auxiliary aids, i.e., accommodations.
Main or Westside Campus 224-3259, e-mail: disability_resource_center@cnm.edu;
Montoya Campus 224-5946, e-mail: disability_resource_center_jmmc@cnm.edu;

Veteran Services
We appreciate the services provided by our Armed Forces and want to make sure eligible students are aware of their benefits and the services that are available. Information about these benefits and services can be accessed at the veterans site URL Address: https://www.cnm.edu/student-resources/veterans/veterans-resource-center or students can swing by the VA Certifiers office located on the main campus inside the financial aid office.

Assistance Centers for Education (ACE)
These are locations available to students for tutoring, to work on distance learning, homework assignments, class projects, and for one-on-one assistance. Contact ACE URL Address: http://www.cnm.edu/depts/tutoring for more information. Open Computer Lab Location and Contact Information:

Main Campus - SRC 203, (505) 224-4316 || SRC 201, (505) 224-3954, SB 110
Montoya Campus - RB, (505) 224-5880

Rio Rancho Campus - RR114, (505) 224-4952
South Valley Campus - SV 1-111, (505) 224-5036
Westside Campus - WS1 200, (505) 224-5311 || MJG115, (505) 224-5319

Please list additional laboratory resources and tutors available to your students. (For example, Programming and Database students have tutors available in the Smith Brasher OCL- SB110.)

BIT Achievement Coach

The Achievement Coach (505-224-3811) is available to all BIT students. The Achievement Coach URL Address: https://www.cnm.edu/programs-of-study/business-information-technology/services-and-resources#Achievement Coach provides students with campus and community supports, and with balancing school, family, and work schedules. They are available to coach students on time management and test taking strategies. They can be contacted about any life changes or challenges that are getting in the way of student success.

BIT Advisor

The School of Business & Information Technology (BIT) school advisor is located within the BIT Main Office (505-224-3811). The BIT advisor specializes in the programs offered through BIT and is available to assist you in planning your schedule, evaluating your program of studies and completing graduation audits/checklists. It is highly recommended that students meet with the BIT advisor at least once a year to discuss your program of study and develop a degree plan. More information can be found by reviewing the BIT programs of study URL Address: http://www.cnm.edu/programs-of-study/business-information-technology

Graduation

Commit to graduate! Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime. Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Prepare for your graduation today! URL Address: https://www.cnm.edu/depts/graduation/prepare-for-graduation

Course Evaluations

Students are expected to complete their course evaluations by the due date stated in the course evaluation notification email. Students can obtain access to their course evaluations through the email notification link or through the Course Evaluations link under the Students Tab in myCNM.

Tentative Class Schedule

Syllabus & Class Schedule

The syllabus and class schedule are subject to change by the instructor. Changes will be made with as much advance notice as possible.

[**Required:** Include a tentative Class Schedule with Class Meeting Dates, Topics of Coverage, Readings, Assessments, and Due Dates]

[Faculty: the item below may be added at your discretion.]

Faculty: All items in the below optional Student Acknowledgment may be modified as deemed appropriate. You may leave as a "tear-out" or remove the dashed lines and make a page break, therefore, forcing the Student Acknowledgment onto a new page.]

_ —

Student Acknowledgment

(Please return to instructor at next regularly scheduled class meeting.)

I have read and understand the Course Syllabus. The Course Syllabus is designed to assist with my learning and enhance my opportunities for student success.

Course Name:		**Section #:**		**CRN #:**	
Instructor Name:		**Office Hours:**			
Phone #:		**CNM Email:**			
Alternative Phone #:		**Alternative Email:**			
Student Name:		**Student Signature:**			

Wk	Date	15-Week Schedule
1		**In CNM Learn Start Here** / Syllabus link: Read all the important information • **Be sure to read the Syllabus and Class Schedule thoroughly!** Complete and Submit **Syllabus Quiz** Watch the myCNM Tour Video and Complete the **myCNM Tour Quiz** Complete and Submit **CNM Degree Works Assignment** Complete the **Email Assignment** Complete **Discussion Board Introduction – Introduce Yourself (1 post & 2 replies)**
2		Complete and Submit **Access Database Assignment** Complete Concepts Project: **Networking** (Part 1&2) Create IT 1010 Folders on Storage Device / Location Complete and Submit **Managing Files and Folders Assignment** *Human Face of Big Data* *Introduction to Word 2016 Videos (optional)*
3		**Create MyITLab Account** Complete and Submit **Getting Started with Word Assignment** (APA Research Paper Template) Complete and Submit **Word Chapter 1 Skill Builder (MyITLab)** [Communication Essential Skill – Audience, Medium, Evaluating Messages] Submit – **Audience and Medium Analysis & Evaluation** (Word Chapter 1) Complete Concepts Topic – **What is a Computer?** Quiz Complete Concepts Topic – **Inside a Computer** Quiz Complete Concepts Topic – **Sustainability** Quiz Complete Concepts Project: **Networking (**Part 3&4) *Computer Fundamentals* *Windows and Applications*
4		Complete and Submit **Word Chapter 2 Skill Builder (MyITLab)** Submit – **Audience and Medium Analysis & Evaluation** (Word Chapter 2) Complete and Submit **Library Research Course Enrollment Assignment** View MLA vs APA presentation Complete and Submit **CNM Library Database Assignment** *Evaluating Internet Sources* *View Effective Research presentation*
5		Complete and Submit **Word Chapter 3 Skill Builder (MyITLab)** Submit – **Audience and Medium Analysis & Evaluation** (Word Chapter 3) Complete Concepts Topic – **Understanding Operating Systems** Quiz Complete Concepts Topic – **Understanding Applications** Quiz
6		Complete and Submit **Word Chapter 2 Exam REVIEW (MyITLab)** Complete and Submit **Word Chapter 3 Exam REVIEW (MyITLab)** *Introduction to Excel 2016 videos (optional)*
7		Complete and Submit **Word Exam (100 Points – MyITLab)**

		File Management Exam [1] Word Folder: Screen Shot of Chapter Folder-File Complete and Submit Concepts Project – **Computer Security**
8		Complete and Submit Concepts Project – **The Internet** (Part 1) Complete and Submit Concepts Project – **The Internet** (Part 2) Complete and Submit **Getting Started with Excel Assignment** (Service Invoice / Budget Templates)
9		Complete and Submit **Excel Chapter 1 Skill Builder (MyITLab)** Submit – **Audience and Medium Analysis & Evaluation** (Excel Chapter 1) Complete and Submit **Excel Chapter 2 Skill Builder (MyITLab)** Submit – **Audience and Medium Analysis & Evaluation** (Excel Chapter 2)
10		Complete and Submit **Excel Chapter 3 Skill Builder (MyITLab)** Submit – **Audience and Medium Analysis & Evaluation** (Excel Chapter 3) Complete and Submit **Excel Chapter 2 Exam REVIEW (MyITLab)**
11		Complete and Submit **Excel Chapter 3 Exam REVIEW (MyITLab)** Complete and Submit **Excel EXAM (100 points – MyITLab)**
12		**File Management Exam [2] Excel Folder:** Screen Shot of Chapter Folder-File Complete and Submit Concepts Project - **Information Literacy and Systems Social Impact** (Part 1&2) Watch the Job Connection Services video and Complete **Job Connection Services Quiz**
13		Complete and Submit Concepts Project - **Information Literacy and Systems Social Impact** (Part 3&4) **Review for File Management Exam** **File Management Exam (3) – Final Exam - 50 points** *Introduction to PowerPoint 2016 videos (optional)*
14		Complete and Submit **Getting Started with PowerPoint Assignment** (Business Plan Template) Complete and Submit **PowerPoint Chapter 1 Skill Builder (MyITLab)** Submit – **Audience and Medium Analysis & Evaluation** (PowerPoint Chapter 3)
15		Complete and Submit **PowerPoint Chapter 1 Exam REVIEW (MyITLab)** Complete and Submit **PowerPoint EXAM (100 points – MyITLab)**

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Business & Information Technology
Course Number, Title, Credits: CSCI 1108, CS for All: Introduction to Computer Modeling, 4 credits
Co-requisite Course Number and Title, if any: None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Dr. Chu Jong, Computer Science Instructor
Email and Phone Number of Contact Person: cjong@cnm.edu, 505-224-4000 X 52704

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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. Link to General Education Information*

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

Which three essential skills will be addressed? *Note: these must be the required skills for the course's content area as listed in the Part B instructions. (Link to rubric for each Essential Skill)*

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

C. Learning Outcomes

This course follows the CCNS SLOs for

N/A Listed as Unique Course

List all learning outcomes that are shared between course sections at your institution.

1. Learn the basics of a programming language (NetLogo).
2. Improve on logical problem-solving skill.

3. Use agent-based models to conduct scientific experiments.
4. Use programming skills in an interdisciplinary environment.
5. Develop computational thinking and problem-solving skills.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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

In this box, provide a narrative that explains how the proposed course addresses the outcomes of the first essential skill. 250 – 500 words.

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

In this course, students write scientific reports that apply basic scientific facts related to important contemporary issues (e.g., global warming, stem cell research, cosmology) and methods to resolve those issues. Students complete modeling assignments using modern laboratory equipment (such as microscopes, scales, computing devices, and computation technology) and appropriate quantitative methods. To complete the project, students construct a solution that evaluates isolated observations about the physical universe to test the hypotheses and relates them to hierarchically organized explanatory frameworks (theories).

Assessment:
Presentation of case studies, problems, and/or laboratory exercises that call for the student to critically evaluate scientific accounts from the popular media. Exam questions call upon higher-order thinking rather than rote knowledge. Presentations that call for the student to construct and test hypotheses related to the scientific discipline they have elected to study.

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

Students apply both pre computational analysis and post computational evaluation to construct methods and solutions for their modeling and/or simulation programs. They work on the computational process using logical diagrams, flow controls, and executing sequences analysis in their program for preciseness. Prior to integrating the computation components, students must fully verify and prove the correctness of all computations, processes, functions, and procedures..

Assessment:
Presentation of case studies, problems, and/or laboratory exercises that call for the student to apply appropriate quantitative techniques for the level and type of material being covered.

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 box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*
Students write lab reports to communicate effectively about science and explain basic scientific concepts, procedures, and results using digital graphic presentation techniques. Students construct a project in which they demonstrate that scientists rely on evidence obtained from observations rather than authority, tradition, doctrine, or intuition, which are in a variety of digital formats. Students learn to use different computational devices to construct and demonstrate their scientific evidence using a variety of digital formats. Assessment: Written and oral work to be evaluated according to college level writing criteria, as well as the standards of the field being studied. Presentation using common digital devices of case studies, problems, and/or laboratory exercises that call for the student to apply the "scientific method" on different digital platforms.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

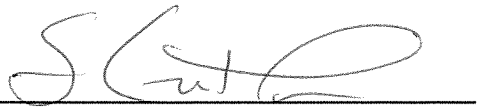
F. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM stipulates the following assessment policy: "The SAAC assessment process includes annual reporting for all general education content areas. Each of the essential skills associated with a content area, as shown in the table below, must be assessed at least twice during a planned, six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the assessment will rotate through the essential skills associated with CSCI 1108 with one essential skill being assessed each year. the schedule defined by the Computer Science program assessment team 2024/25. In addition, the policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of Computer Science faculty.

This course meets institutional standards for general education.



Signature of Chief Academic Officer

8/16/18

Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

CENTRAL NEW MEXICO COMMUNITY COLLEGE
SCHOOL OF BUSINESS & INFORMATION TECHNOLOGY (BIT)
COURSE SYLLABUS [*Fall, 2018*]
08/27/2018 – 12/09/2018

COURSE TITLE:	**CS for All: Introduction to Computer Modeling**
COURSE, SECTION NUMBER:	**CSCI 1108**
COURSE CRN#:	
CLASS TIME:	
CLASS LOCATION:	
COURSE CREDITS:	**4**
PRE-REQUISITE:	**N/A**
INSTRUCTOR:	
TELEPHONE	
E-MAIL:	
OFFICE LOCATION:	
OFFICE HOURS:	

OTHER ELECTRONIC AVAILABILITIES (optional): BYOD (Windows, Linux, MacBook).

Texts & Supplies

Required text: N/A, will be announced in the class
Supplies: USB flash drive 16 GB, notebook and pen/pencil, calculator

Course Description

Introduction to Computational Science using modeling and simulation. Apply the fundamentals of computational thinking to solve a realistic problem of interdisciplinary environment. Employing lab activities integrated into the course, students will learn the agent-based programming language to formulate their problem modules, experiment to find solutions, and evaluate the results. Students will practice cycling through the formulation, experiment, and evaluation process for a realistic conclusion.

Student Learning Outcomes

Students completing this course should be able to:

1. Describe the fundamental structures of an agent-based programming language
2. Solve a problem by using an agent-based programming language
3. Compose logical structures (algorithms) to produce an adequate solution for a problem
4. Apply quantitative method to evaluate and analyze computation results and make further improvement
5. Develop and enhance problem-solving skills by applying computational thinking methodologies.

Attendance/Tardy/Withdrawal/Drop Policies

Students enrolled for credit or audit are expected to attend all class sessions. To avoid interrupting or distracting the class, students are expected to be prompt for each class. Students must keep in mind, however, that it is ultimately their responsibility to withdraw from the course.
A sign-in sheet will be on the table of the classroom; all students need to sign their name on the sign-in sheet for every class. The sign-in sheet is the evidence of the attendance of the students, thus make sure you sign-in accordingly.

Absences from class do not relieve students from responsibility for missed assignments, material covered in class or exams. Students are responsible for learning the course material covered during their absences, and most importantly, absences do not relieve a student from submitting course assignments and exams when they are due (or before). Students who arrive to class more than 15 minutes late will be marked tardy, 2 tardies will equal one absence.

The School of Business and Information Technology (BIT) prohibits the use of assignments used solely as a determination of attendance. Choose from the following drop policies below or add your specific policy.

- Students who miss the first class meeting and have not contacted the instructor may be dropped from the course.
- Students who miss two consecutive class meetings in the first week may be dropped from the course.
- Students who are absent a total of 4.5 class sessions may be dropped from the course.
- Students who are absent 15 % of class sessions may be dropped from the course.

Students dropped from a course for non-attendance will be notified at their CNM e-mail address and will also be dropped from co-requisite courses. If the student disagrees with the action, he or she must contact the instructor within **two working days** of receipt of the notification. A student should not assume he/she will be dropped automatically. It is their responsibility to drop/withdraw from the course in order to avoid a grade of "F."

Students **auditing** a class must meet course prerequisites, are expected to attend all class sessions, but are not required to complete assignments. Audit Courses are not eligible for Financial Aid. Audit students are required to notify the instructor of their AUDIT status to avoid being dropped. To change your grade mode visit Academic Records. URL Address: https://www.cnm.edu/student-resources/academic-records/academic-records-list/grade-mode

If the CNM District is impacted by snow or other weather that can make travel dangerous, the most efficient ways to receive information on whether the college is closed or delayed is the "**AttentionCNM**" emergency text messaging system, the weather line at 224-4SNO (4766) and the CNM website.

Important dates, deadlines and the last day to drop this course can be found here. URL Address: https://www.cnm.edu/student-resources/class-schedule/important-dates-and-deadlines

Grading

The following will be used to determine your grade in this course:

Points / Percent	
Programming	20%
Participation	5%
Exam #1	15%
Exam #2	15%
Final Exam	20%
Project	20%
In-class Exercises	5%
Total	**100**

The following scale is used to assign course grades:

Grade Scale	Grade
91-100	**A**
81-90	**B**
71-80	**C**
61-70	**D**
Below 61	**F**

Note: A final grade of "D" or "F" is not acceptable for this course if it is required for graduation or as a prerequisite for other courses. A final grade of "D" or "F" requires repeating this course.

Late/Make-up/Re-take Policies

A. Assignments: **To receive FULL credit for an assignment, the assignment must be handed in ON or BEFORE the day/time it is due. No late assignments will be accepted.** If you need help with an assignment, you can ask in class, see me during office hours, or send me an email with clear description of your question.

Note: assignments must be submitted to the Blackboard.

B. Evaluation: Grades will be based on in-class exercises, participation, assignments, project, and exams.
In-Class Exercises: There will be a series of "In Class Exercises" in a variety of forms. Each one will be graded on a YES/NO. You must be present in the class to complete these exercises to receive credit, THERE WILL BE NO LATE and NO MAKE-UPS.
Assignments and project: They are posted on the Blackboard, including due days and/or descriptions.
Exams: There will be two semester exams and a cumulative final exam. **All students must receive at least 50% on the final exam in order to pass the course.** Exams will occur on the date indicated on the syllabus. Attendance at exams is mandatory without prior approval of the instructor.

Course Codes & Policies

Course Communication

All official email communication to students, originating from CNM, will be sent to a student's assigned CNM email account in MyCNM or within CNM Learn. By becoming a student at CNM, students agree to follow the CNM technology use policies.

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As a member of this classroom, students are expected to behave in a professional and honest manner. Students are responsible for understanding and adhering to the CNM codes and policies that govern and prescribe acceptable student behavior and academic dishonesty URL Address: https://www.cnm.edu/depts/dean-of-students/academic-integrity-policy. The codes and policies of this course are governed by the Student Code of Conduct URL Address: http://www.cnm.edu/depts/dean-of-students/student-code-of-conduct. If a student demonstrates behavior that is a violation of the Code of Conduct, the incident will be reported to the Dean of Students URL Address: http://www.cnm.edu/depts/dean-of-students for further disciplinary action.

Emergency Procedures

An emergency is any state requiring immediate action to prevent dire consequences, usually immediate threat to life, limb or property. To report an emergency, call 911 from any CNM phone. If a CNM phone is not available, call 224-3001 from a cell or pay phone, or see the emergency procedures site. URL Address: https://www.cnm.edu/depts/security/emergency-procedures

Electronic Devices in Class

Electronic devices are only allowed for educational purposes. In case you are expecting an emergency contact, you need to switch your cell phones, pagers and/or beepers to silent or vibration mode. Electronic entertainment devices are to be turned off and headphones removed.

Smoke Free Campus

The use of tobacco products, including the use of chewing tobacco and e-cigarettes, is limited to the designated smoking areas and banned from all other areas.

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Papercut URL Address: https://www.cnm.edu/depts/academic-affairs/papercut is part of the college's sustainability efforts and provides students with a printing allowance.

Student Resources/Advisement/Graduation

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For technical support on all CNM computers, printers, email, passwords, networks, myCNM, you may contact ITS at 224-HELP or ITS Service Desk [itsservicedesk@cnm.edu]. For all inquiries regarding CNM Learn, contact Embanet URL Address: https://embanet.frontlinesvc.com/app/home/p/67, the 24/7 assistance and support center.

