



**College of Health Sciences  
General Education Learning Outcomes (GELOs)**

**GELO 1: Written Communication. Demonstrate the ability to write coherent, supported and logically structured prose.**

<b>Indicators</b>	<b>Initial</b>	<b>Developing</b>	<b>Developed</b>	<b>Proficient</b>
1.1 Content	<ul style="list-style-type: none"> <li>• Does not provide an identifiable viewpoint or claim</li> <li>• Does not provide sufficient information to support conclusions</li> <li>• Demonstrates mostly inaccurate, misused, and insufficient citations</li> </ul>	<ul style="list-style-type: none"> <li>• Provides an ambiguous viewpoint or claim</li> <li>• Demonstrates use of information that does not support logical conclusions</li> <li>• Demonstrates limited attempts to examine details of the main topics</li> <li>• Does not demonstrate use of some critical citations</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates use of a recognizable viewpoint or claim</li> <li>• Supports conclusions with referenced data</li> <li>• Demonstrates detailed examination of topic and subtopics</li> <li>• Demonstrates satisfactory use of citations</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates support for clear and concise viewpoints or claims with referenced data</li> <li>• Provides content that is purposeful and unbiased</li> <li>• Demonstrates use of an appropriate number of and accurate use of citations</li> </ul>
1.2 Structure	<ul style="list-style-type: none"> <li>• Does not demonstrate a discernible, logical pattern of organization to present information</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates use of some pattern of organization to present information, but an alternative pattern may be more suitable for presentation of information</li> <li>• Demonstrates use of transitions that may be illogical and confusing</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates use of a pattern of organization to present information</li> <li>• Demonstrates use of transitions that are clear and mostly connect topics and subtopics</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates logical organization to present information appropriately as main topics and sub topics</li> <li>• Demonstrates use of effective transitions that clearly connect topics and subtopics</li> </ul>
1.3 Style	<ul style="list-style-type: none"> <li>• Demonstrates misuse of standard vocabulary</li> <li>• Demonstrates use of ineffective sentence structures with major grammatical errors</li> <li>• Demonstrates misuse of type, font, and margin sizes to conceal other flaws</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates use of limited vocabulary</li> <li>• Demonstrates use of awkward sentence structure with some grammatical errors</li> <li>• Demonstrates misuse of type, font, and margin sizes</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates use of appropriate vocabulary</li> <li>• Demonstrates use of appropriate sentence structure with minimal grammatical errors</li> <li>• Demonstrates use of standard type, font, and margins as required</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates use of appropriate and concise vocabulary</li> <li>• Demonstrates use of appropriate and varied vocabulary, diction, and sentence structure with virtually no grammatical errors</li> <li>• Demonstrates use of appropriate and varied sentence structure</li> <li>• Demonstrates use of standard type, font, and margins</li> <li>• Provides conventional headings, white space, and creative visuals (graphs, charts, tables) where</li> </ul>

## GELO 2: Oral Communication. Listen and speak effectively in formal communication.

Indicators	Initial	Developing	Developed	Proficient
2.1 Content	<ul style="list-style-type: none"> <li>Provides no discernable claim or viewpoint</li> <li>Makes irrelevant, tangential statements</li> <li>Provides no evidence for support of topics</li> </ul>	<ul style="list-style-type: none"> <li>Although a viewpoint or claim is provided by the student, it is only based on popular opinion with no supporting evidence</li> <li>If the student does provide evidence it is primarily inaccurate or irrelevant</li> </ul>	<ul style="list-style-type: none"> <li>Provides a claim or viewpoint with reference to supporting evidence</li> <li>Expresses some logical, original ideas</li> </ul>	<ul style="list-style-type: none"> <li>Provides a clear claim or viewpoint with an explanation of the appropriate and valid evidence in support</li> <li>Delivers presentations based on logical arguments</li> <li>Creative in story telling while maintaining relevance to topic</li> </ul>
2.2 Structure	<ul style="list-style-type: none"> <li>Demonstrates a disorganized presentation of topics</li> <li>Connections between information presented are unclear and inhibit understanding by the audience</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates minimal organization between topics</li> <li>The connections between topics and supporting data are loosely related</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates clear organization between topics with transitions between topics and subpoints and methods used in presenting data</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates effective organization with appropriate transitions between topics and subtopics</li> <li>Demonstrates creative methods to presenting data</li> </ul>
2.3 Style	<ul style="list-style-type: none"> <li>Uses inappropriate, offensive language</li> <li>Demonstrates unprofessional attitudes or behaviors</li> <li>Makes no attempt at connecting with the audience</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates inaccurate use of professional language or jargon</li> <li>Provides minimal attempts made to connect with audience</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates appropriate use of professional language and minimal jargon</li> <li>Makes clear attempts to engage the audience</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates use of appropriate, professional language and attitudes</li> <li>Actively engages the audience through the use of questions, soliciting ideas, or engaging in dialogue</li> </ul>
2.4 Response	<ul style="list-style-type: none"> <li>Does not leave time for questions</li> <li>Does not acknowledge other viewpoints</li> <li>Demonstrates no ability answer questions</li> </ul>	<ul style="list-style-type: none"> <li>Student leaves minimal time for questions</li> <li>Demonstrates a clear attempt to avoid recognition of other viewpoints</li> <li>Answers that are provided to questions are simplistic and lack intellectual depth</li> </ul>	<ul style="list-style-type: none"> <li>Leaves sufficient time for questions</li> <li>Recognizes other viewpoints, but may not demonstrate a respect for those opinions</li> <li>Adequately answers questions</li> </ul>	<ul style="list-style-type: none"> <li>Listens to questions with a consideration of alternative viewpoints</li> <li>Answer questions thoughtfully referencing evidence</li> <li>If unable to answer a question, student defers to the need for more information clarifying point of confusion or lack of knowledge</li> </ul>

