

SUNY Broome Institutional Learning Outcomes (ILOs)

SUNY Broome Institutional Learning Outcomes align with SUNY General Education Learning Outcomes. These guidelines provide the context within which SUNY Broome ILOs are viewed per SUNY General Education ILOs definitions. SUNY Gen Ed categories may align with Broome ILOs, depending on the Course Student Learning Outcome (SLO). An explanation of what the SLO should encompass to best capture the various Broome ILOs and suggested SUNY General Education categories are listed. Suggestions for other types of courses, which are not General Education courses, but which may align to the respective Broome ILOs are also provided. All Student Learning Outcomes, whether or not considered General Education must align to at least one Broome ILO.

(Broome ILO 1) Cultural and Global Awareness: Students demonstrate ability to explore issues related to culture, diversity, and global awareness.

- Student Learning Outcomes (SLOs) which align with this Broome ILO should demonstrate that the students will engage in learning about human nature, society, institutions, and culture, both within America and across the globe. Courses, such as those in Arts, Foreign Language, Philosophy, Archaeology, Geography, Social Sciences, Humanities, and Literature which investigate the human world, cultural perspectives, issues related to diversity, history of cultures, and various societies may align with this ILO. Other courses, which are not General Education, but which provide students with the opportunity to explore issues related to culture, diversity, and global awareness may also align with this ILO.

SUNY General Education Categories:

- Social Science
- American History
- Western Civilization
- Other World Civilizations
- Humanities
- The Arts
- Foreign Languages

(Broome ILO 2) Critical Analysis and Decision-Making: Students demonstrate the following: identify, analyze, and evaluate arguments as they occur in their own or others' work; and develop well-reasoned arguments based on data or theories. This could apply to research-related courses in the respective divisions, and argumentative based courses requiring critical analysis of issues, concepts, perspectives or techniques.

- Student Learning Outcomes (SLOs) which align with this Broome ILO should demonstrate that the students will engage in learning about data analysis, evaluation of arguments, developing research studies, and critical analysis of issues. Courses, such as those in Math, Natural Sciences, Social Sciences, and Literature, which investigate the identification, analysis, and evaluation of arguments and theories, and those in which students must evaluate data and theories to make decisions, reflecting critical thinking, may align with this ILO. Courses which capture the SUNY Gen Ed Critical Thinking infused competency will align with this ILO. Other courses, which are not General Education, but which provide students with the opportunity to engage in critical analysis may also align with this ILO.

SUNY General Education Categories:

- Mathematics
- Natural Sciences
- Social Sciences
- Humanities

(Broome ILO 3) Oral & Written Communication: Students demonstrate the ability to produce and revise oral and written forms of communication.

- Student Learning Outcomes (SLOs) which align with this Broome ILO should demonstrate that the students will engage in producing oral and/or written forms of communication. Courses, such as those in the Social Sciences, Humanities, Foreign Language, and Basic Communication, in which students research a topic, develop arguments, and deliver oral presentations or produce written forms, may align with this ILO. Other courses, which are not General Education, but which provide students with the opportunity to develop and deliver oral and/or written forms of communication may also align with this ILO.

SUNY General Education Category Learning Outcomes:

- Social Sciences
- Humanities
- Foreign Languages
- Basic Communication

(Broome ILO 4) Scientific & Quantitative Reasoning: Students demonstrate the ability to engage in the process of scientific and quantitative reasoning through analysis of data in various forms.

- Student Learning Outcomes (SLOs) which align with this Broome ILO should demonstrate that the students will engage in the exploration of scientific, mathematic, and social phenomena using data, and quantitative or qualitative reasoning. Courses, such as those in Math, Natural Sciences, and Social Sciences, in which students utilize formulas, graphs, tables, the application of data, concepts, and models, may align with this ILO. Other courses, which are not General Education, but which provide students with the opportunity to engage in scientific data exploration and analysis may also align with this ILO.

SUNY General Education Categories:

- Mathematics
- Natural Sciences
- Social Sciences

(Broome ILO 5) Technological Competency: Students will demonstrate the ability to utilize technological resources to understand, apply, analyze and solve problems related to courses in a discipline or program. This could include courses requiring knowledge of and use of computers or other equipment to successfully complete a course/program, the use of software in analyzing information or data, competency in research techniques aimed at analysis and solutions to problems using technological resources. Examples include courses in Visual Arts and Graphic Design, Dental Hygiene, Radiologic Technology, Medical Assisting, Nursing, Computer Science, Engineering, Business requiring the use of software and techniques, etc.