Disability Resources

Students with disabilities, including dual enrollment and high school age students, are encouraged to contact the Disability Resource Center URL Address: http://www.cnm.edu/depts/disability-resource-center to arrange for academic adjustments, including auxiliary aids, i.e., accommodations.
Main or Westside Campus 224-3259, e-mail: disability_resource_center@cnm.edu;
Montoya Campus 224-5946, e-mail: disability_resource_center_jmmc@cnm.edu;

Veteran Services

We appreciate the services provided by our Armed Forces and want to make sure eligible students are aware of their benefits and the services that are available. Information about these benefits and services can be accessed at the veterans site URL Address: https://www.cnm.edu/student-resources/veterans/veterans-resource-center or students can swing by the VA Certifiers office located on the main campus inside the financial aid office.

Assistance Centers for Education (ACE)

These are locations available to students for tutoring, to work on distance learning, homework assignments, class projects, and for one-on-one assistance. Contact ACE URL Address: http://www.cnm.edu/depts/tutoring for more information. Open Computer Lab Location and Contact Information:

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Montoya Campus - RB, (505) 224-5880
Rio Rancho Campus - RR114, (505) 224-4952
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Westside Campus - WS1 200, (505) 224-5311 || MJG115, (505) 224-5319

BIT Achievement Coach

The Achievement Coach (505-224-3811) is available to all BIT students. The Achievement Coach URL Address: https://www.cnm.edu/programs-of-study/business-information-technology/services-and-resources#Achievement Coach provides students with campus and community supports, and with balancing school, family, and work schedules. They are available to coach students on time management and test taking strategies. They can be contacted about any life changes or challenges that are getting in the way of student success.

BIT Advisor

The School of Business & Information Technology (BIT) school advisor is located within the BIT Main Office (505-224-3811). The BIT advisor specializes in the programs offered through BIT and is available to assist you in planning your schedule, evaluating your program of studies and completing graduation audits/checklists. It is highly recommended that students meet with the BIT advisor at least once a year to discuss your program of study and develop a degree plan. More information can be found by reviewing the BIT programs of study URL Address: http://www.cnm.edu/programs-of-study/business-information-technology

Graduation

Commit to graduate! Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime. Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Prepare for your graduation today! URL Address: https://www.cnm.edu/depts/graduation/prepare-for-graduation

Course Evaluations

Students are expected to complete their course evaluations by the due date stated in the course evaluation notification email. Students can obtain access to their course evaluations through the email notification link or through the Course Evaluations link under the Students Tab in myCNM.

CSCI 1108 Section 101 – CS for All: Introduction to Computer Modeling

Tentative Class Schedule (Subject to change)

WEEK	DATE	Learning Materials	Assignments	Topic(s) – Read Material before class
1	08/28 08/30	NetLogo on-line documents Blackboard Module 1	Assignment 0 out Assignment 0 due	Introduction to Computer Science, agent based programming, familiar with the CNM computing system
2	09/04 09/06	Blackboard Module 2	Assignment 1 out	Introduction to NetLogo, and agent based programming language and the environment
3	09/11 09/13	Blackboard Module 3	Assignment 1 due	Introduction to Abstraction
4	09/18 09/20	Blackboard Module 4	Assignment 2 out	Introduction to Modeling
5	09/25 09/27	Blackboard Module 5	 Assignment 2 due	Boolean Logic Review
6	**10/02** 10/04	Blackboard Module 6	Assignment 3 out	**Exam 1** Variables, Scope and Running Experiments with Computer Models
7	10/09 10/11	Blackboard Module 6 Blackboard Module 7	Project Out Assignment 3 due	Cont.: Variables, Scope and Running Experiment with Computer Models Algorithm
8	10/16 10/18	Blackboard Module 7 Blackboard Module 8	Assignment 4 out	Cont.: Algorithm Recursion
9	10/23 10/25	Blackboard Module 8	 Assignment 4 due	Cont.: Recursion
10	10/30 11/01	Blackboard Module 9	Assignment 5 out	Epidemic Modeling Review
11	**11/06** 11/08	 Blackboard Module 10	 Project draft due Assignment 5 due	**Exam 2** Ecosystem Modeling
12	11/13 11/15	Blackboard Module 10	Assignment 6 out (TBD)	Cont.: Ecosystem Modeling
13	11/20 **11/22**	Blackboard Module 11 **Thanksgiving Day**		Project Discussion
14	11/27 11/29	Blackboard Module 11	 Assignment 6 due(TBD)	Project Discussion
15	12/04 **12/06**		Project due (12/04)	Review and Wrap-up **Final Exam (In-class)**

Note: Assignments are due at the end of day of Friday, project due at the of day of 12/04, all others are due at the end of the day of Wednesday

Student Acknowledgment

(Please return to instructor at next regularly scheduled class meeting.)

I have read and understand the Course Syllabus. The Course Syllabus is designed to assist with my learning and enhance my opportunities for student success.

Course Name:	CS for All: Introduction to Computer Modeling	**Section #:**	101	**CRN #:**	**76336**
Instructor Name:	Dr. Chu Jong	**Office Hours:**	List on the syllabus		
Phone #:	505-224-4000 x 52704	**CNM Email:**	cjong@cnm.edu		
Alternative Phone #:		**Alternative Email:**			
Student Name:		**Student Signature:**			

Sample Assessments for CSCI 1108 – CS for All: Introduction to Computer Modeling

The following could be used as discussion prompts or homework, exam, or project questions.

Essential Skill: Critical Thinking
Component Skill: Evidence Acquisition

Describe how to construct an algorithm, a step-by-step procedure, to model the development (growth) of a tree.

Essential Skill: Quantitative Reasoning
Component Skill: Analysis of Quantitative Arguments

Evaluate the computation resources, in particular the running time and running space, required to implement the model of the development (growth) of a tree as mentioned in the above "Critical Thinking" part.

Essential Skill: Information & Digital Literacy
Component Skill: Information Structure

Illustrate the data structures used to present the graphical result of the modeling process, example: the development (growth) of a tree.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Business and Information Technology
Course Number, Title, Credits: CSCI 1151, Introduction to Computer Programming for Non-Majors Computer Science, 4 Credit Hours
Co-requisite Course Number and Title, if any: None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Dr. Chu Jong, Computer Science Instructor
Email and Phone Number of Contact Person: cjong@cnm.edu, 505-224-4000 X 52704

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

N/A This is a course offering unique to CNM

List all learning outcomes that are shared between course sections at your institution.

1. describe the fundamentals of computer programming
2. develop moderate complex computer programs using procedural programming techniques
3. apply appropriate data structure, access of data, and operate the data using standard operations
4. develop C program for solving problems by applying different control and data structure using appropriate input, output mechanisms

5. apply data structures, accessing methods, and memory allocation mechanisms for solving problems
6. develop and implement applications in a multi-processing environment

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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

Learning the fundamental knowledge of computing and the logic structures of the computation components that include both hardware devices and software programs, students develop their problem solving skills and write programs (using programming C) to solve science and engineering problems. The problem solving methods are critically constructed and implemented on computing systems to produce proven results. Students evaluate the computation resources for different problems, based on the types of the evidence acquired, and use appropriate quantitative methods to generate solutions.

Assessment:
Exams, homework, programming assignments that call for the student to critically evaluate scientific methods and methodologies and the project that call for the student to design and construct their solutions.

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

Students construct and implement programs written in C programming language to solve problems that need both pre computational analysis and post computational evaluation. Prior to integrate the computation hardware and software components, students must fully verify and prove the correctness of all processes, functions, and procedures. The constructing and implementation process requires completion of all logical diagrams, flow controls, and executing sequences.

Assessment:
Presentation of case studies, problems, and/or programming exercises that call for the student to apply appropriate quantitative techniques for the level and type of material being covered.

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

By studying the computation fundamentals, the computing structures, and the C programming, students develop extensive digital literacy, which is inherent to the course topic. In preparation for their science/engineering results generated by their C program, students evaluate the authority and value of information and practice research as inquiry. Students construct solutions under a variety of digital platforms and use written, oral, and graphic techniques to present their results.

Assessment:
Project and programming assignments to be evaluated based on processing the gathered/collected digital data and presenting results by running the programs on different hardware/software platforms.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

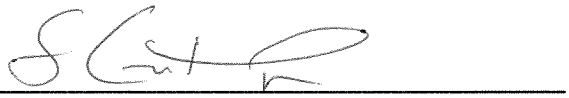
F. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM stipulates the following assessment policy: "The SAAC assessment process includes annual reporting for all general education content areas. Each of the essential skills associated with a content area, as shown in the table below, must be assessed at least twice during a planned, six-year cycle, and at least one essential skill must be assessed each year. In accordance with the stipulations of the institutional policy, the essential skills for CSCI 1151 will be assessed as part of the schedule defined by the Computer Science program assessment team 2021/22. In addition, the policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of Computer Science faculty.

This course meets institutional standards for general education.



Signature of Chief Academic Officer

8/16/18

Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

CENTRAL NEW MEXICO COMMUNITY COLLEGE
SCHOOL OF BUSINESS & INFORMATION TECHNOLOGY (BIT)
COURSE SYLLABUS [*Enter Term*]

COURSE TITLE:	**Intro to Programming for Non-Majors Computer Science**
COURSE, SECTION NUMBER:	**CSCI 1151**
CRN:	
CLASS TIME:	
LOCATION:	
COURSE CREDITS:	**4**
PRE-REQUISITE:	**MATH 1415 or higher level math course**
INSTRUCTOR:	
TELEPHONE:	
E-MAIL:	
OFFICE LOCATION:	
OFFICE HOURS:	
OTHER ELECTRONIC AVAILABILITIES (optional):	**TBD**

Texts & Supplies

Required text: A First Book of ANSI C, 4th Edition, Gary J. Bronson, Course Technology/Cengage Learning, 2007, ISBN 978-1-4188-3556-9
Supplement Materials: Will be posted on the Blackboard
Supplies: Flash memory device at least 8 GB storage space

Course Description

Current Catalogue Description: Designed for non-computer science majors interested in programming, or developing useful problem solving skills; explores the relationship between programming and problem solving using programming languages.

Extend Description: Introduction to the C programming language, the workhorse of the Unix operating system and lingua franca of embedded processors and micro-controllers.
Learn the fundamental programming concepts and problem solving skills, how to write simple applications using programming language (example, C). It is designed for those who may undertake future courses that assume some background knowledge in computer programming. Topics include variables, data types, functions, control structures, pointers, strings, arrays, dynamic memory allocation, and multi-threading principles.

Student Learning Outcomes

Students completing this course should be able to:

1. describe the fundamentals of computer programming
2. develop moderate complex computer programs using procedural programming techniques
3. apply appropriate data structure, access of data, and operate the data using standard operations
4. develop C program for solving problems by applying different control and data structure using appropriate input, output mechanisms
5. apply data structures, accessing methods, and memory allocation mechanisms for solving problems
6. develop and implement applications in a multi-processing environment

Attendance/Tardy/Withdrawal/Drop Policies

Any student who is absent more than fifteen percent (15% of scheduled course hours equates to 4.5 absences of a semester) of the total class hours will be dropped from the class. Students must keep in mind, however, that it is ultimately their responsibility to withdraw from the course. Students should contact the instructor before they are absent to obtain **excused absences** from the class.
A sign-in sheet will be on the table of the classroom; all students need to sign their name on the sign-in sheet for every class.

Absences from class do not relieve students from responsibility for missed assignments, material covered in class or exams. Students are responsible for learning the course material covered during their absences, and most importantly, absences do not relieve a student from submitting course assignments when they are due (or before).

Attendance Policy

Students enrolled for credit or audit are expected to attend all class sessions. Instructors will take attendance. Absences do not relieve students of the responsibility for missed assignments and exams. A student with excessive absences may be dropped from a course (See withdrawal/drop policy).

Students **auditing** a class must meet course prerequisites, are expected to attend all class sessions, but are not required to complete assignments. Audit Courses are not eligible for Financial Aid. Audit students are required to notify the instructor of their AUDIT status to avoid being dropped. For more on auditing a class can be found at CNM's Academic Records site URL Address: https://www.cnm.edu/student-resources/academic-records/academic-records-list/grademode.html.

If the CNM District is impacted by snow or other weather that can make travel dangerous, the most efficient ways to receive information on whether the college is closed or delayed is the "AttentionCNM" emergency text messaging system, the weather line at 224-4SNO (4766) and the CNM website. Emails will also be sent to all CNM email accounts -- personal email accounts can be added through the AttentionCNM system. For more information, use this weather information site URL Address: http://www.cnm.edu/depts/marketing/weather

Tardy Policy

To avoid interrupting or distracting the class, students are expected to be prompt for each class. Class will begin promptly at the time scheduled. Students who arrive to class more than 10 minutes late or leave the class earlier will be marked tardy. Five (5) tardies will equal one absence.

Withdrawal/Drop Policy

The School of Business Information Technology (BIT) prohibits the use of assignments used solely as a determination of attendance.

Drop Policy

- Students who miss the first class meeting and have not contacted the instructor may be dropped from the course.
- Students who miss two consecutive class meetings in the first two weeks may be dropped from the course.
- Students who are absent a total of 4.5 class sessions may be dropped from the course.
- Students who are absent 15% of class sessions may be dropped from the course.

Students dropped from a course for non-attendance will be notified at their CNM e-mail address and will also be dropped from co-requisite courses. If the student disagrees with the action, he or she must contact the instructor within **two working days** of receipt of the notification. A student should not assume he/she will be dropped automatically. It is their responsibility to drop/withdraw from the course in order to avoid a grade of "F."

Important dates, deadlines and the last day to drop this course can be found at student resources URL Address: https://www.cnm.edu/student-resources/class-schedule/important-dates-and-deadlines

Grading

The following will be used to determine your grade in this course:

Points / Percent	
Homework	10%
Programming	20%
Participation	5%
In-Class Exercise	5%
Exam #1	10%
Exam #2	10%
Project	20%
Final Exam	20%
Total	**100**

The following scale is used to assign course grades:

Grade Scale	Grade
91-100	**A**
81-90	**B**
71-80	**C**
61-70	**D**
Below 61	**F**

Note: A final grade of "D" or "F" is not acceptable for this course if it is required for graduation or as a prerequisite for other courses. A final grade of "D" or "F" requires repeating this course.

Late/Make-up/Re-take Policies

A. Homework and Programming Assignments: **To receive FULL credit for a homework or programming assignment, the assignment must be handed in ON or BEFORE the day/time it is due. No late assignments will be accepted.** If you need help with a homework assignment, you can ask in class, see me during office hours, or send me an email with clear description of your question.

Note: All assignment/homework must be submitted to the Blackboard.

B. Evaluation: Grades will be based on in homework, class exercises, participation, programming assignment, project, and exams.
In-Class Exercises: There will be a series of "In Class Exercises" in a variety of forms. Each one will be graded on a YES/NO. You must be present in the class to complete these exercises to receive credit, THERE WILL BE NO LATE and NO MAKE-UPS.
Homework, programming assignments, and project: They are posted on the Blackboard, including due days and/or descriptions.
Exams: There will be two semester exams and a cumulative final exam. **All students must receive at least 50% on the final exam in order to pass the course.** Exams will occur on the date indicated on the syllabus. Attendance at exams is mandatory without prior approval of the instructor.

Course Codes & Policies

Course Communication

All official email communication to students, originating from CNM, will be sent to a student's assigned CNM email account in MyCNM or within CNM Learn. By becoming a student at CNM, students agree to follow the technology use policies outlined in the Information Technology Use Administrative Directive URL Address: http://www.cnm.edu/depts/hr/policies-and-procedures/the-source/is-1002/IS-1002-policy

Student Behavior

As a member of this classroom, students are expected to behave in a professional manner. Students are responsible for understanding and adhering to the CNM codes and policies that govern and prescribe acceptable student behavior. The codes and policies of this course are governed by the Student Code of Conduct URL Address: http://www.cnm.edu/depts/dean-of-students/student-code-of-conduct If a student demonstrates behavior that is a violation of the Code of Conduct, the incident will be reported to the Office of Student Life and Conduct URL Address: http://www.cnm.edu/depts/dean-of-students for further disciplinary action.

Academic Dishonesty
Students in this course and in all college classes are expected to complete their course work in accordance with a high level of honesty and integrity. Academic dishonesty on the part of a student, such as cheating on a test or aiding other students' cheating, plagiarism, falsification, fabrication, unauthorized collaboration, or submitting a piece of work from another course for credit, will be subject to academic sanctions. Students committing these offenses are subject to penalty ranging from a "0" on the assignment or test, to an "F" for the course. The Office of Student Life and Conduct will be notified of any instances of academic dishonesty URL Address: http://www.cnm.edu/depts/dean-of-students/academicdishonesty.html

Emergency Procedures
An emergency is any state requiring immediate action to prevent dire consequences, usually immediate threat to life, limb or property. To report an emergency, call 911 from any CNM phone. If a CNM phone is not available, call 224-3001 from a cell or pay phone, or see the emergency procedures site URL Address: http://www.cnm.edu/depts/security/Emergency-Procedures.html

Electronic Devices in Class
When students are in class or a lab, cellular telephones, pagers and beepers must be turned off or switched to silent or vibration mode. Electronic entertainment devices are to be turned off and headphones removed.

Smoke Free Campus
The use of tobacco products, including the use of chewing tobacco and e-cigarettes, is limited to the designated smoking areas and banned from all other areas.

PaperCut
Papercut URL Address: https://www.cnm.edu/depts/academic-affairs/papercut is part of the college's sustainability efforts and provides students with an initial allowance of 150 sheets of paper for printing up to 300 double-sided pages each term. If this allotment runs out, additional pages may be purchased by the student.

Student Resources/Advisement/Graduation

CNM Information Technology Services (ITS)
For technical support on all CNM computers, printers, email, passwords, networks, myCNM, you may contact ITS at 224-HELP or ITS Service Desk [itsservicedesk@cnm.edu]. For all inquiries regarding CNM Learn, contact Embanet URL Address: https://embanet.frontlinesvc.com/app/home/p/67, the 24/7 assistance and support center.

Disability Resources
Students with disabilities, including dual enrollment and high school age students, are encouraged to contact the Disability Resource Center URL Address: http://www.cnm.edu/depts/disability-resource-center to arrange for academic adjustments, including auxiliary aids, i.e., accommodations.
Main or Westside Campus 224-3259, e-mail: disability_resource_center@cnm.edu;
Montoya Campus 224-5946, e-mail: disability_resource_center_jmmc@cnm.edu;

Veteran Services
We appreciate the services provided by our Armed Forces and want to make sure eligible students are aware of their benefits and the services that are available. Information about these benefits and services can be accessed at the veterans site URL Address: : https://www.cnm.edu/student-resources/veterans/veterans-resource-center or students can swing by the VA Certifiers office located on the main campus inside the financial aid office.