**GELO 3: Information Literacy. Identify and search relevant libraries of information and databases; synthesize information obtained from primary literature using properly referenced citations.**

Indicators	Initial	Developing	Developed	Proficient
3.1 Search and acquisition of resources	<ul style="list-style-type: none"> <li>Does not identify external resources to support topic</li> </ul>	<ul style="list-style-type: none"> <li>Identifies resources that may not be sufficient in quality and/or quantity</li> </ul>	<ul style="list-style-type: none"> <li>Identifies a number of resources that are generally appropriate</li> <li>Often solicits guidance and help from faculty and library learning resources personnel when needed</li> </ul>	<ul style="list-style-type: none"> <li>Identifies a variety of relevant sources that are sufficient in quality and quantity</li> <li>Regularly seeks guidance and help from faculty mentors and library learning resources personnel when necessary</li> </ul>
3.2 Evaluation of references	<ul style="list-style-type: none"> <li>Shows no discretion in use of resources, if used</li> </ul>	<ul style="list-style-type: none"> <li>Evaluates references based only on association with topic</li> </ul>	<ul style="list-style-type: none"> <li>Evaluates references based on currency and relevancy but may lack emphasis on quality of publication</li> </ul>	<ul style="list-style-type: none"> <li>Critically evaluates references based on currency, relevancy, quality of peer review</li> <li>Demonstrates the ability to assess divergence of opinion where facts are uncertain</li> </ul>
3.3 Incorporation of references	<ul style="list-style-type: none"> <li>Does not include references but, if included, are irrelevant and do not support an argument</li> </ul>	<ul style="list-style-type: none"> <li>Uses references that are largely irrelevant to clearly support claims, ideas, or viewpoints</li> </ul>	<ul style="list-style-type: none"> <li>Uses relevant references that generally support claims, ideas, or viewpoints that build some argument</li> </ul>	<ul style="list-style-type: none"> <li>Uses relevant references that appropriately support claims, ideas, or viewpoints that build a coherent argument</li> </ul>
3.4 Citation of references	<ul style="list-style-type: none"> <li>Does not use citations</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates use of citations, but may lack a complete reference list</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates use of appropriate citations in context</li> <li>Usually uses correct citation format</li> <li>May demonstrate typographical errors</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates use of properly cited references in context to specific ideas</li> <li>Uses correct citation format</li> <li>Includes all necessary information in reference list</li> </ul>

**GELO 4: Critical Thinking. Exercise reasoned judgement to assess technical information and make well-informed decisions using evidence-based approaches.**

