

# Student Learning Outcomes: IF 2014, IF, SUNY

Category	New BSC IF 2014 SLOs	Original BSC IF SLOs (2005)	SUNY SLOs
American History	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Analyze the origins and development of intellectual diversity, political, economic, social, and cultural institutions of the US and the roles that they have played in American life (critical thinking)</li> <li>2. Explain the role of and influence of racial, ethnic, class, and gender groups in the development of the American people</li> <li>3. Summarize the process by which the US emerged as a world power</li> <li>4. Distinguish primary and secondary sources</li> </ol>	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Understand the origins and development of the political, economic, social and cultural institutions of the United States and the roles that they have played in American life</li> <li>2. Understand the origins of the racial, ethnic and intellectual diversity of the American People</li> <li>3. Understand the origins and development of the political, economic, social, and cultural institutions of the United States and the changing roles that they have played in American life.</li> <li>4. Understand the impact of race, class, ethnicity, and gender on the development of the American people</li> <li>5. Understand the process by which the United States expanded its territorial boundaries</li> <li>6. Understand the emergence of the United States as a world power</li> <li>7. Demonstrate the ability to distinguish between primary and secondary sources</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge of a basic narrative of American history: political, economic, social, and cultural, including knowledge of unity and diversity in American society</li> <li>2. Knowledge of common institutions in American society and how they have affected different groups; and</li> <li>3. Understanding of America's evolving relationship with the rest of the world.</li> </ol>

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Arts	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Describe the connection between creative process and artistic outcome</li> <li>2. Explain the relationships between art and the individual, culture, and society</li> <li>3. Analyze visual and/or performed work by considering purposes and processes (critical thinking)</li> </ol>	<ol style="list-style-type: none"> <li>1. Ability to read and understand visual and/or performed language including, e.g., idioms, styles, codes and conventions.</li> <li>2. Understanding of the meaning and use of artistic symbols in social context.</li> <li>3. Ability to interpret visual and/or performed work, including an understanding of purposes and processes of creative endeavors</li> <li>4. Ability to identify the persuasive and/or emotive aspects of visual and/or performed work.*</li> <li>5. Understanding of artistic criteria for evaluating visual and/or performed work.</li> </ol>	<ol style="list-style-type: none"> <li>1. Understanding of at least one principal form of artistic expression and the creative process inherent therein.</li> </ol>

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<p>Basic Communication</p> <p>Will Fold in CT and IM:</p> <p>Overarching SLO's are the same as SUNY.</p> <p>Course level:</p>	<p>CWP 102: Students will:</p> <ol style="list-style-type: none"> <li>1. Implement a tool kit of strategies for composing written texts, including both processed and on-demand writing.</li> <li>2. Apply rhetorical strategies in response to audience and purpose when approaching written, as well as prepared and extemporaneous oral tasks.</li> <li>3. Design research-based argumentative written texts and oral presentations for specific audiences and purposes.</li> <li>4. Identify and analyze material from critical and popular print, electronic and other media, surveys, interviews, and artifact inventories, and synthesize that material into written and oral texts, including employing appropriate citation format in written texts.</li> <li>5. Listen/respond appropriately to, critique, and revise their own and others' oral presentations and written texts, substantiating successful and less successful features on all levels.</li> </ol> <p>CWP 101: (Pending): Students will:</p> <ol style="list-style-type: none"> <li>1. Develop a student defined, individually practiced writing process.</li> <li>2. Demonstrate a repertoire of strategies for analyzing and approaching writing tasks.</li> <li>3. Practice various types of informal writing.</li> <li>4. Practice and demonstrate competence in writing on-demand through the use of timed in-class essays and other on-demand writing.</li> <li>5. Examine the relationship between reading and writing processes.</li> <li>6. Articulate the conventions of academic discourse, including the role of research in the scholarly experience.</li> <li>7. Access and analyze resources, including electronic resources and texts from scholarly databases, and incorporate researched material into scholarly essays.</li> <li>8. Demonstrate ability to critically evaluate and construct multi-modal text, and multi-media text presentations</li> </ol>	<ol style="list-style-type: none"> <li>1. Demonstrate competence in argumentative/persuasive writing.</li> <li>2. Demonstrate competence in rhetorical forms and writing with sources.</li> <li>3. Demonstrate competency in finding, analyzing, and synthesizing material from critical and popular print, electronic media and other media into their writing.</li> <li>4. Demonstrate the ability to use research strategies for specialized assignments, employing an appropriate citation format (MLA) and demonstrating the ability to use Butler Library and the Internet as sources of reference information.</li> <li>5. Demonstrate the ability to read writing-in-progress, identify rhetorical patterns that work for articulated writing tasks, and appreciate and expand their stylistic repertoire.</li> <li>6. Explore the use of the personal computer as writing and revising tool.</li> <li>7. Demonstrate the ability to write well-organized, unified, coherent research-based papers and essays that include a clear thesis and strong supporting material.</li> </ol>	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Produce coherent texts within common college-level written forms;</li> <li>2. Demonstrate the ability to revise and improve such texts;</li> <li>3. Research a topic, develop an argument, and organize supporting details;</li> <li>4. Develop proficiency in oral discourse; and</li> <li>5. Evaluate an oral presentation according to established criteria.</li> </ol>