Assistance Centers for Education (ACE)
These are locations available to students for tutoring, to work on distance learning, homework assignments, class projects, and for one-on-one assistance. Contact ACE URL Address: http://www.cnm.edu/depts/tutoring for more information. Open Computer Lab Location and Contact Information:

Main Campus - SRC 203, (505) 224-4316 || SRC 201, (505) 224-3954, SB 110
Montoya Campus - K-104, (505) 224-5880
Rio Rancho Campus - RR114, (505) 224-4952
South Valley Campus - SV 1-111, (505) 224-5036
Westside Campus - WS1 200, (505) 224-5311 || MJG115, (505) 224-5319

BIT Advisor

The School of Business & Information Technology (BIT) school advisor is located within the BIT Main Office (505-224-3811). The BIT advisor specializes in the programs offered through BIT and is available to assist you in planning your schedule, evaluating your program of studies and completing graduation audits/checklists. It is highly recommended that students meet with the BIT advisor at least once a year to discuss your program of study and develop a degree plan. More information can be found by reviewing the BIT programs of study URL Address: http://www.cnm.edu/programs-of-study/business-information-technology

BIT Achievement Coach

The Achievement Coach (505-224-3811) is available to all BIT students. The Achievement Coach URL Address: https://www.cnm.edu/programs-of-study/business-information-technology/services-and-resources#Achievement Coach assists students with finding answers to questions involving college and life. The Achievement Coach helps with the following: campus and community supports, balancing school, family and work, life changes and obstacles.

Graduation

Commit to graduate! Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime. Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Learn more at Set your graduation date today URL Address: http://www.cnm.edu/student-resources/academicrecords/graduation

Additional questions regarding graduation can also be answered by our school advisor, faculty advisors, and achievement coach. (505-224-3811)

Course Evaluations

Students are expected to complete their course evaluations by the due date stated in the course evaluation notification email. Students can obtain access to their course evaluations through the email notification link or through the Course Evaluations link under the Students Tab in myCNM.

Tentative Class Schedule

Syllabus & Class Schedule The syllabus and class schedule are subject to change by the instructor. Changes will be made with as much advance notice as possible.

CSCI 1151– Introduction to Programming for Non-Majors Computer Science

Tentative Schedule (Subject to change)

WEEK	DATE	Chapter/Section	Assignments	Topic – Read Material before class
1		**No Class** Chapter 1	Assignment 0, 1 out Assignment 0 due	Introduction to computer programming Writing C program, data type, arithmetic operations
2		Chapter 2 Chapter 3	Assignment 2 out Lab 1 out Assignment 1 due	Assignment, math functions, interactive Input, formatted Output
3		Chapter 3 Chapter 4	Assignment 3 out Lab 1 due, Lab 2 out Assignment 2 due	Chapter 3 – cont. Selection, Expression Parsing & Evaluation, control flow
4		Chapter 4 Chapter 5	Assignment 4 out Assignment 3 due	Chapter 4 – cont. Loops
5		Chapter 5 Chapter 10	Lab 2 due, Lab 3 out Assignment 5 out Assignment 4 due	Chapter 5 – cont. Operation on files
6		 Chapter 10	Assignment 6 out Assignment 5 due	**Exam 1 (Chapter 1 – 5)** Chapter 10 – cont.
7		Chapter 6	Assignment 7 out Project Out Assignment 6 due	Function and parameters
8		Chapter 7	Lab 3 due, lab 4 out Assignment 8 out Assignment 7 due	Scope. Storage, pass by references
9		Chapter 8	Assignment 9 out Assignment 8 due	Array Implementation, searching and sorting
10		Chapter 9 Chapter 11	Assignment 10 out Assignment 9 due	Character strings Arrays, Addresses Pointers
11		 Chapter 11	Lab 4 due, Lab 5 out	**Exam 2 (Chapter 10, 6 – 9)** Chapter 11 – cont.
12		Chapter 12	Assignment 11 out Project proposal due Assignment 10 due	Structures
13		Chapter 13	Assignment 12 out Lab 5 due Assignment 11 due	Dynamic Data Structures Linked list
14		Select Features	 Assignment 12 due	Sockets and Asynchronous I/O Process communication
15		Select Features	Project due (04/23)	Multithreading and concurrency **Final Exam (In-class)**

Note: Assignments are due at the end of day of Friday, project due at the of day of [enter date], all others are due at the end of the day of Wednesday

Student Acknowledgment

(Please return to instructor at next regularly scheduled class meeting.)

I have read and understand the Course Syllabus. The Course Syllabus is designed to assist with my learning and enhance my opportunities for student success.

Course Name:	**CSCI 1151**		**Section Number:**	**102**	**CRN:**	**86935**
Instructor Name:	**De. Chu Jong**		**Office Hours:**	**M/W 13:00 – 15:00; T/R 12:00 – 13:00**	
Student ID#:		**Phone #:**		**CNM Email:**	
		Alternative Phone #:		**Alternative Email:**	
Student Name:			**Student Signature:**		

Sample Assessments for CSCI 1151 – Introduction to Computer Programming for Non-Majors Computer Science

The following could be used as discussion prompts or homework, exam, or project questions.

Essential Skill: Critical Thinking
Component Skill: Evidence Acquisition

Describe how to construct an application, a step-by-step procedure, that acquire data from a network file, student grade book, process them, and generate the statistic of them (the student grade).

Essential Skill: Quantitative Reasoning
Component Skill: Analysis of Quantitative Arguments

Evaluate the computation resources, network bandwidth, input/output performance, memory, and CPU cycles, required by the application as described in the above “Critical Thinking” part to generate the statistic of the input data (the student grade).

Essential Skill: Information & Digital Literacy
Component Skill: Information Structure

Illustrate the data structures constructions used by the application as mentioned in the above “Critical Thinking” part after reading the input data and the data structures for output the statistic.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Business and Information Technology
Course Number, Title, Credits: CSCI 1152, Introduction to Programming and Problem Solving, 4 Credit Hours
Co-requisite Course Number and Title, if any: None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Dr. Chu Jong, Computer Science Instructor
Email and Phone Number of Contact Person: cjong@cnm.edu, 505-224-4000 X 52704

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

N/A This is a course offering unique to CNM

List all learning outcomes that are shared between course sections at your institution.

1. describe the fundamentals of computer programming
2. demonstrate an understanding of algorithmic problem solving by creating algorithmic solutions to problems
3. demonstrate an understanding of procedural programming techniques by implementing Java programs which employ structured programming techniques
4. implement flow of control to a program, use of sequence, iteration, and choice
5. demonstrate an understanding of modularization in their programs by defining and using functions, which may use value and/or reference parameters, and contribute to the solution of the task at hand

6. apply appropriate data structures, access of data, and operate the data using Java
7. develop moderate complex computer programs using Java programming techniques
8. develop Java program for solving problems by applying different control and data structure using appropriate input, output mechanisms

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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

Learning the fundamental knowledge of computing, software engineering methodologies, and the logic structures of the computation components that include both hardware devices and software programs, students develop their problem solving skills and write programs to solve the computation problems and develop new systems for computing using programming language, Java. The problem solving methods and computing system development methodologies are critically constructed and implemented on computing systems to produce proven results. Students evaluate the computation resources for different problems, based on the types of evidence acquired, and use appropriate quantitative methods to generate results.

Assessment:
Exams, homework, programming assignment that call for the student to critically evaluate scientific methods and methodologies and the project that call for the student to design and construct their solutions.

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

Students construct, develop, and implement methods and methodologies using the Java programming language to solve problems and improve computing systems that need both pre computational analysis and post computational evaluation. Prior to integrate the computation hardware and software components, students must fully verity and prove the correctness of all processes, functions, and procedures. The construction, developing, and implementation process requires completion of all logical diagrams, flow controls, and executing sequences.

Assessment:
Presentation of case studies, problems, and/or laboratory exercises that call for the student to apply appropriate quantitative techniques for the level and type of material being covered.

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

By studying the computation fundamentals, engineering methodologies, and the computing structures, students develop extensive digital literacy, which is inherent to the course topic. In preparation for their software and system development students evaluate the authority and value of information and practice research inquiry. Students complete their project by cycle through the development, construction, implementation, and testing processes under a variety of digital platforms and use written, oral, and graphic techniques to present their products.

Assessment:
Project and programming assignments to be evaluated based on processing the gathered/collected digital data and presenting results by running the programs on different hardware/software platforms.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

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

Link to Institution's General Education Assessment https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM stipulates the following assessment policy: "The SAAC assessment process includes annual reporting for all general education content areas. Each of the essential skills associated with a content area, as shown in the table below, must be assessed at least twice during a planned, six-year cycle, and at least one essential skill must be assessed each year. In accordance with the stipulations of the institutional policy, the essential skills for CSCI 1152 (Introduction to Programming and Problem Solving) will be assessed as part of the schedule defined by the Computer Science program assessment team 2021/22. In addition, the policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of Computer Science faculty.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

CENTRAL NEW MEXICO COMMUNITY COLLEGE
SCHOOL OF BUSINESS & INFORMATION TECHNOLOGY (BIT)
COURSE SYLLABUS [*Enter Term*]

COURSE TITLE:	**Intro to Programming and Problem Solving**
COURSE, SECTION NUMBER:	**CSCI 1152**
CRN:	
CLASS TIME:	
LOCATION:	
COURSE CREDITS:	**4**
PRE-REQUISITE:	**MATH 1415 or higher level math course**
INSTRUCTOR:	
TELEPHONE:	
E-MAIL:	
OFFICE LOCATION:	
OFFICE HOURS:	
OTHER ELECTRONIC AVAILABILITIES (optional):	**TBD**

Texts & Supplies

Required text: Java How to Program, Late Objects Version, Tenth Edition, Paul Deitel & Harvey Deitel, Pearson, 2015, ISBN-13: 978-0-13-257565-2, ISBN-10: 0-13-257565-5
Supplement Materials: Will be posted on the Blackboard
Supplies: Flash memory device at least 8 GB storage space

Course Description

Catalogue Description: Introduction to computer programming designed for those interested in majoring or minoring in computer science or as a useful problem-solving skill; explores the relationship between programming and problem solving, using programs written in Java.

Extended Description: Introduction to computer programming and problem solving using object-oriented programming language (example, Java), applied to the solution of numeric and non-numeric problems. Study the computer structures and explores the relation between computer programming and problem solving.

Student Learning Outcomes

Students completing this course should be able to:

1. describe the fundamentals of computer programming
2. demonstrate an understanding of algorithmic problem solving by creating algorithmic solutions to problems
3. demonstrate an understanding of procedural programming techniques by implementing Java programs which employ structured programming techniques
4. implement flow of control to a program, use of sequence, iteration, and choice
5. demonstrate an understanding of modularization in their programs by defining and using functions, which may use value and/or reference parameters, and contribute to the solution of the task at hand
6. apply appropriate data structures, access of data, and operate the data using Java
7. develop moderate complex computer programs using Java programming techniques
8. develop Java program for solving problems by applying different control and data structure using appropriate input, output mechanisms

Attendance/Tardy/Withdrawal/Drop Policies

Any student who is absent more than fifteen percent (15% of scheduled course hours equates to 4.5 absences of a semester) of the total class hours will be dropped from the class. Students must keep in

mind, however, that it is ultimately their responsibility to withdraw from the course. Students should contact the instructor before they are absent to obtain **excused absences** from the class.

Absences from class do not relieve students from responsibility for missed assignments, material covered in class or exams. Students are responsible for learning the course material covered during their absences, and most importantly, absences do not relieve a student from submitting course assignments when they are due (or before).

Attendance Policy

Students enrolled for credit or audit are expected to attend all class sessions. Instructors will take attendance. Absences do not relieve students of the responsibility for missed assignments and exams. A student with excessive absences may be dropped from a course (See withdrawal/drop policy).

Students **auditing** a class must meet course prerequisites, are expected to attend all class sessions, but are not required to complete assignments. Audit Courses are not eligible for Financial Aid. **Audit students are required to notify the instructor of their AUDIT status to avoid being dropped.** For more on auditing a class can be found at CNM's Academic Records site URL Address: https://www.cnm.edu/student-resources/academic-records/academic-records-list/grademode.html.

If the CNM District is impacted by snow or other weather that can make travel dangerous, the most efficient ways to receive information on whether the college is closed or delayed is the "AttentionCNM" emergency text messaging system, the weather line at 224-4SNO (4766) and the CNM website. Emails will also be sent to all CNM email accounts -- personal email accounts can be added through the AttentionCNM system. For more information, use this weather information site URL Address: http://www.cnm.edu/depts/marketing/weather

Tardy Policy

To avoid interrupting or distracting the class, students are expected to be prompt for each class. Class will begin promptly at the time scheduled. Students who arrive to class more than 10 minutes late or leave the class earlier will be marked tardy. Five (5) tardies will equal one absence.

Withdrawal/Drop Policy

The School of Business Information Technology (BIT) prohibits the use of assignments used solely as a determination of attendance.

Drop Policy

- Students who miss the first class meeting and have not contacted the instructor may be dropped from the course.
- Students who miss two consecutive class meetings in the first two weeks may be dropped from the course.
- Students who are absent a total of 4.5 class sessions may be dropped from the course.
- Students who are absent 15% of class sessions may be dropped from the course.

Students dropped from a course for non-attendance will be notified at their CNM e-mail address and will also be dropped from co-requisite courses. If the student disagrees with the action, he or she must contact the instructor within **two working days** of receipt of the notification. A student should not assume he/she will be dropped automatically. It is their responsibility to drop/withdraw from the course in order to avoid a grade of "F."

Important dates, deadlines and the last day to drop this course can be found at student resources URL Address: https://www.cnm.edu/student-resources/class-schedule/important-dates-and-deadlines

Grading

The following will be used to determine your grade in this course:

Points / Percent	
Homework	10%
Programming	20%
Participation	5%
In-Class Exercise	5%
Exam #1	10%
Exam #2	10%
Project	20%
Final Exam	20%
Total	**100**

The following scale is used to assign course grades:

Grade Scale	Grade
91-100	**A**
81-90	**B**
71-80	**C**
61-70	**D**
Below 61	**F**

Note: A final grade of "D" or "F" is not acceptable for this course if it is required for graduation or as a prerequisite for other courses. A final grade of "D" or "F" requires repeating this course.

Late/Make-up/Re-take Policies

A. Homework and Programming Assignments: **To receive FULL credit for a homework or programming assignment, the assignment must be handed in ON or BEFORE the day/time it is due. No late assignments will be accepted.** If you need help with a homework assignment, you can ask in class, see me during office hours, or send me an email with clear description of your question.

Note: All assignment/homework must be submitted to the Blackboard.

B. Evaluation: Grades will be based on homework, in-class exercises, participation, programming assignments, project, and exams.
In-Class Exercises: There will be a series of "In Class Exercises" in a variety of forms. Each one will be graded on a YES/NO. You must be present in the class to complete these exercises to receive credit, THERE WILL BE NO LATE and NO MAKE-UPS.
Homework, programming assignments, and project: They are posted on the Blackboard, including due days and/or descriptions.
Exams: There will be two semester exams and a cumulative final exam. **All students must receive at least 50% on the final exam in order to pass the course.** Exams will occur on the date indicated on the syllabus. Attendance at exams is mandatory without prior approval of the instructor.

Course Codes & Policies

Course Communication

All official email communication to students, originating from CNM, will be sent to a student's assigned CNM email account in MyCNM or within CNM Learn. By becoming a student at CNM, students agree to follow the technology use policies outlined in the Information Technology Use Administrative Directive URL Address: http://www.cnm.edu/depts/hr/policies-and-procedures/the-source/is-1002/IS-1002-policy

Student Behavior

As a member of this classroom, students are expected to behave in a professional manner. Students are responsible for understanding and adhering to the CNM codes and policies that govern and prescribe acceptable student behavior. The codes and policies of this course are governed by the Student Code of Conduct URL Address: http://www.cnm.edu/depts/dean-of-students/student-code-of-conduct If a student demonstrates behavior that is a violation of the Code of Conduct, the incident will be reported to the Office of Student Life and Conduct URL Address: http://www.cnm.edu/depts/dean-of-students for further disciplinary action.

Academic Dishonesty

Students in this course and in all college classes are expected to complete their course work in accordance with a high level of honesty and integrity. Academic dishonesty on the part of a student, such as cheating

on a test or aiding other students' cheating, plagiarism, falsification, fabrication, unauthorized collaboration, or submitting a piece of work from another course for credit, will be subject to academic sanctions. Students committing these offenses are subject to penalty ranging from a "0" on the assignment or test, to an "F" for the course. The Office of Student Life and Conduct will be notified of any instances of academic dishonesty URL Address: http://www.cnm.edu/depts/dean-of-students/academicdishonesty.html

Emergency Procedures
An emergency is any state requiring immediate action to prevent dire consequences, usually immediate threat to life, limb or property. To report an emergency, call 911 from any CNM phone. If a CNM phone is not available, call 224-3001 from a cell or pay phone, or see the emergency procedures site URL Address: http://www.cnm.edu/depts/security/Emergency-Procedures.html

Electronic Devices in Class
When students are in class or a lab, cellular telephones, pagers and beepers must be turned off or switched to silent or vibration mode. Electronic entertainment devices are to be turned off and headphones removed.

Smoke Free Campus
The use of tobacco products, including the use of chewing tobacco and e-cigarettes, is limited to the designated smoking areas and banned from all other areas.

Paper Cut
Papercut URL Address: https://www.cnm.edu/depts/academic-affairs/papercut is part of the college's sustainability efforts and provides students with an initial allowance of 150 sheets of paper for printing up to 300 double-sided pages each term. If this allotment runs out, additional pages may be purchased by the student.

Student Resources/Advisement/Graduation

CNM Information Technology Services (ITS)
For technical support on all CNM computers, printers, email, passwords, networks, myCNM, you may contact ITS at 224-HELP or ITS Service Desk [itsservicedesk@cnm.edu]. For all inquiries regarding CNM Learn, contact Embanet URL Address: https://embanet.frontlinesvc.com/app/home/p/67, the 24/7 assistance and support center.

