NM HED Area I: Communications Competencies
UNM Core Area 1: Writing and Speaking

Core Competency *Students will:*	Rationale *Students should:*	Assessment Suggestions
1. Analyze and evaluate oral and written communication in terms of situation, audience, purpose, aesthetics, and diverse points of view.	• Understand, appreciate, and critically evaluate a variety of written and spoken messages in order to make informed decisions	• rubric-based (e.g., holistic, criteria-based, skills assessments) evaluation of student written and oral discourse
2. Express a primary purpose in a compelling statement and order supporting points logically and convincingly.	• Organize their thinking to express their viewpoints clearly, concisely, and effectively	• portfolio (e.g., paper, digital, recorded performance) evaluations
3. Use effective rhetorical strategies to persuade, inform, and engage.	• Select and use the best means to deliver a particular message to a particular audience. Rhetorical strategies include but are not limited to modes (such as narration, description, and persuasion), genres (essays, web pages, reports, proposals), media and technology (PowerPoint™, electronic writing), and graphics (charts, diagrams, formats).	• journals • self-review • peer review • pre/post tests • capstone projects • skills tests • exit exams • core competency panel assessments
4. Employ writing and/or speaking processes such as planning, collaborating, organizing, composing, revising, and editing to create presentations using correct diction, syntax, grammar, and mechanics.	• Use standard processes for generating documents or oral presentations independently and in groups.	
5. Integrate research correctly and ethically from credible sources to support the primary purpose of a communication.	• Gather legitimate information to support their ideas without plagiarizing, misinforming, or distorting.	
6. Engage in reasoned civic discourse while recognizing the distinctions among opinions, facts, and inferences.	• Negotiate civilly with others to accomplish their goals and to function as responsible citizens.	

NM HED Area II: Mathematics - College Algebra Competencies
UNM Core Area 2: Mathematics

Core Competency *Students will:*	Rationale/Elaboration *Students should:*	Assessment Suggestions
1. Construct and analyze graphs and/or data sets.	• Sketch the graphs of linear, quadratic, higher-order polynomial, rational, absolute value, exponential, logarithmic, and radical functions. • Construct graphs using a variety of techniques including plotting points, using properties of basic transformations of functions, and by using key characteristics of functions such as end behavior, intercepts and asymptotes. • Determine the key features a function such as domain/range, intercepts, and asymptotes.	• Pre/post tests • Test/quiz questions • Routine use of an accepted Classroom • Assessment Technique (CAT) • Oral presentations • Written presentations • Student-created portfolios • Capstone projects • Peer review • Student self-assessments • Group research and presentations on real-life problems analyzed/solved by using algebra
2. Use and solve various kinds of equations.	• Solve quadratic equations using techniques such as factoring, completing the square and the square root method, and the quadratic formula. • Solve equations using inverse operations for powers/roots, exponents/logarithms and other arithmetic operations. • Use the equation of a function to determine its domain, to perform function operations, and to find the inverse of a function.	
3. Understand and write mathematical explanations using appropriate definitions and symbols.	• Correctly use function notation and the vocabulary associated with functions. • Describe the implications of key features of a function with respect to its graph and/or in relation to its real world context.	
4. Demonstrate problem solving skills within the context of mathematical applications.	• Apply the knowledge of functions to identify an appropriate type of function to solve application problems. • Solve application problems including those requiring maximization or minimization of quadratic functions and exponential growth & decay problems. • Interpret the results of application problems in terms of their real world context.	

NM HED Area II: Mathematics - Liberal Arts Math Competencies
UNM Core Area 2: Mathematics