Indicators	Initial	Developing	Developed	Proficient
4.1 Recognition of information	<ul style="list-style-type: none"> <li>• Has difficulty identifying the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies a problem</li> <li>• Attempts to find information that may help address the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies the problem at hand</li> <li>• Defines some of the appropriate information relevant to the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Clearly states the problem at hand</li> <li>• Defines appropriate and sufficient information relevant to the problem</li> </ul>
4.2 Organization of selected facts and ideas	<ul style="list-style-type: none"> <li>• Unable to identify information needed to address the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies information that may be helpful in addressing the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies the required information for addressing the problem</li> <li>• Categorizes information</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies the required information for addressing the problem</li> <li>• Compares information from multiple sources</li> <li>• Categorizes the information</li> <li>• Explains the importance of the selected information</li> </ul>
4.3 Consideration of facts, rules, and principles	<ul style="list-style-type: none"> <li>• Does not consider the problem or potential information needed to address the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Considers the situation surrounding the current problem</li> <li>• Considers relationships between information related to the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Considers the effects of alternative situations</li> <li>• Considers significance of information</li> <li>• Considers relationships between information related to the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Considers the effects of alternative situations</li> <li>• Looks for patterns</li> <li>• Considers significance of information</li> <li>• Considers relationships between information related to the problem</li> </ul>
4.4 Delineation of current ideas	<ul style="list-style-type: none"> <li>• Fails to categorize parts of the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Categorizes parts of the problem</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies critical components of the problem</li> <li>• Identifies information relevant to specific components of the overall problem</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies critical components of the problem and possible solutions</li> <li>• Identifies information relevant to specific components of the overall problem</li> <li>• Compares/contrasts multiple components of the problem</li> </ul>
4.5 Synthesis of new ideas	<ul style="list-style-type: none"> <li>• Fails to generate new ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Reiterates reported information without forming novel ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Generates new ideas based on the evidence and information researched</li> </ul>	<ul style="list-style-type: none"> <li>• Generates new ideas based on the evidence and information researched</li> <li>• Generates alternative ideas based on different circumstances surrounding the problem</li> <li>• Prioritizes potential solutions to a problem</li> </ul>

4.6 Evaluation of process and results	<ul style="list-style-type: none"> <li>• Does not evaluate the process undergone to make a decision or develop an opinion</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies the process used to make a decision or form an opinion, but does not assess the validity</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluates the process for making a decision or opinion</li> <li>• Projects consequences of the decision or opinion</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluates the process for making a decision or opinion</li> <li>• Identifies criteria needed for achieving a solution to the problem or for forming an evidence-based opinion</li> <li>• Projects consequences of the decision or opinion</li> </ul>
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**GELO 5: Scientific Inquiry and Quantitative Reasoning. Demonstrate knowledge of the complexity of biological systems and chemistry of matter through research with the use of mathematics and statistics in problem solving.**

<b>Indicators</b>	<b>Initial</b>	<b>Developing</b>	<b>Developed</b>	<b>Proficient</b>
5.1 Reflection	<ul style="list-style-type: none"> <li>• Unable to identify gaps in own knowledge or areas of confusion</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies general areas of own confusion in relation to the core sciences and mathematics of the program</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies specific areas of own confusion but does not identify gaps in the greater body of scientific knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies specific areas of own confusion or lack of knowledge within the courses of the program</li> <li>• Identifies a gap in the greater body of scientific knowledge</li> </ul>
5.2 Research	<ul style="list-style-type: none"> <li>• Does not demonstrate understanding of research principles</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates some understanding of research principles by including rudimentary concepts related to biology and chemistry that involve a basic understanding of sciences and mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates sufficient understanding of research principles by utilizing appropriate biology and chemistry concepts to draw connections among information presented in the literature and by using related science and mathematics concepts to justify those connections</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates thorough understanding of research principles by utilizing appropriate biology and chemistry concepts to draw logical connections among knowledge presented in the literature and by using appropriate science and mathematics concepts to analyze and evaluate those connections</li> </ul>
5.3 Experimental design and methodology	<ul style="list-style-type: none"> <li>• Displays difficulty with completing a basic biological or chemical experiment or procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Completes basic biological and chemical experiments</li> </ul>	<ul style="list-style-type: none"> <li>• Completes basic biological and chemical experiments</li> <li>• Develops acceptable strategies address gaps in knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Designs innovative strategies to address gaps in knowledge</li> <li>• Proposes appropriate and innovative experiments designed to address the hypothesis</li> </ul>
5.4 Interpretation of data	<ul style="list-style-type: none"> <li>• Demonstrates a limited ability to interpret basic scientific data or complete mathematical or statistical calculations</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates attempts to interpret basic scientific data</li> <li>• Demonstrates the ability to complete simple mathematical and statistical analyses</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates the ability to interpret basic scientific data</li> <li>• Demonstrates use of appropriate math and statistics to analyze data</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates interpretation of data in the context of current scientific knowledge using appropriate mathematics and statistical analyses</li> </ul>

<p>5.5 Generating conclusions</p>	<ul style="list-style-type: none"> <li>• Does not generate conclusions based on current scientific data and statistics</li> </ul>	<ul style="list-style-type: none"> <li>• Generates conclusions that may be based on current scientific data and mathematics and are largely flawed and contain gaps in logic that either do not or only minimally address the hypothesis</li> </ul>	<ul style="list-style-type: none"> <li>• Generates conclusions, using scientific and mathematical data, that appropriately, but may not necessarily entirely, address the proposed hypothesis; may minimally relate conclusions to the greater body of scientific knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Generates conclusions, using appropriate scientific and mathematical data, that accurately address the proposed hypothesis; relates conclusions logically to the greater body of scientific knowledge</li> </ul>
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**GELO 6: Cultural Literacy and Social Intelligence. Demonstrate knowledge of diverse human cultures and influences of social forces, economic principles, and human interactions within the framework of social sciences.**