Disability Resources
Students with disabilities, including dual enrollment and high school age students, are encouraged to contact the Disability Resource Center URL Address: http://www.cnm.edu/depts/disability-resource-center to arrange for academic adjustments, including auxiliary aids, i.e., accommodations.
Main or Westside Campus 224-3259, e-mail: disability_resource_center@cnm.edu;
Montoya Campus 224-5946, e-mail: disability_resource_center_jmmc@cnm.edu;

Veteran Services
We appreciate the services provided by our Armed Forces and want to make sure eligible students are aware of their benefits and the services that are available. Information about these benefits and services can be accessed at the veterans site URL Address: : https://www.cnm.edu/student-resources/veterans/veterans-resource-center or students can swing by the VA Certifiers office located on the main campus inside the financial aid office.

Assistance Centers for Education (ACE)
These are locations available to students for tutoring, to work on distance learning, homework assignments, class projects, and for one-on-one assistance. Contact ACE URL Address: http://www.cnm.edu/depts/tutoring for more information. Open Computer Lab Location and Contact Information:

Main Campus - SRC 203, (505) 224-4316 || SRC 201, (505) 224-3954, SB 110
Montoya Campus - K-104, (505) 224-5880
Rio Rancho Campus - RR114, (505) 224-4952
South Valley Campus - SV 1-111, (505) 224-5036

BIT Advisor

The School of Business & Information Technology (BIT) school advisor is located within the BIT Main Office (505-224-3811). The BIT advisor specializes in the programs offered through BIT and is available to assist you in planning your schedule, evaluating your program of studies and completing graduation audits/checklists. It is highly recommended that students meet with the BIT advisor at least once a year to discuss your program of study and develop a degree plan. More information can be found by reviewing the BIT programs of study URL Address: http://www.cnm.edu/programs-of-study/business-information-technology

BIT Achievement Coach

The Achievement Coach (505-224-3811) is available to all BIT students. The Achievement Coach URL Address: https://www.cnm.edu/programs-of-study/business-information-technology/services-and-resources#Achievement Coach assists students with finding answers to questions involving college and life. The Achievement Coach helps with the following: campus and community supports, balancing school, family and work, life changes and obstacles.

Graduation

Commit to graduate! Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime. Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Learn more at Set your graduation date today URL Address: http://www.cnm.edu/student-resources/academicrecords/graduation

Additional questions regarding graduation can also be answered by our school advisor, faculty advisors, and achievement coach. (505-224-3811)

Course Evaluations

Students are expected to complete their course evaluations by the due date stated in the course evaluation notification email. Students can obtain access to their course evaluations through the email notification link or through the Course Evaluations link under the Students Tab in myCNM.

Tentative Class Schedule

Syllabus & Class Schedule **The** syllabus and class schedule are subject to change by the instructor. Changes will be made with as much advance notice as possible.

CSCI 1152 Section 101 – Introduction to Programming and Problem Solving
Tentative Schedule (Subject to change)

WEEK	DATE	Chapter/Section	Assignments	Topic – Read Material before class
1		Chapter 1 Chapter 2	Assignment 0 out Assignment 1 out Assignment 0 due	Introduction to Computer, the Internet and Java Java application, I/O and operators
2		Chapter 2 Chapter 3	Assignment 2 out Lab 1 out Assignment 1 due	Control Statement, Part I Control Statements, Part II
3		Chapter 3, 4 Chapter 4	Assignment 3 out Lab 1 due, Lab 2 out Assignment 2 due	Control Statements Part II
4		Chapter 5 Chapter 5	Assignment 4 out Assignment 3 due	Methods
5		Chapter 6 Chapter 6	Lab 2 due, Lab 3 out Assignment 5 out Assignment 4 due	Array
6		 Chapter 14		**Exam 1 (Chapter 1 – 5)** Strings: Characters and Regular Expressions
7		Chapter 14 Chapter 15	Assignment 6 out Project Out Assignment 5 due	Strings: Characters and Regular Expressions Files, Streams
8		Chapter 15 Chapter 16	Lab 3 due, Lab 4 out Assignment 7 out Assignment 6 due	Files, Streams Generic collections
9		Chapter 16 Chapter 18	Assignment 8 out Assignment 7 due	Generic collections Recursion
10		Chapter 18 Chapter 19	Assignment 9 out Assignment 8 due	Recursion Searching, sorting and Big O
11		 Chapter 19	Lab 4 due, Lab 5 out Assignment 10 out Assignment 9 due	**Exam 2 (Chapter 6, 14, 15, 16, 18-partial)** Searching, sorting and Big O
12		Chapter 20	Assignment 11 out Project proposal due Assignment 10 due	Generic Classes and Methods
13		Chapter 21	Assignment 12 out Lab 5 due Assignment 11 due	Generic Classes and Methods
14		Chapter 21	 Assignment 12 due	Custom Generic Data Structure Swarmathon Physical Competition, class subject to change
15			Project due (04/24)	Review **Final Exam (In-class)**

Note: Homework assignments are due at end of the day of Friday, the project due [enter date], all others are due at the end of the day of Wednesday

Student Acknowledgment

(Please return to instructor at next regularly scheduled class meeting.)

I have read and understand the Course Syllabus. The Course Syllabus is designed to assist with my learning and enhance my opportunities for student success.

Course Name:	**CSCI 1152**		**Section Number:**	**101**	**CRN:**	**85109**
Instructor Name:	**De. Chu Jong**		**Office Hours:**	**M/W 13:00 – 15:00; T/R 12:00 – 13:00**	
Student ID#:		**Phone #:**		**CNM Email:**	
		Alternative Phone #:		**Alternative Email:**	
Student Name:			**Student Signature:**		

Sample Assessments for CSCI 1152 – Introduction to Programming and Problem Solving

The following could be used as discussion prompts or homework, exam, or project questions.

Essential Skill: Critical Thinking
Component Skill: Evidence Acquisition

Describe how to construct a stack using linked list, how to implement the basic functions of the stack such as push, pop, empty, full, top, and bottom using linked list.

Essential Skill: Quantitative Reasoning
Component Skill: Analysis of Quantitative Arguments

Evaluate the computation resources, primary the memory and CPU cycles, required for implementing stack data structure using linked list as mentioned in the “Critical Thinking” part.

Essential Skill: Information & Digital Literacy
Component Skill: Information Structure

Illustrate the data structures used for implementing the stack by linked list; explain the correlations of the internal/external representations between the stack and linked list of the implementation.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Business and Information Technology
Course Number, Title, Credits: CSCI 1153, Programming in MATLAB, 4 Credit Hours
Co-requisite Course Number and Title, if any: None
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Content Expert): Dr. Chu Jong, Computer Science Instructor
Email and Phone Number of Contact Person: cjong@cnm.edu, 505-224-4000 X 52704

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

N/A This is a course offering unique to CNM

List all learning outcomes that are shared between course sections at your institution.

1. Operate the MATLAB computer programming environment.
2. Using the MATLAB (data types, variables, basic mathematical and logical expressions, arrays and vectors, structures, file manipulation) to solve computation problems.
3. Apply the software development tool to create, test and debug programs.
4. Write programs using predefined functions and procedures, conditional statements, control structures, matrix computations, and graphing and plotting.
5. Design and write functions with parameters, and reuse function m-files.

6. Compose structured programs using symbolic algebra, equation solving, differentiation and integration, and numerical techniques.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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

While learning how to write programs to solve problems using MATLAB software package, students develop the skills of the computation system fundamentals and the logic structures of the hardware and software components, critically thinking how to solve the math, science, and engineering problems on different computing system platforms. Students evaluate the computation resources for different problems, based on the types of the evidence acquired, and use appropriate quantitative methods to generate solutions.

Assessment:
Exams, homework, programming assignment that call for the student to critically evaluate scientific methods and methodologies for their solutions.

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

Students construct and implement MATLAB programs to solve problems that need both pre computational analysis and post computational evaluation. Prior to integrate the computation components (hardware devices and the MATLAB software package), students must fully verify and prove the correctness of all processes, functions, and procedures. The computational process requires completion of all logical diagrams, flow controls, and executing sequences.

Assessment:
Presentation of case studies, problems, and MATLAB programming exercises that call for the student to apply appropriate quantitative techniques for the level and type of material being covered.

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

By learning and implementing the MATLAB programs, students develop extensive digital literacy, which is inherent to the course topic. In preparation for explaining the basic scientific concepts, procedures, and their MATLAB programming logic, students evaluate the authority and value of information and practice research as inquiry. Students construct solutions under a variety of digital platforms and use written, oral, and graphic techniques to present their results.

Assessment:
MATLAB programming assignments to be evaluated based on processing the gathered/collected digital data and the presenting results by running the programs on different hardware/software platforms.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

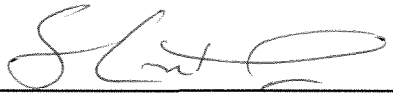
F. Assessment (Must be on file with HED by August 1, 2019)

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM stipulates the following assessment policy: "The SAAC assessment process includes annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a planned, six-year cycle, and at least one essential skill must be assessed each year. In accordance with the stipulations of the institutional policy, the essential skills for CSCI 1153 (Programming in MATLAB) will be assessed as part of the schedule defined by the Computer Science program assessment team 2021/22. In addition, the policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of Computer Science faculty.

This course meets institutional standards for general education.



Signature of Chief Academic Officer

8/16/18

Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

CENTRAL NEW MEXICO COMMUNITY COLLEGE
SCHOOL OF BUSINESS & INFORMATION TECHNOLOGY (BIT)
COURSE SYLLABUS [*Enter Term*]

COURSE TITLE:	**Programming in Matlab**
COURSE AND SECTION:	**CSCI 1153**
CRN:	
CLASS TIME:	
LOCATION:	
COURSE CREDITS:	**3**
PRE-REQUISITE:	MATH 1415 or higher level math course

INSTRUCTOR:
TELEPHONE:
E-MAIL:
OFFICE LOCATION:
OFFICE HOURS:

Texts & Supplies

Required text: MATLAB® for Engineers (4th edition), Holly Moore, Prentice Hall, 2015, ISBN-13: 978- 0-13-348597-4.
Recommend: MATLAB Student Version R2015a (CNM Bookstore),
Supplies: A USB storage device or cloud storage

Course Description

An introduction to computing. The objective of this course is to help students understand the relationship between computing and problem solving. A general understanding of matrices and basic computer knowledge is beneficial for success in this course.

Student Learning Outcomes

Students completing this course should be able to:

1. Understand the MATLAB computer programming environment.
2. Using the MATLAB (data types, variables, basic mathematical and logical expressions, arrays and vectors, structures, file manipulation) to solve computation problems.
3. Apply the software development tool to create, test and debug programs.
4. Write programs using predefined functions and procedures, conditional statements, control structures, matrix computations, and graphing and plotting.
5. Design and write functions with parameters, and reuse function m-files.
6. Compose structured programs using symbolic algebra, equation solving, differentiation and integration, and numerical techniques.

Attendance/Tardy/Withdrawal/Drop Policies

Attendance Policy

Students enrolled for credit or audit are expected to attend all class sessions. Instructors will take attendance. Absences do not relieve students of the responsibility for missed assignments and exams. A student with excessive absences may be dropped from a course (See withdrawal/drop policy).

Students **auditing** a class must meet course prerequisites, are expected to attend all class sessions, but are not required to complete assignments. Audit Courses are not eligible for Financial Aid. Audit students are required to notify the instructor of their AUDIT status to avoid being dropped. For more on auditing a class can be found at CNM's Academic Records site URL Address: https://www.cnm.edu/student-resources/academic-records/academic-records-list/grademode.html.

If the CNM District is impacted by snow or other weather that can make travel dangerous, the most efficient ways to receive information on whether the college is closed or delayed is the "AttentionCNM" emergency text messaging system, the weather line at 224-4SNO (4766) and the CNM website. Emails will also be sent to all CNM email accounts -- personal email accounts can be added through the AttentionCNM system. For more information, use this weather information site URL Address: http://www.cnm.edu/depts/marketing/weather

Tardy Policy

To avoid interrupting or distracting the class, students are expected to be prompt for each class. Class will begin promptly at the time scheduled. Students who arrive after roll call are absent.

Withdrawal/Drop Policy

Students who miss two consecutive class meetings may be dropped from the course. Students dropped from a course for non-attendance will be notified at their CNM e-mail address and will also be dropped from co-requisite courses. If the student disagrees with the action, he or she must contact the instructor within **two working days** of receipt of the notification. A student should not assume he/she will be dropped automatically. It is their responsibility to drop/withdraw from the course in order to avoid a grade of "F."

Important dates, deadlines and the last day to drop this course can be found at student resources URL Address: https://www.cnm.edu/student-resources/class-schedule/important-dates-and-deadlines

Grading

The following will be used to determine your grade in this course:

Assessments	Points/Percent
Homework/Programming	30%
Exercises(Mostly in class)	10%
Exam #1	15%
Exam #2	15%
Final Exam	30%
Total	**100%**

The following scale is used to assign course grades:

Grade Scale	Grade
91-100	**A**
81-90	**B**
71-80	**C**
61-70	**D**
Below 61	**F**

Note: A final grade of "D" or "F" is not acceptable for this course if it is required for graduation or as a prerequisite for other courses. A final grade of "D" or "F" requires repeating this course.

Late/Make-up/Re-take Policies

Makeup Quizzes/Exams

Cumulative make-up exam one week before the final exam that can be used to replace the missed exam and quiz scores with a 30%-point deduction.

Late Assignments

Late assignments receive a deduction of 30%. Assignments more than one week late are not accepted. Partially completed homework is not acceptable and receives a zero.

Course Codes & Policies

Course Communication

All official email communication to students, originating from CNM, will be sent to a student's assigned CNM email account in MyCNM or within CNM Learn. By becoming a student at CNM, students agree to follow the technology use policies outlined in the Information Technology Use Administrative Directive URL Address: http://www.cnm.edu/depts/hr/policies-and-procedures/the-source/is-1002/IS-1002-policy

Student Behavior

As a member of this classroom, students are expected to behave in a professional manner. Students are responsible for understanding and adhering to the CNM codes and policies that govern and prescribe acceptable student behavior. The codes and policies of this course are governed by the Student Code of Conduct URL Address: http://www.cnm.edu/depts/dean-of-students/student-code-of-conduct

If a student behaves in a manner that is disruptive to the educational process or violates any other provisions of the Code of Conduct, this behavior will (generally) first be addressed by the instructor. If the behavior continues, or escalates, this behavior will be reported to the Dean of Students for appropriate disciplinary action. If a student demonstrates behavior that is a violation of the Code of Conduct, CNM instructors may require the student to leave the classroom. Should this occur, the incident will be reported to the Dean of Students URL Address: http://www.cnm.edu/depts/dean-of-students for further disciplinary action.

Academic Dishonesty

Students in this course and in all college classes are expected to complete their course work in accordance with a high level of honesty and integrity. Academic dishonesty on the part of a student, such as cheating on a test or aiding other students' cheating, plagiarism, falsification, fabrication, unauthorized collaboration, or submitting a piece of work from another course for credit, will be subject to academic sanctions. Students committing these offenses are subject to penalty ranging from a "0" on the assignment or test, to an "F" for the course.

For more detailed information about academic dishonesty and how such incidents will be handled by your instructors and by the Institute, read the Codes & Policies section of the CNM Catalog. The Dean of Students will be notified of any instances of academic dishonesty URL Address: http://www.cnm.edu/depts/dean-of-students/academicdishonesty.html

Emergency Procedures

An emergency is any state requiring immediate action to prevent dire consequences, usually immediate threat to life, limb or property. To report an emergency, call 911 from any CNM phone. If a CNM phone is not available, call 224-3001 from a cell or pay phone, or see the emergency procedures site URL Address: http://www.cnm.edu/depts/security/Emergency-Procedures.html

Electronic Devices in Class

When students are in class or a lab, cellular telephones, pagers and beepers must be turned off or switched to silent or vibration mode. Electronic entertainment devices are to be turned off and headphones removed.

Smoke Free Campus

In an effort to respect all students, CNM has created smoke-free zones as well as designated smoking areas at all CNM locations. The use of tobacco products, including the use of chewing tobacco and e-cigarettes, is limited to the designated smoking areas and banned from all other areas. View CNM's policy on smoking URL Address: https://www.cnm.edu/about/smoke-free-campus and view a map of the designated smoking areas URL Address: https://www.cnm.edu/about/smoke-free-campus/designated-smoking-areas

Paper Cut
Papercut URL Address: https://www.cnm.edu/depts/academic-affairs/papercut is part of the college's sustainability efforts and provides students with an initial allowance of 150 sheets of paper for printing up to 300 double-sided pages each term. If this allotment runs out, additional pages may be purchased by the student.

Student Resources/Advisement/Graduation

CNM Information Technology Services (ITS)
For technical support on all CNM computers, printers, email, passwords, networks, myCNM, you may contact ITS at 224-HELP or ITS Service Desk [itsservicedesk@cnm.edu]. For all inquiries regarding CNM Learn, contact Embanet URL Address: https://embanet.frontlinesvc.com/app/home/p/67, the 24/7 assistance and support center.

Disability Resources
Students with disabilities, including dual enrollment and high school age students, are encouraged to contact the Disability Resource Center URL Address: http://www.cnm.edu/depts/disability-resource-center to arrange for academic adjustments, including auxiliary aids, i.e., accommodations.
Main or Westside Campus 224-3259, e-mail: disability_resource_center@cnm.edu;
Montoya Campus 224-5946, e-mail: disability_resource_center_jmmc@cnm.edu;

Veteran Services
We appreciate the services provided by our Armed Forces and want to make sure eligible students are aware of their benefits and the services that are available. Information about these benefits and services can be accessed at the veterans site URL Address: http://cnm.edu/depts/fass/veterans/ or students can swing by the VA Certifiers office located on the main campus inside the financial aid office.

Assistance Centers for Education (ACE)
These are locations available to students for tutoring, to work on distance learning, homework assignments, class projects, and for one-on-one assistance. Contact ACE URL Address: http://www.cnm.edu/depts/tutoring for more information. Software and network access required for this class is available in the open lab, E102.

BIT Advisor
The School of Business & Information Technology (BIT) school advisor is located within the BIT Main Office (505-224-3811). The BIT advisor specializes in the programs offered through BIT and is available to assist you in planning your schedule, evaluating your program of studies and completing graduation audits/checklists. It is highly recommended that students meet with the BIT advisor at least once a year to discuss your program of study and develop a degree plan. More information can be found by reviewing the BIT programs of study URL Address: http://www.cnm.edu/programs-of-study/business-information-technology

BIT Achievement Coach
The Achievement Coach (505-224-3811) is available to all BIT students. The Achievement Coach URL Address: https://www.cnm.edu/depts/achievement-coach/contact-a-coach assists students with finding answers to questions involving college and life. The Achievement Coach helps with the following: campus and community supports, balancing school, family and work, life changes and obstacles.