Core Competency *Students will:*	Rationale/Elaboration *Students should:*	Assessment Suggestions
1. Construct and analyze graphs and/or data sets.	• Gather and organize information. • Understand the purpose and use of various graphical representations such as tables, line graphs, tilings, networks, bar graphs, etc. • Interpret results through graphs, lists, tables, sequences, etc. • Draw conclusions from data or various graphical representations.	• Pre/post tests • Test/quiz questions • Routine use of an accepted Classroom Assessment Technique (CAT) • Oral presentations • Written presentations • Student-created portfolios • Capstone projects • Peer review • Student self-assessments • Group research and presentations on real-life problems analyzed/solved by using mathematics • Student journals • Individual or group projects • Cooperative learning activities
2. Use and solve various kinds of equations.	• Understand the purpose of and use appropriate formulas within a mathematical application. • Solve equations within a mathematical application. • Check answers to problems and determine the reasonableness of results.	
3. Understand and write mathematical explanations using appropriate definitions and symbols.	• Translate mathematical information into symbolic form. • Define mathematical concepts in the student's own words. • Use basic mathematical skills to solve problems.	
4. Demonstrate problem solving skills within the context of mathematical applications.	• Show an understanding of a mathematical application both orally and in writing. • Choose an effective strategy to solve a problem. • Gather and organize relevant information for a given application. • Draw conclusions and communicate the findings.	

NM HED Area II: Mathematics - Statistics Competencies
UNM Core Area 2: Mathematics

Core Competency *Students will:*	Rationale/Elaboration *Students should:*	Assessment Suggestions
1. Construct and analyze graphs and/or data sets.	• Organize data and display in frequency distribution and find percentile points and ranks for the distribution • Graph data distributions using the correct format for graphs, to include: histograms, frequency polygons, box plots and scatter plots and draw appropriate inferences	• Pre/post tests • Test/quiz questions • Routine use of an accepted Classroom Assessment Technique (CAT) • Oral presentations • Written presentations • Student-created portfolios • Capstone projects • Peer review • Student self-assessments • Group research and presentations on real-life problems analyzed/solved by using statistics
2. Use and solve various kinds of equations.	• Compute mean, median, mode, and standard deviation • Calculate the least squares regression equation and the correlation coefficient • Determine basic probabilities and probabilities associated with the standard normal curve • Understand the binomial distribution and its properties • Compute sampling distributions of sample means • Compute the mean and standard deviation of sample means • Calculate margin of error given sample size and sample size given margin of error • Construct confidence intervals for population means and proportions • Calculate test statistics	
3. Understand and write mathematical explanations using appropriate definitions and symbols.	• Use Z-scores appropriately • Construct probability distributions • Write confidence intervals • Understand the Central Limit Theorem and when to apply it • Write null and alternate hypotheses • Understand the concept of significance level and P values • Apply the steps for inference/hypothesis testing • Describe the basic elements of sampling and experimental design • Define parameters and statistic	
4. Demonstrate problem solving skills within the context of mathematical applications.	• Determine appropriate methods to display data • Compare measures using Z-scores • Identify and analyze outliers • Use least-square regression equations to predict values • Select appropriate sampling techniques • Determine if random variables are continuous or discrete • Choose and construct appropriate hypothesis tests for population means and proportions	

NM HED Area III: Laboratory Science Competencies
UNM Core Area 3: Physical and Natural Sciences

Competency *Students will:*	Rationale *Students should:*	Assessment Suggestions
1. Describe the process of scientific inquiry.	• Understand that scientists rely on evidence obtained from observations rather than authority, tradition, doctrine, or intuition. Students should value science as a way to develop reliable knowledge about the world.	• Presentation of case studies, problems, and/or laboratory exercises that call for the student to apply the "scientific method."
2. Solve problems scientifically.	• Be able to construct and test hypotheses using modern laboratory equipment (such as microscopes, scales, and computer technology) and appropriate quantitative methods. Students should be able to evaluate isolated observations about the physical universe and relate them to hierarchically organized explanatory frameworks (theories).	• Presentation of case studies, problems, and/or laboratory exercises that call for the student to construct and test hypotheses related to the scientific discipline they have elected to study.
3. Communicate scientific information.	• Communicate effectively about science (e.g., write lab reports in standard format and explain basic scientific concepts, procedures, and results using written, oral, and graphic presentation techniques).	• Require written and oral work to be evaluated according to college level writing criteria, as well as the standards of the field being studied.
4. Apply quantitative analysis to scientific problems.	• Select and perform appropriate quantitative analyses of scientific observations. Students should show familiarity with the metric system, use a calculator to perform appropriate mathematical operations, and present results in tables and graphs.	• 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.
5. Apply scientific thinking to real world problems.	• Critically evaluate scientific reports or accounts presented in the popular media, understand the basic scientific facts related to important contemporary issues (e.g., global warming, stem cell research, cosmology), and ask informed questions about those issues.	• 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 should call upon higher-order thinking rather than rote knowledge.