<b>Indicators</b>	<b>Initial</b>	<b>Developing</b>	<b>Developed</b>	<b>Proficient</b>
6.1 Knowledge of cultural rules and norms in human relations	<ul style="list-style-type: none"> <li>Does not demonstrate recognition of similarities and differences between varied cultures</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates an attempt to identify similarities and differences between a variety of cultures</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates recognition of the similarities and differences among a variety of cultures</li> </ul>	<ul style="list-style-type: none"> <li>Acknowledges similarities and differences among a variety of specific cultures and demonstrates a respect for these differences</li> </ul>
6.2 Social adaptation	<ul style="list-style-type: none"> <li>Does not demonstrate interest or motivation to adapt cross-culturally</li> <li>Does not adapt well in social situations</li> <li>Demonstrates an inability to change verbal or nonverbal actions in order to adapt to the social situation</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates some interest in adapting to other cultures, but may lack motivation to change behavior</li> <li>Demonstrates some attempt to adapt in social situations, but unable to appropriately change verbal and nonverbal actions</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates interest in adapting cross-culturally, and shows some motivation to change behavior</li> <li>Demonstrates the ability to adapt in some social situations, and is able to appropriately adjust some verbal and nonverbal actions</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates interest and motivation to adapt cross-culturally</li> <li>Demonstrates adaptation to varying social situations by adjusting verbal and nonverbal actions appropriately</li> </ul>
6.3 Interpersonal skills	<ul style="list-style-type: none"> <li>Does not attempt to interact with others</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates limited attempts to interact with others</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates sensitivity and curiosity when attempting to interact with others</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates empathy with others when appropriate</li> <li>Displays curiosity when interacting with others</li> <li>Demonstrate sensitivity in social situations</li> </ul>

**GELO 7: Personal Development. Demonstrate leadership and foster improvement in the local community through voluntary service.**

<b>Indicators</b>	<b>Initial</b>	<b>Developing</b>	<b>Developed</b>	<b>Proficient</b>
7.1 Professionalism	<ul style="list-style-type: none"> <li>Does not demonstrate professional attitudes and behaviors.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates some attitudes and behaviors that may be characteristic of professional ones, but demonstration of these are inconsistent and may impede on the quality of work completed.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates professional attitudes and behaviors that generally aid in the completion of work.</li> </ul>	<ul style="list-style-type: none"> <li>Student consistently demonstrates professional attitudes and behaviors that uphold the integrity and competence of the work completed.</li> </ul>
7.2 Personal Responsibility	<ul style="list-style-type: none"> <li>Student does not demonstrate personal accountability for work completed.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates minimal personal accountability for work completed but generally attempts to involve others or hold others accountable for the completion of the student's work.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates personal accountability for the work completed but does not necessarily respond appropriately to changing circumstances.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates personal accountability for the work completed by responding appropriately to changing circumstances.</li> </ul>
7.3 Judgment	<ul style="list-style-type: none"> <li>Student does not demonstrate judgment</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates some judgment by making decisions that do not necessarily function to get work completed.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates judgment by making decisions to complete the work but not necessarily in a way that enhances the quality of the work.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates appropriate judgment by making effective decisions that enhance the quality of the work.</li> </ul>
7.4 Teamwork	<ul style="list-style-type: none"> <li>Student does not demonstrate attitudes and behaviors appropriate for functioning as a member of the team.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates attitudes and behaviors that are needed to promote teamwork but largely and generally function to satisfy personal needs rather than those of the team.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates attitudes and behaviors that largely respond to the welfare of the team but that sometimes do not necessarily help the team in accomplishing goals.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates appropriate attitudes and behaviors that fully address the welfare of the team and function to aid the team in accomplishing shared goals.</li> </ul>
7.5 Engagement in the community	<ul style="list-style-type: none"> <li>Student does not demonstrate engagement in the community.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates minimal engagement in the community by participating in community service events as required but does not initiate good working relationships that may aid to improve the community.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates some engagement in the community by participating in community service events and by establishing some working relationships that serve and improve the community.</li> </ul>	<ul style="list-style-type: none"> <li>Student demonstrates engagement in the community by participating in community service events, demonstrating outstanding service, and establishing and maintaining strong working relationships that aid in improving the community.</li> </ul>