Graduation
Commit to graduate! Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime. Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Learn more at Set your graduation date today URL Address: http://www.cnm.edu/student-resources/academicrecords/graduation

Additional questions regarding graduation can also be answered by our school advisor, faculty advisors, and achievement coach. (505-224-3811)

Course Evaluations

Students are expected to complete their course evaluations by the due date stated in the course evaluation notification email. Students can obtain access to their course evaluations through the email notification link or through the Course Evaluations link under the Students Tab in myCNM.

Tentative Class Schedule

Syllabus & Class Schedule **The** syllabus and class schedule are subject to change by the instructor. Changes will be made with as much advance notice as possible. Assignments are posted to Blackboard.

Class Schedule

Due Date	Reading Assignment
	Chapter 1 Introduction to MATLAB, getting started & solving problems. MATLAB Environment Chapter 2 Matrix Manipulation
	Chapter 3 Built-in MATLAB Functions
	Chapter 4 Problem with Two Variables, Special Matrices Homework Lab 1
	Homework Lab 2 [date] Exam 1 (Chapter 1 – 4)
	Chapter 5 Plotting Chapter 6 User-Defined Functions
	Chapter 7 User-Controlled Input and Output and Data Files Homework Lab 3
	Chapter 8 Logical Functions and Control Structures
	Homework Lab 4
	[date] Exam 2 (Chapter 5-8)
	Chapter 9 Loops
	Chapter 10 Matrix Algebra
	Chapter 11 Other Kinds of Arrays
	Chapter 12 Symbolic Mathematics
	Chapter 13 Numerical Techniques Homework Lab 5
	Final Exam Week

Sample Assessments for CSCI 1153 – Programming in MatLab

The following could be used as discussion prompts or homework, exam, or quiz questions.

Essential Skill: Critical Thinking
Component Skill: Evidence Acquisition

Explain under what circumstances (provide an example for each) the following regression methods are used: linear, linear through zero, polynomial.

Essential Skill: Quantitative Reasoning
Component Skill: Analysis of Quantitative Arguments

Evaluate the data points, data values, and number of data for different order of polynomial functions and polynomial regressions, compare and contrast with the outcomes of the real world.

Essential Skill: Information & Digital Literacy
Component Skill: Information Structure

Illustrate the data types, data formats, and data structures of different regression and the representations of how to plot or draw the results (on a screen) and how store the result in a file.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Math Science & Engineering
Course Number, Title, Credits: Math 1211 Problem Solving with Formulas, Measurement and Algebra, 1 credit
Co-requisite Course Number and Title, if any: N/A
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person (Faculty Contact Expert): Ella Sitkin, Full Time Faculty
Email and Phone Number of Contact Person: esitkin@cnm.edu, 505-224-4000 x 50712

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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. Link to General Education Information*

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

Which three essential skills will be addressed? *Note: these must be the required skills for the course's content area as listed in the Part B instructions. (Link to rubric for each Essential Skill)*

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

C. Learning Outcomes

This course follows the CCNS SLOs for

NA – This course is unique to CNM

List all learning outcomes that are shared between course sections at your institution.

1. **Create and apply algebraic models to solve problems.**
   Component 1: Create linear algebraic models by constructing ratios and proportions and use to solve problems.

Component 2: Apply basic exponential algebraic models including compound interest and percent increase and decrease to solve applied problems
Component 3: Solve applied problems related to measurement

2. **Use quantitative reasoning to solve problems**
   Component 1: Select and use appropriate formulas to solve problems.
   Component 2: Solve a formula for a specific variable
   Component 3: Use appropriate notation, including scientific notation, level of precision, and terminology when solving problems and communicating answers.
   Component 4: Use appropriate unit conversions and apply dimensional analyses as needed to solve problems.
   Component 5: Apply non-algebraic techniques, such as drawing pictures, performing multiple arithmetic calculations, and using trial and error to solve problems.

3. **Use critical thinking techniques**
   Component 1: Assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*
This course is heavily application oriented. The student will be required to fully explain problem solving methods and solutions using appropriate terminology, notation and using a clear communication style in order to convey results and outcomes. Further, this course is designed to be project and group-activity based. Students will frequently interact with each other to communicate ideas and solutions. Students will be required to explain mathematical concepts to other students in order to foster a deeper understanding of the topic. Students will be encouraged to restate problems in their own words to devise their own conjectures about the problem and share that with their peers. Assessment will take the form of a short project where communication of ideas is key. For example, students may be asked to bring in a formula that would typically be used in their chosen field. The student will explain the formula, using proper notion to represent the formula. The students will be asked to find the most effective way to describe how the formula is used as well as demonstrating a real problem involving the use of the formula.

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

This mathematics course is designed to help students integrate various mathematical tools with critical thinking to solve sophisticated problems. One aspect of critical thinking in mathematics involves being able to derive different strategies for solving problems. Given a problem, students will be required to parse that problem into what is known (the "givens") and the unknowns (what needs to be found or calculated). Students will develop a reasonable strategy for solving the problem. Students will be required to state, define and describe their problem solving process for specific problems and state solutions using clear language and appropriate terminology. Students will also be required to assess whether their solution is reasonable for the context of the problem. Students will need to solve problems with alternative methods to check for correctness. Students will demonstrate their flexibility in applying different strategies for problem solving. There are many strategies for solving quantitative problems. For example, creating algebraic models , drawing diagrams or pictures, creating organized tables, using trial and error, or working backwards from the desired outcome are some of the common strategies.

A specific critical thinking learning outcome is incorporated into this course. The specific learning outcome states that students will be able to assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods.

Assessment of critical thinking in this course will be determined by providing the student with a multi-step, moderately complex application problem that is agreed upon by the math department. This problem will require the student to demonstrate their proficiency at applying problem solving strategies as outlined above.

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

In this course, students will use basic numerical and quantitative skills and tools needed to work with and critically evaluate quantitative information in both everyday life and job-related skills. The focus will be on applying basic mathematical concepts to solve real-world problems, and to develop skills in developing and working with mathematical models. Students will be required to use correct and appropriate mathematical terminology, symbols and pictures to document their problems, solutions, analyses and interpretations.

The course is project-based with extensions to a wide variety of professions and trades. Course content is designed to engage the student to develop their skills working with and interpreting formulas, algebraic models and measurements. Students will practice model development and correct formula usage using basic principles of algebra, scaling, dimensional analysis and measurement.

Assessment of Quantitative Reasoning in this course problem will be determined by providing the student with a moderately complex application problem that is agreed upon by the math department. Student will be asked to apply one or more techniques to develop and test a model and then use the model to find a solution.

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*

N/A

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

N/A

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM stipulates the following assessment policy:"The SAAC assessment process includes annual reporting for all general education content areas. Each of the essential skills associated with a content area, as shown in the table below, must be assessed at least twice during a planned, six-year cycle, and at least one essential skill must be assessed each year. For every general education course, at minimum a representative sample of the student enrollment must be assessed at least once during the six-year cycle." In accordance with the stipulations of the institutional policy, the essential skills for Math 1211 will be assessed as part of the schedule defined by the Math department assessment team: 2018/19: Math 1315 (College Algebra); 2019/20: Math 1330 (Statistics) & Math 1340 (Design with Geometry); 2020/21: Math 1320 (Survey of Mathematics) and Math 1460 (Elements of Calculus); 2021/22: Math 1310 (Intermediate Algebra); 2022/2023: Math 1211, Math 1212, Math 1213 (Problem Solving courses). In addition, the policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of math faculty.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

SAMPLE SYLLABUS: Math 1211 Fall 2018

Problem Solving with Formulas, Measurements and Algebra

I. General Information

Instructor:
Office:
Phone:
Office Hours:

Sections:
Email:

Communication: Monday through Friday (5pm) I will respond to email in less than 24 hours (usually significantly less). On Friday (from 5:00pm and on), Saturday and Sunday, the response time may be longer but no later than the following Monday.

II. Course Description

This course presents strategies for solving mathematical problems; topics include solving problems with ratios, proportions, and percentages, precision in measurement, dimensional analysis, working with and solving formulas, solving 2-step linear equations and creating and solving algebraic models.

Prerequisite: Math 0970 or a recommendation by an admissions counselor based on performance on a placement exam (Accuplacer, ACT, or SAT). Any student who does not meet the prerequisite for this course may be dropped from the class at any time during the term.

III. Student Learning Outcomes At the end of this course, students should be able to:

1. **Create and apply algebraic models to solve problems**.
   Component 1: Create linear algebraic models by constructing ratios and proportions and use to solve problems.
   Component 2: Apply basic exponential algebraic models including compound interest and percent increase and decrease to solve applied problems
   Component 3: Solve applied problems related to measurement

2. **Use quantitative reasoning to solve problems**
   Component 1: Select and use appropriate formulas to solve problems.
   Component 2: Solve a formula for a specific variable
   Component 3: Use appropriate notation, including scientific notation, level of precision, and terminology when solving problems and communicating answers.
   Component 4: Use appropriate unit conversions and apply dimensional analyses as needed to solve problems.
   Component 5: Apply non-algebraic techniques, such as drawing pictures, performing multiple arithmetic calculations, and using trial and error to solve problems.

3. **Use critical thinking techniques**
   Component 1: Assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods.

4. Texts/Materials

Textbook: Mathematics for the Trades: A Guided Approach (10th Ed.), by Robert Carman and Hal Saunders. Inclusive Access is required. You will pay for Inclusive Access when you pay the registration and tuition fees for the course. The Inclusive Access will contain your MyMathLab access as well as access to the eText. You can also pay for an optional "upgrade" that will include a print copy of the text book in loose leaf format.

To access your eText, once logged into the course in CNM Learn, click on the MyMathLab link in the course menu on the left and then select MyLab Math Pearson eText.

Other necessities: Calculator, 3-ring binder, computing device, reliable internet connection

- Calculator: A scientific calculator is required for this course.
- You may wish to have a 3-ring binder to keep all your notes and assignments
- Access to an appropriate computing device and reliable internet connection is an essential requirement. Technology is not 100% perfect 100% of the time. You should create a back-up plan in case your computing device malfunctions or you lose internet connectivity.

5. Course Requirements:

Attendance

CNM Policy

According to CNM regulations, students enrolled for credit or audit are expected to attend all class sessions. Students who miss the equivalent of 15% of contact time may be dropped from the course by the instructor. But it is ultimately the student's responsibility to withdraw from the course. Absences from class do not relieve students from responsibility

Netiquette

Your online behavior should be respectful just as it would be in a physical classroom. All communications should be polite and not contain inappropriate language. Remember that typing in all capital letters gives the impression you are yelling. Take a moment to check your grammar and spelling and to make sure your ideas are coming across clearly.

MyMathLab Assignments

- **Homework assignment details**. Homework assignments are found in CNM Learn -> MyMathLab -> MyLab Homework. Refer to the schedule at the end of this syllabus for the overall information and the Learning Modules in CNM Learn for assignment details. It is your responsibility to read and understand the assignments and stay on top of the deadlines.
- **Assignment due dates**. Homework assignments are due as shown in the schedule unless otherwise specified by the instructor in class.
- **Late policy for assignments**. There is a penalty of 5% per day for late assignments. You may not work on any homework assignment beyond the FINAL ASSIGNMENT AND QUIZ DEADLINE given in the schedule attached to this syllabus. There are no exceptions.

In-class activities

- Class time will be spent primarily on small projects and worksheets. Some activities will be group oriented and others will be individual.
- **Due dates** for the specific activity will be as shown in the schedule unless otherwise specified by the instructor in class.
- **Late policy for assignments**. There is a penalty of 5% per day for late assignments.

Discussion Posts and Check-ins

- **Discussion post details**. There is one discussion forum that you will participate in during the course. This is an Introduction forum at the beginning of the semester. Instructions for Introduction post are found in your Learning Modules in CNM Learn.
- **Discussion due date**. The due date for the Introduction post is given in the schedule.
- **Late policy for discussion post**. There are no deadline extensions for any reason.
- **Check-ins**. Once during the semester, you will individually check in with the instructor by creating an entry in the online journal. This is entirely private. Only you and the instructor can read your entry. Instructions for the Check-ins are found in your Learning Modules on CNM Learn.
- **Check-i**n due date is given in the schedule.

Online Quizzes

- Online Quizzes are taken in MyMathLab and can be found MyMathLab -> MyLab Math Quizzes & Tests and cover the material in each week's module.
- Each Quiz has a time limit of 60 minutes. You have 2 attempts. The highest score is recorded. If you are satisfied with your first attempt, you need not take it again.
- Make sure you are prepared and will not be interrupted. The quiz must be taken in one sitting and cannot be stopped and restarted later.
- Quizzes must be taken independently. Collaborating with anyone during a quiz is considered academic dishonesty and subject to disciplinary action.
- Quizzes (both attempts) must be taken on or before the FINAL ASSIGNMENT AND QUIZ DEADLINE as given in the schedule on the last page of this syllabus.

In-class quizzes

A one question, 10-minute quiz will be given each week at the end of the week. The question will be drawn from the homework for the week.

Final Exam

- The Final Exam will be taken in class on the last day of the course.
- The deadline for the Final Exam is not flexible. No extensions are possible for any reason.
- The Final Exam cannot be made up. A zero will be recorded for any student who does not take the exam.
- An optional Final Exam Review is available in MyMathLab to help you prepare for the exam. The score on the Review has no effect on your grade.
- You may bring one 3 x 5 card with **handwritten** notes (both sides okay).
- You must bring a scientific calculator. Graphing calculators are not allowed.

Success Tips

- MyMathLab contains a "Study Plan". The Study Plan is a good source for extra practice. There is no grade associated with the Study Plan so you can try it as often and whenever you'd like. Click on MyMathLab and then "MyLab Math Study Plan".
- Read the Syllabus carefully. Review it every week to stay on track.
- Post all the deadlines on your favorite calendar
- Ask for help when you need it. Don't wait until the end.

System Outages

Any extended campus wide system outage or MyMathLab outage that affects the students' ability to complete assignments or quizzes will be considered and if necessary and possible, deadline extensions granted.

Personal Outages:

No extensions are granted in the case where outages are due to students' personal computing devices or internet connectivity. Students are advised to have a back-up plan should their own systems fail.

Registration Deadlines:

- Last day to drop without a W: Aug 30, 2018
- Last day to drop with a W or change grading option: Sept 12, 2018

Disability Statement:

We will accommodate students with disabilities documented by the CNM Disability Resource Center. During the first two weeks of the semester, those students should inform the instructor of their needs.

6. Grading Policy: The grades will be assigned based on the standard scale:

A = 90 – 100% B = 80 – 89% C = 70 – 79% D = 60 – 69% F = 0 – 59%

Grades will be calculated using the following scheme:

MyMathLab Homework Assignments and Quizzes, Discussion post and check-in	25%
In-class activities and worksheets	35%
In-class quizzes	10%
Final Exam	30%

In the event CNM closes on the day of the final exam, final grades for students will be calculated based on all work assessed up to that point in the course.

VII. Additional CNM Announcements

- **PaperCut:** PaperCut is an element of the sustainability effort at CNM. Its purpose is to reduce paper usage. Each student has an online account with an allotment of 150 free printer pages per term. If this allotment runs out, additional pages may be purchased by the student. For more information, go to the PaperCut website: http://cnm.edu/papercut.
- **Commit to graduate**! **Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime.** Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Set your graduation date today! Learn more at http://cnm.edu/graduation.
- **Smoke-free campus**: In an effort to respect all students, CNM has created smoke-free zones as well as designated smoking areas at all CNM locations. The use of tobacco products, including the use of chewing tobacco and e-cigarettes is limited to the designated smoking areas and banned from all other areas. View CNM's policy on smoking at http://www.cnm.edu/about/smoke-free-campus. View a map of the designated smoking areas at http://www.cnm.edu/about/smoke-free-campus/designated-smoking-areas.
- **Faculty Feedback**: The Faculty feedback system allows your instructor to securely provide feedback on your performance in this course. If your instructor uses it, you may be contacted by a CNM Academic/Achievement Coach to follow up on the feedback. You can read more about the system here: http://www.cnm.edu/depts/academic-affairs/documents/FacultyFeedbackStudentInformation.docx.

VIII. Tentative Schedule:

For details on assignments, see the appropriate Learning Module in CNM Learn. All deadlines are at TBD on the date given unless otherwise noted.

Module 1: Ratios, proportions, percentages		
Week begins	**Work & Topics Covered**	**Deadline**
Week 1 TBD	Covered this week: Chapter 4 on ratios, proportions and percentages Post introduction on Discussions eText Reading and MyMathLab Assignments for sections 4.2, 4.4 and 4.5 MyMathLab Quiz 1 (On Chapter 4) In Class Group Project (all week) on Proportions In Class Quiz #1	TBD

Module 2: Measurement		
Week begins	**Work & Topics Covered**	**Deadline**
Week 2 TBD	Covered this week: Chapter 5 on measurement Create Check-in entry in Journal eText Reading and MyMathLab Assignments for Sections 5.2, 5.3, 5.4 MyMathLab Quiz 2 (On Chapter 5) In Class Group Project (all week) on Measurement In Class Quiz #2	TBD

Module 3: Algebra and Formulas		
Week begins	**Work & Topics Covered**	**Deadline**
Week 3 TBD	Covered this week: part of Chapter 7 on Algebra and Formulas eText Reading and MyMathLab Assignments for Sections 7.4, 7.5 MyMathLab Quiz 3 (On Sections 7.4 – 7.5) Bring "Fantastic Formula" to discuss in class (instructions handed out in class last week) In Class Quiz #3	TBD

Module 4: Algebra, Formulas and Scientific Notation		
Week begins	**Work & Topics Covered**	**Deadlines**
Week 4 TBD	Covered this week: part of Chapter 7 on Algebra and Scientific Notation eText Reading and MyMathLab Assignments for Sections 7.6 and 7.8 MyMathLab Quiz 4 (On Sections 7.6 and 7.8) In Class individual worksheet on Career Algebra challenge In Class Quiz #4	TBD

Module 5: Final Exam Pretest, Review and Final Exam		
Week begins	**Work & Topics Covered**	**Deadlines**
Week 5 TBD	Review for Final Exam Take Final Exam (last day of class)	**TBD**

Final MyMathLab Assignment and Quiz Deadline: TBD

Math 1211 Sample Communication Assessment

About the assessment.
This assessment takes the form of a short project. The results may be presented orally by a student to the class or group. In cases of Distance Learning courses, the results may be presented in written fashion.