- Student Learning Outcomes (SLOs) which align with this Broome ILO should demonstrate that the students will engage in the use of computers, technology, including software and equipment. Courses, such as those in Math, Natural Sciences, Arts, and Health Sciences, in which technology is utilized in the process of learning, may align with this ILO. Other courses, which are not General Education, but which provide students with the opportunity to engage in the use of technology to analyze and solve problems, may also align with this ILO.

SUNY General Education Categories:

- Mathematics
- Natural Sciences
- The Arts

(Broome ILO 6) Information Literacy: Students will demonstrate the ability to perform the basic operations of personal computer use, understand and use basic research techniques; and locate, evaluate and synthesize information from a variety of sources using Internet resources.

- Student Learning Outcomes (SLOs) which align with this Broome ILO should demonstrate that students have the ability to use basic research techniques in which information is located, evaluated, and synthesized, a hypothesis is developed based on research of the literature pertaining to the field (e.g. a literature review as part of a research study), or the use of the various library databases. The key for this ILO is that students demonstrate the ability to locate and utilize information. Merely using course information presented alone is insufficient to meet this ILO. Courses, such as those in which students develop a research project and conduct a literature review, or write a research paper in which a literature review is conducted, or which require the Information Management Tutorial, may align with this ILO. Courses which capture the SUNY infused competency, Information Management will align with this ILO.

SUNY General Education Categories:

- Social Sciences
- Basic Communication

SUNY General Education Categories with Learning Outcomes: Below provides the list of SUNY General Education categories with their respective learning outcomes.

- 1. Mathematics:** Students to demonstrate competency in the following: interpret and draw inferences from mathematical models such as formulas, graphs, tables and schematics; represent mathematical information symbolically, visually, numerically and verbally; employ quantitative methods such as, arithmetic, algebra, geometry, or statistics to solve problems; estimate and check mathematical results for reasonableness; and recognize the limits of mathematical and statistical methods.
- 2. Natural Science:** Understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis; and application of scientific data, concepts, and models in one of the natural (or physical) sciences.

3. **Social Science:** Students demonstrate understanding of the methods social scientists use to explore social phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical and interpretive analysis; and knowledge of major concepts, models and issues of at least one discipline in the social sciences.
4. **American History:** Knowledge of a basic narrative of American history; political, economic, social, and cultural, including knowledge of unity and diversity in American society; knowledge of common institutions in American society and how they have affected different groups; and understanding of America's evolving relationship with the rest of the world.
5. **Western Civilization:** Students demonstrate knowledge of the development of the distinctive features of the history, institutions, economy, society, culture, etc., of Western civilization; and relate the development of Western civilization to that of other regions of the world.
6. **Other World Civilizations:** Students demonstrate knowledge of either a broad outline of world history, or the distinctive features of the history, institutions, economy, society, culture, etc., of one non-Western civilization.
7. **Humanities:** Students demonstrate knowledge of the conventions and methods of at least one of the humanities in addition to those encompassed by other knowledge areas required by the General Education program.
8. **The Arts:** Students demonstrate understanding of at least one principal form of artistic expression and the creative process inherent therein.
9. **Foreign Languages:** Students demonstrate basic proficiency in the understanding and use of a foreign language; and knowledge of the distinctive features of culture(s) associated with the language they are studying.
10. **Basic Communication:** Students will produce coherent texts within common college-level written forms; demonstrate the ability to revise and improve such texts; research a topic, develop an argument, and organize supporting details; develop proficiency in oral discourse; and evaluate an oral presentation according to established criteria.

Competencies: These competencies should be infused throughout the general education program:

1. **Critical Thinking (Reasoning):** Students will identify, analyze and evaluate arguments as they occur in their own or others' work and; develop well-reasoned arguments.
2. **Information Management:** Students will perform the basic operations of personal computer use; understand and use basic research techniques; and locate, evaluate, and synthesize information from a variety of sources.