NM HED Area IV: Social and Behavioral Sciences Competencies
UNM Area 4: Social and Behavioral Sciences

Core Competency *Students will:*	Rationale *Students should:*	Assessment Suggestions
1. Identify, describe and explain human behaviors and how they are influenced by social structures, institutions, and processes within the contexts of complex and diverse communities.	• Develop an understanding of self and the world by examining the content and processes used by social and behavioral sciences to discover, describe, explain, and predict human behavior and social systems.	• Essays, examinations requiring analysis of information, problem based applications, research projects, laboratory experiments.
2. Articulate how beliefs, assumptions, and values are influenced by factors such as politics, geography, economics, culture, biology, history, and social institutions.	• Enhance their knowledge of social and cultural institutions and the values of their society and other societies and cultures in the world.	• Comparative & problem based essays, examinations requiring analysis of information, research projects.
3. Describe ongoing reciprocal interactions among self, society, and the environment.	• Understand the interdependent nature of the individual, family/social group, and society in shaping human behavior and determining quality of life.	• Comparative & problem based essays, portfolios, research projects, laboratory experiments, fieldwork.
4. Apply the knowledge base of the social and behavioral sciences to identify, describe, explain, and critically evaluate relevant issues, ethical dilemmas, and arguments.	• Articulate their role in a global context and develop an awareness and appreciation for diverse value systems in order to understand how to be good citizens who can critically examine and work toward quality of life within a framework of understanding and justice.	• Problem based projects, research projects, essays, examinations requiring analysis of information, fieldwork.

NM HED Area V: Humanities and Fine Arts Competencies UNM Core Areas 5, 6, & 7: Humanities, Foreign Language, & Fine Arts

Core Competency	Rationale	Assessment Suggestions
Students will:	*Students should:*	
1. Analyze and critically interpret significant primary texts and/or works of art (this includes fine art, literature, music, theatre, & film).	• Possess an understanding of the present that is informed by an awareness of past heritages in human history, arts, philosophy, religion, and literature, including the complex and interdependent relationships among cultures. NOTE: For the purposes of the Humanities and Fine Arts requirement, courses will come from the areas of History, Philosophy, Literature, Art, Dance, Music, Theatre and those offerings from other disciplines that also include, among other criteria, analytical study of primary texts and/or works of art as forms of cultural and creative expression. This requirement does not include work in areas such as studio and performance courses that are primarily skills-oriented.	• Pre/post tests • Journals • Portfolios • Public Debates • Essays • Visual / Audio Identification • Videos • Recitals • Performances • Documentation of service learning • Presentations: Visual, Oral, Performance, time-based • Final Exams • Log of On-line Discussions • Graphic Productions (charts, diagrams, timelines, etc.) • Peer review/self review.
2. Compare art forms, modes of thought and expression, and processes across a range of historical periods and/or structures (such as political, geographic, economic, social, cultural, religious, and intellectual).		
3. Recognize and articulate the diversity of human experience across a range of historical periods and/or cultural perspectives.		
4. Draw on historical and/or cultural perspectives to evaluate any or all of the following: contemporary problems/issues, contemporary modes of expression, and contemporary thought.		
5. *UNM addition:* Identify, analyze, and apply criteria for making aesthetic judgments in at least one field of the fine arts and in at least one field of the humanities.		
6. *UNM addition:* In a language other than English, express and understand simple concepts and basic information relating to daily activities and culture.	• Acquire adequate familiarity with a non-English language to communicate at a basic level, with sensitivity to social and cultural norms.	
7. *UNM addition:* Demonstrate knowledge of basic cultural expressions, values, and practices.	• In addition to language skills, students should become familiar with the social and cultural context of the communities where the language is practiced today.	
8. *UNM addition:* Evaluate the social implications of differences within and between language communities.	• Recognize and respect linguistic diversity in the target cultures.	
9. *UNM addition:* Demonstrate knowledge of basic historical facts from the target culture.	• Understand the broad historical background of the target language itself (its origins and its distribution) and of the cultures in which the language is spoken, in order to inform the student's understanding of the language's current cultural context.	