Directions to the student.
Find a formula that is commonly used in your intended trade or occupation. Describe how this formula is used, what types of problems are solved by using the formula, describe what data needs to be known in order to use the formula, and illustrate how to use the formula. Also specify the units that are required for the input data and what the units of the final value calculated are. Use of diagrams and figures are encouraged as appropriate to communicate clearly about your formula.

Math 1211 Sample Critical Thinking Assessment

About the assessment.
The student is given a multi-step application word problem of moderate complexity. The specific problem will be developed by the math faculty.

Directions to the student.
Using the problem given above, do the following.

1. List the information or data that is given in the problem
2. Restate in your own words what the problem is asking you to find.
3. Develop a problem solving strategy for finding a solution. Show each step in the process. Give enough detail so that another student could replicate your work given the same problem with different data.
4. Execute your strategy. That is, use the steps you have described to find the answer.
5. Clearly state the solution using appropriate notation and terminology.
6. Describe a means for checking the reasonableness of the solution in the context of the problem.

Math 1211 Sample Quantitative Reasoning Sample Assessment

About the assessment.
The student is given a multi-step application word problem of moderate complexity. The specific problem will be developed by the math faculty.

Directions to the student.
Given the problem as stated above, do the following.

1. Create an algebraic model (equation) to represent the problem
2. Use the information given in the problem to test the equation for its accuracy in determining the correct solution.
3. Find the solution, stating the solution as a complete sentence and including units as appropriate.
4. Describe a strategy for checking the solution. Illustrate how use the strategy to check your solution.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Math Science & Engineering
Course Number, Title, Credits: Math 1212, Problem Solving Statistics and Probability, 1 credit
Co-requisite Course Number and Title, if any: NA
Is this application for your system (ENMU, NMSU, & UNM)? NA
Name and Title of Contact Person: Click here to enter text.Cynthia Griffin Ediger
Email and Phone Number of Contact Person: cediger@cnm.edu, 505-224-4000 ext 50310

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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. Link to General Education Information*

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

Which three essential skills will be addressed? *Note: these must be the required skills for the course's content area as listed in the Part B instructions. (Link to rubric for each Essential Skill)*

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

C. Learning Outcomes

This course follows the CCNS SLOs for

NA – This course is unique to CNM

List all learning outcomes that are shared between course sections at your institution.

1. **Describe and summarize data graphically and numerically to solve problems.**
   Component 1: Represent data using graphs and tables such as histograms and frequency distribution tables.

Component 2: Interpret graphical displays of data
Component 3: Calculate measures of central tendency including mean, median, mode, and quartiles and use them to characterize and interpret data.
Component 4: Calculate measures of dispersion including range and standard deviation and use them to characterize and interpret data.
Component 5: Calculate probability for single and compound events using probability rules to solve problems.

2. **Use critical thinking techniques**
   Component 1: Assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

Communication. *Genre and Medium Awareness, Application and Versatility; Strategies for Understanding and Evaluating Messages; and Evaluation and Production of Arguments.*
This course is heavily application oriented. The student will be required to fully explain problem solving methods and solutions using appropriate terminology, notation and using a clear communication style in order to convey results and outcomes. Further, this course is designed to be project and group-activity based. Students will frequently interact with each other to communicate ideas and solutions. Students will be required to explain mathematical concepts to other students in order to foster a deeper understanding of the topic. Students will be encouraged to restate problems in their own words to devise their own conjectures about the problem and share that with their peers. Assessment will be in the form of an individual project where effective communication is key. For example, students may be asked to choose and analyze a graph, chart or data table from their choosen field or a field of interest. Students will be asked to describe where the data came from, how the data is being used, critically evaluate the information it provides, assess the validity of the data presented and determine how this information could address problem solving. Students will report their conclusions in a presentation using correct mathematical terminology.

Critical Thinking. *Problem Setting; Evidence Acquisition; Evidence Evaluation; and Reasoning/Conclusion*
This mathematics course is designed to help students integrate various mathematical tools with critical thinking to solve sophisticated problems. One aspect of critical thinking in mathematics involves being able to derive different strategies for solving problems. Given a problem, students will be required to parse that problem into what is known (the "givens") and the unknowns (what needs to be found or calculated). Students will develop a reasonable strategy for solving the problem. Students will be required to state, define and describe their problem solving process for specific problems and state solutions using clear

language and appropriate terminology. Students will also be required to assess whether their solution is reasonable for the context of the problem. Students will need to solve problems with alternative methods to check for correctness. Students will demonstrate their flexibility in applying different strategies for problem solving. There are many strategies for solving quantitative problems. For example, creating algebraic models , drawing diagrams or pictures, creating organized tables, using trial and error, or working backwards from the desired outcome are some of the common strategies. Students will be assessed using a multi-step problem that is used in a career trade or health occupation.

A specific critical thinking learning outcome is incorporated into this course. The specific learning outcome states that students will be able to assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods. Assessment of critical thinking in this course will be determined by a data driven, moderately complex problem that is agreed upon by the math department. This problem will require the student to demonstrate their proficiency at applying problem solving strategies as outlined above in the context of data analysis, basic statistics and simple probability.

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

In this course, students will use basic numerical and quantitative skills and tools needed to work with and critically evaluate quantitative information in both everyday life and job-related skills. The focus will be on applying basic mathematical concepts to solve real-world problems, and to develop skills in interpreting and working with data. Students will be required to use correct and appropriate mathematical terminology, symbols and pictures to document their problems, solutions, analyses and interpretations.

The course is project-based with extensions to a wide variety of professions and trades. Course content is designed to engage the student to develop their skills working with and interpreting data. Students will use data analysis and interpretation using basic principles of descriptive statistics such mean, median, mode, range and standard deviation as well as the interpretation of data in tables and graphs, such as line graphs, bar graphs, circle graphs, boxplots, and frequency distributions. Additionally, elementary probability, such as compound probability and conditional probability are also presented as an effective way to analyze data to informed student conclusions and decision-making.

Assessment of Quantitative Reasoning in this course problem will be determined by providing the student with an open-ended statistical or probabilistic word problem that is agreed upon by the math department. Student will be asked to apply one or more techniques to represent and interpret the relevant data in the problem by calculating basic statics or probabilities.

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 box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

Information & Digital Literacy. *Authority and Value of Information; Digital Literacy; Information Structure; and Research as Inquiry*
In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM stipulates the following assessment policy:"The SAAC assessment process includes annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a planned, six-year cycle, and at least one essential skill must be assessed each year. For every general education course, at minimum a representative sample of the student enrollment must be assessed at least once during the six-year cycle." In accordance with the stipulations of the institutional policy, the essential skills for Math 1212 will be assessed as part of the schedule defined by the Math department assessment team: 2018/19: Math 1315 (College Algebra); 2019/20: Math 1330 (Statistics) & Math 1340 (Design with Geometry); 2020/21: Math 1320 (Survey of Mathematics) and Math 1460 (Elements of Calculus); 2021/22: Math 1310 (Intermediate Algebra); 2022/2023: Math 1211, Math 1212, Math 1213 (Problem Solving courses). In addition, the policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of math faculty.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

SAMPLE SYLLABUS: Math 1212 Fall 2018

Problem Solving with Statistics and Probability

I. General Information

Instructor:
Office:
Phone:
Office Hours:

Sections:
Email:

Communication: Monday through Friday (5pm) I will respond to email in less than 24 hours (usually significantly less). On Friday (from 5:00pm and on), Saturday and Sunday, the response time may be longer but no later than the following Monday.

II. Course Description

This course presents an introduction to statistics and probability. Topics include constructing and interpreting graphical representations of data, finding and interpreting measures of central tendency (mean, median, mode), finding and interpreting measures of dispersion (standard deviation, range), and calculating probability for single and compound events using probability rules.

Prerequisite: Math 0970 or a recommendation by an admissions counselor based on performance on a placement exam (Accuplacer, ACT, or SAT). Any student who does not meet the prerequisite for this course may be dropped from the class at any time during the term.

III. Student Learning Outcomes At the end of this course, students should be able to:

1. **Describe and summarize data graphically and numerically to solve problems.**
   Component 1: Represent data using graphs and tables such as histograms and frequency distribution tables.
   Component 2: Interpret graphical displays of data
   Component 3: Calculate measures of central tendency including mean, median, mode, and quartiles and use them to characterize and interpret data.
   Component 4: Calculate measures of dispersion including range and standard deviation and use them to characterize and interpret data.
   Component 5: Calculate probability for single and compound events using probability rules to solve problems.

2. **Use critical thinking techniques**
   Component 1: Assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods.

IV. Texts/Materials

Textbook: Mathematics for the Trades: A Guided Approach (10th Ed.), by Robert Carman and Hal Saunders. Inclusive Access is required. You will pay for Inclusive Access when you pay the registration and tuition fees for the course. The Inclusive Access will contain your MyMathLab access as well as access to the eText. You can also pay for an optional "upgrade" that will include a print copy of the text book in loose leaf format.

To access your eText, once logged into the course in CNM Learn, click on the MyMathLab link in the course menu on the left and then select MyLab Math Pearson eText.

Other necessities: Calculator, 3-ring binder, computing device, reliable internet connection

- Calculator: A scientific calculator is required for this course.
- You may wish to have a 3-ring binder to keep all your notes and assignments
- Access to an appropriate computing device and reliable internet connection is an essential requirement. Technology is not 100% perfect 100% of the time. You should create a back-up plan in case your computing device malfunctions or you lose internet connectivity.

V. Course Requirements:

Attendance

CNM Policy

According to CNM regulations, students enrolled for credit or audit are expected to attend all class sessions. Students who miss the equivalent of 15% of contact time may be dropped from the course by the instructor. But it is ultimately the student's responsibility to withdraw from the course. Absences from class do not relieve students from responsibility

Netiquette

Your online behavior should be respectful just as it would be in a physical classroom. All communications should be polite and not contain inappropriate language. Remember that typing in all capital letters gives the impression you are yelling. Take a moment to check your grammar and spelling and to make sure your ideas are coming across clearly.

MyMathLab Assignments

- **Homework assignment details**. Homework assignments are found in MyMathLab -> MyLab Homework. Refer to the schedule at the end of this syllabus for the overall information and the Learning Modules in CNM Learn for assignment details. It is your responsibility to read and understand the assignments and stay on top of the deadlines.
- **Assignment due dates**. Homework assignments are due as shown in the schedule unless otherwise specified by the instructor in class.
- **Late policy for assignments**. There is a penalty of 5% per day for late assignments. You may not work on any homework assignment beyond the FINAL ASSIGNMENT AND QUIZ DEADLINE given in the schedule attached to this syllabus. There are no exceptions.

In-class activities

- Class time will be spent primarily on small projects and worksheets. Some activities will be group oriented and others will be individual.
- **Due dates** for the specific activity will be as shown in the schedule unless otherwise specified by the instructor in class.
- **Late policy for assignments**. There is a penalty of 5% per day for late assignments.

Discussion Posts and Check-ins

- **Discussion post details**. There is one discussion forum that you will participate in during the course. This is an Introduction forum at the beginning of the semester. Instructions for Introduction post are found in your Learning Modules in CNM Learn.
- **Discussion due date**. The due date for the Introduction post is given in the schedule.
- **Late policy for discussion post**. There are no deadline extensions for any reason.
- **Check-ins**. Once during the semester, you will individually check in with the instructor by creating an entry in the online journal. This is entirely private. Only you and the instructor can read your entry. Instructions for the Check-ins are found in your Learning Modules on CNM Learn.
- **Check-i**n due date is given in the schedule.

Online Quizzes

- Online Quizzes are taken in MyMathLab and can be found MyMathLab -> MyLab Math Quizzes & Tests and cover the material in each week's module.
- Each Quiz has a time limit of 60 minutes. You have 2 attempts. The highest score is recorded. If you are satisfied with your first attempt, you need not take it again.
- Make sure you are prepared and will not be interrupted. The quiz must be taken in one sitting and cannot be stopped and restarted later.
- Quizzes must be taken independently. Collaborating with anyone during a quiz is considered academic dishonesty and subject to disciplinary action.
- Quizzes (both attempts) must be taken on or before the FINAL ASSIGNMENT AND QUIZ DEADLINE as given in the schedule on the last page of this syllabus.

In-class quizzes

A one question, 10-minute quiz will be given each week at the end of the week. The question will be drawn from the homework for the week.

Final Exam

- The Final Exam will be taken in class on the last day of the course.
- The deadline for the Final Exam is not flexible. No extensions are possible for any reason.
- The Final Exam cannot be made up. A zero will be recorded for any student who does not take the exam.
- An optional Final Exam Review is available in MyMathLab to help you prepare for the exam. The score on the Review has no effect on your grade.
- You may bring one 3 x 5 card with **handwritten** notes (both sides okay).
- You must bring a scientific calculator. Graphing calculators are not allowed.

Success Tips

- MyMathLab contains a "Study Plan". The Study Plan is a good source for extra practice. There is no grade associated with the Study Plan so you can try it as often and whenever you'd like. Click on MyMathLab and then "MyLab Math Study Plan".
- Read the Syllabus carefully. Review it every week to stay on track.
- Post all the deadlines on your favorite calendar
- Ask for help when you need it. Don't wait until the end.

System Outages

Any extended campus wide system outage or MyMathLab outage that affects the students' ability to complete assignments or quizzes will be considered and if necessary and possible, deadline extensions granted.

Personal Outages:

No extensions are granted in the case where outages are due to students' personal computing devices or internet connectivity. Students are advised to have a back-up plan should their own systems fail.

Registration Deadlines:

- Last day to drop without a W: ???
- Last day to drop with a W or change grading option: ????

Disability Statement:

We will accommodate students with disabilities documented by the CNM Disability Resource Center. During the first two weeks of the semester, those students should inform the instructor of their needs.

VI. Grading Policy: The grades will be assigned based on the standard scale:

A = 90 – 100% B = 80 – 89% C = 70 – 79% D = 60 – 69% F = 0 – 59%

Grades will be calculated using the following scheme:

MyMathLab Homework Assignments and Quizzes, Discussion post and check-in	25%
In-class activities and worksheets	35%
In-class quizzes	10%
Final Exam	30%

In the event CNM closes on the day of the final exam, final grades for students will be calculated based on all work assessed up to that point in the course.

VII. Additional CNM Announcements

- **PaperCut:** PaperCut is an element of the sustainability effort at CNM. Its purpose is to reduce paper usage. Each student has an online account with an allotment of 150 free printer pages per term. If this allotment runs out, additional pages may be purchased by the student. For more information, go to the PaperCut website: http://cnm.edu/papercut.
- **Commit to graduate**! **Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime.** Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Set your graduation date today! Learn more at http://cnm.edu/graduation.
- **Smoke-free campus**: In an effort to respect all students, CNM has created smoke-free zones as well as designated smoking areas at all CNM locations. The use of tobacco products, including the use of chewing tobacco and e-cigarettes is limited to the designated smoking areas and banned from all other areas. View CNM's policy on smoking at http://www.cnm.edu/about/smoke-free-campus. View a map of the designated smoking areas at http://www.cnm.edu/about/smoke-free-campus/designated-smoking-areas.
- **Faculty Feedback**: The Faculty feedback system allows your instructor to securely provide feedback on your performance in this course. If your instructor uses it, you may be contacted by a CNM Academic/Achievement Coach to follow up on the feedback. You can read more about the system here: http://www.cnm.edu/depts/academic-affairs/documents/FacultyFeedbackStudentInformation.docx.

VIII. Tentative Schedule:

For details on assignments, see the appropriate Learning Module in CNM Learn. All deadlines are at TBD on the date given unless otherwise noted.

Module 1: Reading and Constructing Graphs		
Week	**Work & Topics Covered**	**Deadline**
Week 1 TBD	Covered this week: Chapter 12.1 Reading and Constructing Graphs Post introduction on Discussions eText Reading and MyMathLab Assignments for Section 12.1 MyMathLab Module 1 Quiz (On Section 12.1) In Class Group Project (all week) on Constructing graphs In Class Quiz #1	TBD

Module 2: Measures of Central Tendency: Mean, Median, and Mode		
Week	**Work & Topics Covered**	**Deadline**
Week 2 TBD	Covered this week: Chapter 12.2 Measures of Central Tendency Create Check-in entry in Journal eText Reading and MyMathLab Assignments for Section 12.2 MyMathLab Module 2 Quiz (On Section 12.2) In Class Group Project (all week) on Calculating Measures of Central Tendency In Class Quiz #2	TBD

Module 3: Measures of Dispersion		
Week	**Work & Topics Covered**	**Deadline**
Week 3 TBD	Covered this week: Provided Material on Measures of Dispersion: Range and Standard Deviation Provided Reading and MyMathLab Assignments for Measures of Dispersion MyMathLab Module 3 Quiz (On Measures of Dispersions) In Class Group Project (all week) on Calculating and Interpreting Range and Standard Deviation In Class Quiz #3	TBD

Module 4: Probability		
Week	**Work & Topics Covered**	**Deadlines**
Week 4 TBD	Covered this week: Provided Material on Probability Provided Reading and MyMathLab Assignments for Probability MyMathLab Module 4 Quiz (On Empirical and Theoretical Probability, Expected Value, Compound and Conditional Probability) In Class individual worksheet on Applying Probability In Class Quiz #4	TBD

Module 5: Final Exam Pretest, Review and Final Exam		
Week	**Work & Topics Covered**	**Deadlines**
Week 5 TBD	Review for Final Exam Take Final Exam (last day of class) **Final MyMathLab Assignment and Quiz Deadline**	**TBD**

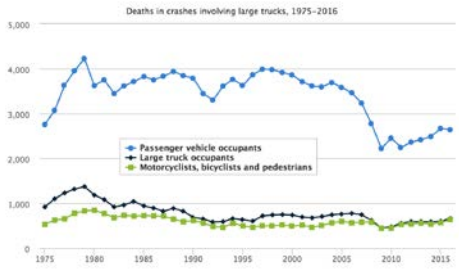
Math 1212 Sample Communication Assessment

About the assessment.
This assessment takes the form of a short project. The results may be presented orally by a student to the class or group. In cases of Distance Learning courses, the results may be presented in written report.

Directions to the student.
Find a graph or chart that applies to your chosen profession or a field that you are interested in and prepare a presentation based on the graph or chart to communicate the following:

- What and how is the data are displayed in this graph or chart?
- What is meaningful and extraneous information presented in the graph?
- What specific questions can be answered from the data displayed?
- What inferences or conclusions can be made from this display of data?

Example graph relevant to CNM Truck Driving program:



Source: http://www.iihs.org/iihs/topics/t/large-trucks/fatalityfacts/large-trucks

Math 1212 Sample Critical Thinking Assessment

About the assessment.
The student will be given a data driven, moderately complex problem that is agreed upon by the math department. This problem will require the student to demonstrate their proficiency at applying problem solving strategies as outlined above in the context of data analysis, basic statistics and simple probability.

Directions to the student.
Using the problem given above, do the following.

1. List the information or data that is given in the problem
2. Restate in your own words what the problem is asking you to find.
3. Develop a problem-solving strategy for finding a solution. Show each step in the process. Give enough detail so that another student could replicate your work given the same problem with different data.
4. Execute your strategy. That is, use the steps you have described to find the answer.
5. Clearly state the solution using appropriate notation and terminology.
6. Describe a means for checking the reasonableness of the solution in the context of the problem.

Math 1212 Sample Quantitative Reasoning Assessment

About the assessment.
The student with an open-ended statistical or probabilistic word problem that is agreed upon by the math department. Student will be asked to apply one or more techniques to represent and interpret the relevant data in the problem by calculating basic statics or probabilities.

Directions to the student.
Given the problem as stated above, do the following.

1. Create a statistical or probabilistic model (equation) to represent the problem
2. Use the information given in the problem to test the equation for its accuracy in determining the correct solution.
3. Find the solution, stating the solution as a complete sentence and including units as appropriate.
4. Describe a strategy for checking the solution. Illustrate how use the strategy to check your solution.

Example Problem.

(This problem could be used for either Critical Thinking or Quantitative Reasoning based on the focus of the assessment questions.)

A Student asks his three friends for some money.

The first friend makes the following offer: Flip a coin and if the coin lands heads up, I will give the you $20. If the coin lands tails up, I will give the you nothing.

The second friend makes the following offer: If you roll a 6-sided die, I will give you $3 for each dot on the up side of the die.

The third friend makes the following offer: If you roll a 12-sided die. I will give you $2 for each dot on the up side of the die.

Which offer is the best offer to accept? Support your answer with calculations, diagrams, and a step by step explanation to compare the three offers and to justify your answer.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: Central New Mexico Community College
Department: School of Math Science & Engineering
Course Number, Title, Credits: Math 1213 Problem Solving with Geometry and Right Triangle Trigonometry, 1 credit
Co-requisite Course Number and Title, if any: N/A
Is this application for your system (ENMU, NMSU, & UNM)? N/A
Name and Title of Contact Person: Cynthia Griffin Ediger
Email and Phone Number of Contact Person: cediger@cnm.edu, 505-224-4000 ext 50310

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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. Link to General Education Information*

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

Which three essential skills will be addressed? *Note: these must be the required skills for the course's content area as listed in the Part B instructions. (Link to rubric for each Essential Skill)*

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

C. Learning Outcomes

This course follows the CCNS SLOs for

NA – This course is unique to CNM

List all learning outcomes that are shared between course sections at your institution.

1. **Use plane geometry to solve problems.**
   Component 1: Accurately measure angles and classify as acute, obtuse or right angles.
   Component 2: Use simple geometric relationships involving intersecting lines

Component 3: Identify and find the area and perimeter of geometric shapes including circles, squares, rectangles, parallelograms, trapezoids and hexagons
Component 4: Apply the Pythagorean theorem to find the sides of a right triangle
Component 5: Solve applied problems involving area and perimeter of plane figures

2. **Use the properties of solid figures to solve problems.**
   Component 1: Identify and find the surface area of volume of solid objects including prisms, cubes, cones, cylinders, pyramids, spheres, and frustums.
   Component 2: Solve applied problems involving solid figures

3. **Use triangle trigonometry to solve applied problems**
   Component 1: Convert angles between decimal degrees, degrees and minutes, and radians
   Component 2: Find the values of trigonometric ratios
   Component 3: Solve right triangles using exact values for special triangles and approximate values for other right triangles. Use a calculator to approximate angle values using inverse trigonometric functions.

4. **Use critical thinking techniques**
   Component 1: Assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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

This course is heavily application oriented. The student will be required to fully explain problem solving methods and solutions using appropriate terminology, notation and using a clear communication style in order to convey results and outcomes. Further, this course is designed to be project and group-activity based. Students will frequently interact with each other to communicate ideas and solutions. Students will be required to explain mathematical concepts to other students in order to foster a deeper understanding of the topic. Students will be encouraged to restate problems in their own words to devise their own conjectures about the problem and share that with their peers.

Assessment will take the form of a short project where communication of ideas is key. For example, students may be asked to bring in a problem involving geometry or trigonometry that would typically be used in their chosen field. The student will explain the problem, using proper notion to represent the formula. The students will be asked to find the

most effective way to describe how the formula is used as well as demonstrating a real problem involving the use of the formula.

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

This mathematics course is designed to help students integrate various mathematical tools with critical thinking to solve sophisticated problems. One aspect of critical thinking in mathematics involves being able to derive different strategies for solving problems. Given a problem, students will be required to parse that problem into what is known (the "givens") and the unknowns (what needs to be found or calculated). Students will develop a reasonable strategy for solving the problem. Students will be required to state, define and describe their problem solving process for specific problems and state solutions using clear language and appropriate terminology. Students will also be required to assess whether their solution is reasonable for the context of the problem. Students will need to solve problems with alternative methods to check for correctness. Students will demonstrate their flexibility in applying different strategies for problem solving. There are many strategies for solving quantitative problems. For example, creating mathematical models , drawing diagrams or pictures, creating organized tables, using trial and error, or working backwards from the desired outcome are some of the common strategies.

A specific critical thinking learning outcome is incorporated into this course. The specific learning outcome states that students will be able to assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods.

Assessment of critical thinking in this course will be determined by providing the student with a multi-step, moderately complex application problem that is agreed upon by the math department. This problem will require the student to demonstrate their proficiency at applying problem solving strategies as outlined above.

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

In this course, students will use basic geometric, trigonometric and quantitative skills and tools needed to work with and critically evaluate quantitative information in both everyday life and job-related skills. The focus will be on applying basic concepts in geometry and trigonometry to solve real-world problems, and to develop skills in interpreting and working with mathematical models. Students will be required to use correct and appropriate mathematical terminology, symbols and pictures to document their problems, solutions, analyses and interpretations.

The course is project-based with extensions to a wide variety of professions and trades. Course content is designed to engage the student to develop their skills working with two and three dimensional geometry

and right triangle trigonometry. Students will practice mathematical model development and correct formula usage using basic principles of geometry and trigonometry.

Assessment of Quantitative Reasoning in this course problem will be determined by providing the student with a moderately complex application problem that is agreed upon by the math department. Student will be asked to apply one or more techniques to develop and test a model and then use the model to find a solution.

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*
N/A

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

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM stipulates the following assessment policy:"The SAAC assessment process includes annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a planned, six-year cycle, and at least one essential skill must be assessed each year. For every general education course, at minimum a representative sample of the student enrollment must be assessed at least once during the six-year cycle." In accordance with the stipulations of the institutional policy, the essential skills for Math 1213 will be assessed as part of the schedule defined by the Math department assessment team: 2018/19: Math 1315 (College Algebra); 2019/20: Math 1330 (Statistics) & Math 1340 (Design with Geometry); 2020/21: Math 1320 (Survey of Mathematics) and Math 1460 (Elements of Calculus); 2021/22: Math 1310 (Intermediate Algebra); 2022/2023: Math 1211, Math 1212, Math 1213 (Problem Solving courses). In addition, the policy states that departments and faculty content experts should determine the mechanism by which assessment takes place as well as the actual assessment. Accordingly, while sample assessments have been provided with this certification document, the actual assessments will be developed by a committee of math faculty.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

SAMPLE SYLLABUS: Math 1213 Fall 2018

Problem Solving with Geometry and Right-Triangle Trigonometry

I. General Information

Instructor:
Office:
Phone:
Office Hours:

Sections:
Email:

Communication: Monday through Friday (5pm) I will respond to email in less than 24 hours (usually significantly less). On Friday (from 5:00pm and on), Saturday and Sunday, the response time may be longer but no later than the following Monday.

II. Course Description

This course presents strategies for solving mathematical problems; topics include practical plane and solid geometry and right-triangle trigonometry.

Prerequisite: Math 0970 or a recommendation by an admissions counselor based on performance on a placement exam (Accuplacer, ACT, or SAT). Any student who does not meet the prerequisite for this course may be dropped from the class at any time during the term.

III. Student Learning Outcomes At the end of this course, students should be able to:

1. **Use plane geometry to solve problems**.
   Component 1: Accurately measure angles and classify as acute, obtuse or right angles.
   Component 2: Use simple geometric relationships involving intersecting lines
   Component 3: Identify and find the area and perimeter of geometric shapes including circles, squares, rectangles, parallelograms, trapezoids and hexagons
   Component 4: Apply the Pythagorean theorem to find the sides of a right triangle
   Component 5: Solve applied problems involving area and perimeter of plane figures

2. **Use the properties of solid figures to solve problems.**
   Component 1: Identify and find the surface area of volume of solid objects including prisms, cubes, cones, cylinders, pyramids, spheres, and frustums.
   Component 2: Solve applied problems involving solid figures

3. **Use triangle trigonometry to solve applied problems**
   Component 1: Convert angles between decimal degrees, degrees and minutes, and radians
   Component 2: Find the values of trigonometric ratios
   Component 3: Solve right triangles using exact values for special triangles and approximate values for other right triangles. Use a calculator to approximate angle values using inverse trigonometric functions.

4. **Use critical thinking techniques**
   Component 1: Assess whether the outcome of a given calculation is reasonable through quick mental estimation, checking answers against recommended ranges, or solving a problem using multiple methods.

1. Texts/Materials

Textbook: Mathematics for the Trades: A Guided Approach (10th Ed.), by Robert Carman and Hal Saunders. Inclusive Access is required. You will pay for Inclusive Access when you pay the registration and tuition fees for the course. The Inclusive Access will contain your MyMathLab access as well as access to the eText. You can also pay for an optional "upgrade" that will include a print copy of the text book in loose leaf format.

To access your eText, once logged into the course in CNM Learn, click on the MyMathLab link in the course menu on the left and then select MyLab Math Pearson eText.

Other necessities: Calculator, 3-ring binder, computing device, reliable internet connection

- Calculator: A scientific calculator is required for this course.
- You may wish to have a 3-ring binder to keep all your notes and assignments
- Access to an appropriate computing device and reliable internet connection is an essential requirement. Technology is not 100% perfect 100% of the time. You should create a back-up plan in case your computing device malfunctions or you lose internet connectivity.

2. Course Requirements:

Attendance

CNM Policy

According to CNM regulations, students enrolled for credit or audit are expected to attend all class sessions. Students who miss the equivalent of 15% of contact time may be dropped from the course by the instructor. But it is ultimately the student's responsibility to withdraw from the course. Absences from class do not relieve students from responsibility

Netiquette

Your online behavior should be respectful just as it would be in a physical classroom. All communications should be polite and not contain inappropriate language. Remember that typing in all capital letters gives the impression you are yelling. Take a moment to check your grammar and spelling and to make sure your ideas are coming across clearly.

MyMathLab Assignments

- **Homework assignment details**. Homework assignments are found in CNM Learn -> MyMathLab -> MyLab Math Homework. Refer to the schedule at the end of this syllabus for the overall information and the Learning Modules in CNM Learn for assignment details. It is your responsibility to read and understand the assignments and stay on top of the deadlines.
- **Assignment due dates**. Homework assignments are due as shown in the schedule unless otherwise specified by the instructor in class.

- **Late policy for assignments**. There is a penalty of 5% per day for late assignments. You may not work on any homework assignment beyond the FINAL ASSIGNMENT AND QUIZ DEADLINE given in the schedule attached to this syllabus. There are no exceptions.

In-class activities

- Class time will be spent primarily on small projects and worksheets. Some activities will be group oriented and others will be individual.
- **Due dates** for the specific activity will be as shown in the schedule unless otherwise specified by the instructor in class.
- **Late policy for assignments**. There is a penalty of 5% per day for late assignments.
-

Discussion Posts and Check-ins

- **Discussion post details**. There is one discussion forum that you will participate in during the course. This is an Introduction forum at the beginning of the semester. Instructions for Introduction post are found in your Learning Modules in CNM Learn.
- **Discussion due date**. The due date for the Introduction post is given in the schedule.
- **Late policy for discussion post**. There are no deadline extensions for any reason.
- **Check-in**. Once during the semester, you will individually check in with the instructor by creating an entry in the online journal. This is entirely private. Only you and the instructor can read your entry. Instructions for the Check-in are found in your Learning Modules on CNM Learn.
- **Check-i**n due date is given in the schedule.

Online Quizzes

- Online Quizzes are taken in MyMathLab and can be found CNM Learn -> MyMathLab -> MyLab Math Quizzes & Tests and cover the material in each week's module.
- Each Quiz has a time limit of 60 minutes. You have 2 attempts. The highest score is recorded. If you are satisfied with your first attempt, you need not take it again.
- Make sure you are prepared and will not be interrupted. The quiz must be taken in one sitting and cannot be stopped and restarted later.
- Quizzes must be taken independently. Collaborating with anyone during a quiz is considered academic dishonesty and subject to disciplinary action.
- Quizzes (both attempts) must be taken on or before the FINAL ASSIGNMENT AND QUIZ DEADLINE as given in the schedule on the last page of this syllabus.

In-class quizzes

A one question, 10-minute quiz will be given each week at the end of the week. The question will be drawn from the homework for the week.

Final Exam

- The Final Exam will be taken in class on the last day of the course.
- The deadline for the Final Exam is not flexible. No extensions are possible for any reason.
- The Final Exam cannot be made up. A zero will be recorded for any student who does not take the exam.
- An optional Final Exam Review is available in MyMathLab to help you prepare for the exam. The score on the Review has no effect on your grade.
- You may bring one 3 x 5 card with **handwritten** notes (both sides okay).
- You must bring a scientific calculator. Graphing calculators are not allowed.

Success Tips

- MyMathLab contains a "Study Plan". The Study Plan is a good source for extra practice. There is no grade associated with the Study Plan so you can try it as often and whenever you'd like. Click on MyMathLab and then "MyLab Math Study Plan".
- Read the Syllabus carefully. Review it every week to stay on track.
- Post all the deadlines on your favorite calendar
- Ask for help when you need it. Don't wait until the end.

System Outages

Any extended campus wide system outage or MyMathLab outage that affects the students' ability to complete assignments or quizzes will be considered and if necessary and possible, deadline extensions granted.

Personal Outages:

No extensions are granted in the case where outages are due to students' personal computing devices or internet connectivity. Students are advised to have a back-up plan should their own systems fail.

Registration Deadlines:

- Last day to drop without a W: TBD
- Last day to drop with a W or change grading option: TBD

Disability Statement:

We will accommodate students with disabilities documented by the CNM Disability Resource Center. During the first two weeks of the semester, those students should inform the instructor of their needs.

3. Grading Policy: The grades will be assigned based on the standard scale:

A = 90 – 100% B = 80 – 89% C = 70 – 79% D = 60 – 69% F = 0 – 59%

Grades will be calculated using the following scheme:

MyMathLab Homework Assignments and Quizzes, Discussion post and check-in	25%
In-class activities and worksheets	35%
In-class quizzes	10%
Final Exam	30%

In the event CNM closes on the day of the final exam, final grades for students will be calculated based on all work assessed up to that point in the course.

VII. Additional CNM Announcements

- **PaperCut:** PaperCut is an element of the sustainability effort at CNM. Its purpose is to reduce paper usage. Each student has an online account with an allotment of 150 free printer pages per term. If this allotment runs out, additional pages may be purchased by the student. For more information, go to the PaperCut website: http://cnm.edu/papercut.
- **Commit to graduate**! **Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime.** Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Set your graduation date today! Learn more at http://cnm.edu/graduation.
- **Smoke-free campus**: In an effort to respect all students, CNM has created smoke-free zones as well as designated smoking areas at all CNM locations. The use of tobacco products, including the use of chewing tobacco and e-cigarettes is limited to the designated smoking areas and banned from all other areas. View CNM's policy on smoking at http://www.cnm.edu/about/smoke-free-campus. View a map of the designated smoking areas at http://www.cnm.edu/about/smoke-free-campus/designated-smoking-areas.
- **Faculty Feedback**: The Faculty feedback system allows your instructor to securely provide feedback on your performance in this course. If your instructor uses it, you may be contacted by a CNM Academic/Achievement Coach to follow up on the feedback. You can read more about the system here: http://www.cnm.edu/depts/academic-affairs/documents/FacultyFeedbackStudentInformation.docx.

VIII. Tentative Schedule:

For details on assignments, see the appropriate Learning Module in CNM Learn. All deadlines are at TBD on the date given unless otherwise noted. Instructions for In Class activities are handed out in class and posted on CNM Learn prior to class.

Module 1: Practical Plane Geometry		
Week begins	**Work & Topics Covered**	**Deadline**
Week 1 TBD	Covered this week: Chapter 8 on two dimensional figures and angles Post introduction on Discussions eText Reading and MyMathLab Assignments for sections 8.1 through 8.4 MyMathLab Quiz 1 (On Chapter 8) In Class Group Project (all week) on the Great 2D Figure challenge In Class Quiz #1	TBD

Module 2: Solid Figures		
Week begins	**Work & Topics Covered**	**Deadline**
Week 2 TBD	Covered this week: Chapter 9 on solid figures Create Check-in entry in Journal eText Reading and MyMathLab Assignments for Sections 9.1 through 9.4 MyMathLab Quiz 2 (On Chapter 9) In Class Group Project (all week) on Great 3D Object challenge In Class Quiz #2	TBD

Module 3: Right Triangle Trigonometry Part 1		
Week begins	**Work & Topics Covered**	**Deadline**
Week 3 TBD	Covered this week: part of Chapter 10 on right-triangle trigonometry eText Reading and MyMathLab Assignments for Sections 10.1, 10.2 MyMathLab Quiz 3 (On Sections 10.1 – 10.2) In Class Individual Worksheet (Day 1) In Class Group Activity on Just How Fast is It? (Day 2) In Class Quiz #3	TBD

Module 4: Right Triangle Trigonometry Part 2		
Week begins	**Work & Topics Covered**	**Deadlines**
Week 4 TBD	Covered this week: part of Chapter 10 on solving problems with trig ratios eText Reading and MyMathLab Assignments for Sections 10.3 MyMathLab Quiz 4 (On Section 10.3) In Class Individual worksheet on the Triangle Pileup (Day 1) In Class Group worksheet on Mapping the Distance (Day 2) In Class Quiz #4	TBD

Module 5: Final Exam Pretest, Review and Final Exam		
Week begins	**Work & Topics Covered**	**Deadlines**
Week 5 TBD	Review for Final Exam Take Final Exam (last day of class)	**TBD**

Math 1213 Sample Communication Assessment

About the assessment.
This assessment takes the form of a short project. The results may be presented orally by a student to the class or group. In cases of Distance Learning courses, the results may be presented in written fashion.

Directions to the student.
Find a formula or problem that is commonly used in your intended trade or occupation. The formula or problem should be based on geometric or trigonometric concepts. Describe how this formula is used, what types of problems are solved by using the formula, describe what data needs to be known in order to use the formula, and illustrate how to use the formula. Also specify the units that are required for the input data and what the units of the final value calculated are. Use of diagrams and figures are encouraged as appropriate to communicate clearly about your formula.

Math 1213 Sample Critical Thinking Assessment

About the assessment.
The student is given a multi-step application word problem of moderate complexity. The specific problem will be developed by the math faculty.

Directions to the student.
Using the problem given above, do the following.

1. List the information or data that is given in the problem
2. Restate in your own words what the problem is asking you to find.
3. Develop a problem-solving strategy for finding a solution. Show each step in the process. Give enough detail so that another student could replicate your work given the same problem with different data.
4. Execute your strategy. That is, use the steps you have described to find the answer.
5. Clearly state the solution using appropriate notation and terminology.
6. Describe a means for checking the reasonableness of the solution in the context of the problem.

Math 1213 Sample Quantitative Reasoning Sample Assessment

About the assessment.
The student is given a multi-step application word problem of moderate complexity. The specific problem will be developed by the math faculty.

Directions to the student.
Given the problem as stated above, do the following.

1. Create a mathematical model (equations or formulas) to represent the problem
2. Use the information given in the problem to test the equation for its accuracy in determining the correct solution.
3. Find the solution, stating the solution as a complete sentence and including units as appropriate.
4. Describe a strategy for checking the solution. Illustrate how use the strategy to check your solution.

NEW MEXICO HIGHER EDUCATION DEPARTMENT

SUSANA MARTINEZ
GOVERNOR

DR. BARBARA DAMRON
CABINET SECRETARY

New Mexico General Education Curriculum Course Certification Form

A. Institution and Course Information

Name of Institution: **Central New Mexico Community College**
Department: **School of Math Science & Engineering**
Course Number, Title, Credits: **MATH 1215, Intermediate Algebra, 4 cr. hr.**
Co-requisite Course Number and Title, if any: **None**
Is this application for your system (ENMU, NMSU, & UNM)? **N/A**
Name and Title of Contact Person: **Aaron Wilson, Math Faculty**
Email and Phone Number of Contact Person: **awilson59@cnm.edu (505) 224-4000 x52751**

Was this course previously part of the general education curriculum?

☐ Yes ☒ No

B. 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

C. Learning Outcomes

This course follows the CCNS SLOs for

MATH 1215 Intermediate Algebra

List all learning outcomes that are shared between course sections at your institution.

Student Learning Outcomes
Students will build on their knowledge of linear and quadratic functions and will begin to build an understanding of absolute value, polynomial, rational, power, radical, exponential and logarithmic functions in the following contexts:

1. Demonstrate appropriate use of basic function language and notation.
2. Convert between equivalent forms of algebraic expressions.
3. Solve single-variable equations of the types listed above.
4. Interpret and communicate algebraic solutions graphically and numerically.

5. Demonstrate contextual problem-solving skills that include setting up and solving problems, and interpreting solutions in context.
6. Solve systems of linear equations.

D. Narrative

Explain what students are going to do to develop the critical skills (selected above) **and how you will assess their learning?**

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

This course will require students to work in groups to research, develop, write, and present a report on a particular mathematics topic directly related to the material covered in the Student Learning Outcomes. Possible topics include cryptography, Pascal's triangle, Investment, Margin of Error/Statistics, Pythagorean Theorem, Population models, etc. Component skills will be addressed by the following methods:

Genre and Medium Awareness: Student groups will write a short research proposal on selected topic presenting why the student group believes this topic to be interesting and relevant to course material. The groups will then write a structured report on approved selected topic. Then, give a short presentation to the class on their topic.

Application and Versatility: In the report and presentation, student groups must state why their topic is applicable to the course material by directly matching it with Student Learning Outcomes, its application to present day cultural environment, and some historical context for when it was developed.

Strategies for Understanding and Evaluating Messages: Along with research on the topics, students must provide mathematical examples of their topic using appropriate mathematical language and vocabulary learned in the course.

Evaluation and Production of Arguments: Student groups will seek out and document multiple sources for their topic. Student groups will discuss level of authority on each source based on credentials of author and the manner in which the source presents its claims and information. The student groups must integrate the sources into their report and presentation and cite them appropriately.

The assessment of this essential skill will be based on the written report and short presentation.

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

Being an algebra course, critical thinking is an essential skill that is imperative for students to develop. While the different types of functions being taught in the course are all based upon the same mathematical logic, the processes for solving each one can take many different approaches. A student of algebra must develop a knowledge base for this mathematical logic and theory, and then be able to apply the appropriate process to each type of function presented depending upon the results that are being requested.

Problem Setting: The course continues student's familiarity and comprehension of reading mathematical text. Students are required to read ahead in their textbook in preparation for the next lesson. They are then encouraged to come to class with problems and/or questions related to the topics covered in the lesson.

Evidence Acquisition: Topics will be backed with sound mathematical theory and logical proofs. This builds in a knowledge foundation for learners to use in solving the various types of problems.

Evidence Evaluation: Showing step by step work for every problem solved is a requirement. Students must use their acquired knowledge base in practice to help evaluate its credibility through logical mathematical processes.

Reasoning/Conclusion: Upon solving problems, students must then check their work. Students will learn how to critically think about their solutions and ask themselves if their solution makes sense based upon the context of the problem being presented. For example, rational and radical equations have restrictions placed upon their solutions. Students must reason whether the solutions they produce from solving are extraneous.

The assessment of this essential skill will be done every day in the course through student lead discussions based on the questions they come prepared with each day. Students will complete in class assignments each day related to the current day's lesson that will test their critical thinking. Exams, including a Final Exam, will also assess critical thinking by presenting different types of functions and applications to be solved by various methods that the students must then use critical thinking to determine the most appropriate method for each problem.

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

Quantitative reasoning is the heart of any algebra course. Intermediate Algebra is most important in this respect as it bridges the gap and reinforces a lot of the basic quantitative reasoning skills introduced in Beginning Algebra and prepares students for the rigor of College Algebra and other higher level math courses that follow.
Communication/Representation of Quantitative Information: This course builds upon mathematical and algebraic literacy started in a Beginning Algebra course. Students are required to learn the meanings of the symbols and notation for absolute value, radicals, intervals, infinity, complex numbers, logarithmic expressions, exponential expressions, and complex rational expressions. The difference between an expression and an equation is also reiterated. Students are required to show all work for solving a problem using the proper syntax of mathematics. Students will learn to translate English sentences into algebraic equations.
Analysis of Quantitative Arguments: The course is built to bring student's level of quantitative reasoning to a point where they can begin to comprehend and summarize quantitative arguments. The unit on rational expressions and rational equations ends with a study of analyzing and translating proportional data and analysis of variation applications. Through the study of absolute value equations and inequalities, students learn the meaning of and how to analyze margin of error in measurement. The study of exponential and logarithmic functions includes comprehension and analysis of exponential growth and decay for various applications.
Application of Quantitative Models: As stated before, several types of real world applications are addressed throughout the course. Students will learn to identify and describe the quantitative information required to express the problem algebraically and then arrive at a solution. Geometry applications, proportional analysis, variation, margin of error, exponential growth and decay are all examples of the types of applications students will be exposed to in the course.
The assessment of this essential skill will be through quizzes and exams that will require students to perform all of the above listed skills for the various applications 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 box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

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

In this box, provide a narrative that explains how the proposed course addresses the outcomes of the third essential skill. 250 – 500 words.

E. Supporting Documents (required).

☒ **Syllabus Attached** ☒ **Sample Assessment Attached**

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

Link to Institution's General Education Assessment Plan https://www.cnm.edu/depts/academic-affairs/saac/genedassessmentplan

G. Relationship between Institutional Assessment Plan and this Course

CNM's Student Academic Assessment Committee (SAAC) requires annual reporting for all general education content areas. Each of the essential skills associated with a content area must be assessed at least twice during a six-year cycle, and at least one essential skill must be assessed each year. In accordance with this policy, the proposed assessment plan for MATH 1215 is as follows: Year 1 – Quantitative Reasoning, Year 2 – Communication, Year 3 – Critical Thinking, Year 4 – Quantitative Reasoning, Year 5 – Communication, Year 6 – Critical Thinking.

This course meets institutional standards for general education.

Signature of Chief Academic Officer

8/16/18
Date

HED Internal Use Only

Presented to NMCC on _____
Date

☐Approved ☐Denied

If denied, rationale:

Institution Notified on _____
Date

SYLLABUS: Math 1215- Intermediate Algebra, 4 Credit Hours

I. General Information:

Instructor: Robert Mroz
Room: H 106
Office: (WS) MJG 201 (JMMC) I 211
Phone: **224 – 4000 ext 50886**

Section: 205
Time: 11:30am – 1:15pm
Email: rmroz1@cnm.edu
Office Hours: MW 10:30 – 11:30 (JMMC)
TR 10:30 – 12:00 (WS)

II. Course Description:

This course investigates algebraic topics such as expressions, equations, functions and their graphs. Applications and modeling, as they relate to polynomial, rational, and radical forms are explored. Basic exponential and logarithmic forms are introduced.

Prerequisite: Math 0980 or a recommendation by an admissions counselor based on performance on a placement exam (Accuplacer, ACT, or SAT). Any student who does not meet the prerequisite for this course may be dropped from the class at any time during the term.

III. Student Learning Outcomes:

Students will build on their knowledge of linear and quadratic functions and will begin to build an understanding of absolute value, polynomial, rational, power, radical, exponential and logarithmic functions in the following contexts:

1. Demonstrate appropriate use of basic function language and notation.
2. Convert between equivalent forms of algebraic expressions.
3. Solve single-variable equations of the types listed above.
4. Interpret and communicate algebraic solutions graphically and numerically.
5. Demonstrate contextual problem-solving skills that include setting up and solving problems, and interpreting solutions in context.
6. Solve systems of linear equations.

IV. Texts/Materials:

- Required: E-book version of *Intermediate Algebra*, 3rd Edition, by Miller, O'Neill, and Hyde, with Connect Math hosted by ALEKS. ISBN# 9781260524000.
- Optional: Loose-leaf text: *Intermediate Algebra*, 3rd Edition, by Miller, O'Neill, and Hyde. ISBN# 9781260523720.

The required course materials listed above were automatically charged to your account upon registering for this course, and will be available to you via CNM Learn on Day 1 of the course. The Looseleaf printed textbook is an optional upgrade that can be purchased separately from the bookstore.

- **Calculator:** *At a minimum, a scientific calculator is required for this course.*

V. Course Requirements:

- **Attendance:** According to CNM regulations, students enrolled for credit or audit are expected to attend all class sessions. Students who miss the equivalent of 15% of contact time may be dropped from the course by the instructor. But it is ultimately the student's responsibility to withdraw from the course. Absences from class do not relieve students from responsibility for missed assignments, material covered in class, or exams.

In Class:

Electronic Devices in Class: "In CNM classrooms and laboratories, all cellular telephones, pagers and beepers must be turned off or switched to silent or vibrate mode. Electronic entertainment devices are to be turned off and head phones removed." Approved by Faculty Senate

Classroom Civility: Students are expected to contribute to a classroom environment that is respectful and conducive to learning. Inappropriate behavior in the classroom may result in a request to leave class.

- **Final Exam:** Our final exam will be on December 5 from 11:30am to 1:15pm.
- **Registration Deadlines:** The last day to drop without a "W" on your transcript and receive a refund is September 10. The last day to drop with a "W" on your transcript or to switch your grading option is November 9.
- **Disability Statement:** We will accommodate students with disabilities documented by the CNM Disability Resource Center. During the first two weeks of the semester, those students should inform the instructor of their particular needs.

VI. Grading Policy: The grades will be assigned based on the standard scale:

A = 90 – 100% B = 80 – 89% C = 70 – 79% D = 60 – 69% F = 0 – 59%

Grades will be calculated according to the following scheme:

Grades will be calculated according to the following scheme:

50% Section Exams
10% Quizzes
10% Written Report and Presentation
5% Classwork/Homework
25% Final

In the event CNM closes on the day of the final exam, final grades for students will be calculated based on all work assessed up to that point in the course.

VII. Additional CNM Announcements

- **PaperCut:** PaperCut is an element of the sustainability effort at CNM. Its purpose is to reduce paper usage. Each student has an online account with an allotment of 150 free printer pages per term. If this allotment runs out, additional pages may be purchased by the student. For more information, go to the PaperCut website: http://cnm.edu/papercut.
- **Commit to graduate**! **Graduating with an associate's degree or certificate will make you more employable and will increase your earning potential for a lifetime.** Getting your degree or certificate is your reward for the hard work and dedication you put into your studies at CNM. Set your graduation date today! Learn more at http://cnm.edu/graduation.
- **Smoke-free campus**: In an effort to respect all students, CNM has created smoke-free zones as well as designated smoking areas at all CNM locations. The use of tobacco products, including the use of chewing tobacco and e-cigarettes is limited to the designated smoking areas and banned from all other areas. View CNM's policy on smoking at http://www.cnm.edu/about/smoke-free-campus. View a map of the designated smoking areas at http://www.cnm.edu/about/smoke-free-campus/designated-smoking-areas.

VIII. MATH 1215 schedule

	Monday/Tuesday	Wednesday/Thursday	Assignments Due
Week 1	Sec 1.6/1.7 Absolute Value Equations and Inequalities Reading for next class: pp 190 – 209 Section 3.1/3.2	Sec 3.1/3.2 Relations and Functions/Intro to Functions Reading for next class: pp 240 – 255 Section 4.1/4.2	Connect MATH Homework for Sections 1.6, 1.7, 3.1, 3.2
Week 2	Sec 4.1/4.2 Solving Systems of Linear Equations by Graphing and Substitution Reading for next class: pp 256 – 272 Section 4.3/4.4	Sec 4.3/4.4 Solving Systems of Linear Equations and Applications Reading for next class: pp 364 – 390 Section 5.5/5.6/5.7	Connect MATH Homework for Sections 4.1, 4.2, 4.3, 4.4 Quiz 1
Week 3	Sec 5.5/5.6/5.7 (Factoring Review) Greatest Common Factor, Factor by Grouping, Factoring Trinomials, Factoring Binomial Special Forms Reading for next class: pp 391 – 404 Section 5.8 and pp 585 – 598 Section 8.2	Sec 5.8/8.2 Solving Equations and Applications by Factoring and Quadratic Formula	Connect MATH Homework for Sections 5.5, 5.6, 5.7, 5.8, 8.2 Quiz 2
Week 4	EXAM 1 Review	**EXAM 1** Reading for next class: pp 420 – 434 Section 6.1/6.2	
Week 5	Sec 6.1/6.2 Rational Expressions/Functions and Multiplication/Division of Rational Expressions Reading for next class: pp 435 – 443 Section 6.3	Sec 6.3 Addition and Subtraction of Rational Expressions Reading for next class: pp 444 – 450 Section 6.4	Connect MATH Homework for Sections 6.1, 6.2, 6.3
Week 6	Sec 6.4 Complex Fractions Reading for next class: pp 451 – 459 Section 6.5	Sec 6.5 Solving Rational Equations Reading for next class: pp 460 – 469 Section 6.6	Connect MATH Homework for Sections 6.4, 6.5 Quiz 3
Week 7	Sec 6.6 Applications of Rational Equations and Proportions Reading for next class: pp 470 – 478 Section 6.7	Sec 6.7 Variation	Connect MATH Homework for Sections 6.6, 6.7 Quiz 4
Week 8	EXAM 2 Review	EXAM 2 Reading for next class: pp 492 – 503 Section 7.1	
Week 9	Sec 7.1 Definition of an nth Root Reading for next class: pp 504 – 510 Section 7.2	Sec 7.2 Rational Exponents Reading for next class: pp 511 – 523 Section 7.3/7.4	Connect MATH Homework for Sections 7.1, 7.2 Group Project Proposal

Week 10	Sec 7.3/7.4 Simplifying Radical Expressions and Addition/Subtraction of Radicals Reading for next class: pp 524–541 Section 7.5/7.6	Sec 7.5/7.6 Multiplication and Division of Radicals and Rationalization Reading for next class: pp 542 – 551 Section 7.7	Connect MATH Homework for Sections 7.3, 7.4, 7.5, 7.6 Quiz 5
Week 11	Sec 7.7 Radical Equations and Applications Reading for next class: pp 552 – 560 Section 7.8	Sec 7.8 Complex Numbers	Connect MATH Homework for Sections 7.7, 7.8 Quiz 6
Week 12	EXAM 3 Review	EXAM 3 Reading for next class: pp 665 – 674 Section 9.2	
Week 13	Sec 9.2 Exponential Functions Reading for next class: pp 675 – 688 Section 9.3	Sec 9.3 Logarithmic Functions Reading for next class: pp 710 – 712 Section 9.6 and pp 719 – 721 Section 9.7	Connect MATH Homework for Sections 9.2, 9.3
Week 14	Sec 9.6/9.7 Exponential and Logarithmic Equations	**Group Presentations**	Connect MATH Homework for Sections 9.6, 9.7 **Group Reports and Presentations** **Quiz 7**
Week 15	FINAL REV	**FINAL EXAM**	

MATH 1215 Sample Assessment for Critical Thinking and Quantitative Reasoning

1) The loudness of sound measured in decibels varies inversely as the square of the distance between the listener and the source of the sound. The loudness of sound is 17.92 decibels at a distance of 10 feet from the speaker.
   a) Write a variation model that relates the loudness to the distance.

   b) What is the decibel level 20 feet from the speaker? Answer with correct units.

2) Devon can cross-country ski $5\ km/hr$ faster than his sister Stacie. Devon skis $45\ km$ in the same amount of time that Stacie skis $30\ km$. Find their speeds. Answer with correct units.

3) Suppose $1000 is invested at 5%. Find the balance after 8 years under the following options.
   a) Compounded Quarterly.

   b) Compounded Monthly.

4) State any restrictions then, Solve.
$$\frac{-8}{y^2-6y} + \frac{y}{y-6} = \frac{1}{y}$$

5) Solve. Check any potential solutions.
$$y + \sqrt{y-2} = 8$$