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Critical Thinking Assessed in CWP 102, IF 2014 Courses, and two Required Major courses	Students will: 1. Identify, analyze, and evaluate arguments as they occur in their own or others' work; and 2. Develop well-reasoned arguments.		Students will: 3. Identify, analyze, and evaluate arguments as they occur in their own or other's work; and 4. Develop well-reasoned arguments.
Diversity: Local Requirement	1. Examine the past, current and/or prospective contributions of diverse groups to American society. 2. Analyze the ways in which social and institutional structures can contribute to privilege, social justice, or social injustice through stereotyping, prejudice, and discrimination (critical thinking)	1. Critically examine the past, current or prospective influences of diverse groups on American society. 2. Analyze the ways in which social and institutional structures can contribute to privilege and injustice through stereotyping, prejudice and discrimination. 3. Explore systematically the importance of understanding, respecting and valuing diverse people or cultures 4. Critically reflect on how their values, attitudes, and beliefs have developed and affect their perceptions of , and relations with others. 5. Assess the ways in which individuals, acting alone and in groups, can contribute to social justice.	
Global Engagement: Local Requirement— Does not Satisfy SUNY SLO	1. Demonstrate cognitive, affective, and behavioral skills and competencies that support effective and appropriate interaction in a variety of cultural contexts 2. Identify, analyze, and evaluate arguments as they occur in their own or others' work		1. Basic proficiency in the understanding and use of a foreign language; and 2. Knowledge of the distinctive features of culture(s) associated with the language they are studying.

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Humanities	Students will: <ol style="list-style-type: none"> <li>1. Examine fundamental aspects of human experience as expressed through literary, philosophical, or rhetorical works</li> <li>2. Articulate and defend critically informed values pertaining to individual and social questions (critical thinking)</li> </ol>	<ol style="list-style-type: none"> <li>1. Students will be able to reflect on basic questions of life with the goal of understanding the world and one's place in it.</li> <li>2. Students will be able to articulate and defend critically informed values.</li> <li>3. Students will be able to recognize and demonstrate creative thought in producing answers to individual and social questions.</li> </ol>	<ol style="list-style-type: none"> <li>1. 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.</li> </ol>
Information Management:  Assessed in CWP 102 and two Major courses	Students will: <ol style="list-style-type: none"> <li>1. Use applications to read, write, and execute files</li> <li>2. Conduct research using investigative techniques</li> <li>3. Evaluate, locate and synthesize information</li> </ol>		<ol style="list-style-type: none"> <li>1. Perform the basic operations of personal computer use;</li> <li>2. Understand and use basic research techniques; and</li> <li>3. Locate, evaluate and synthesize information from a variety of sources.</li> </ol>

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MQ Reasoning	<p>Students completing Mathematics and Quantitative Reasoning courses will meet the outcomes listed below in (i) or (ii).</p> <p>(i) <u>Problem Solving and Abstract Reasoning</u></p> <p>Students will:</p> <ol style="list-style-type: none"> <li>Represent and analyze known relationships<sup>1</sup> using algebraic and geometric models</li> <li>Represent phenomena of the physical world<sup>2</sup> in abstract, symbolic form</li> <li>Solve problems using appropriate methods through logical relationships and reasoning (critical thinking)</li> </ol> <p>(ii) <u>Statistical Analysis and Reasoning</u></p> <p>Students will:</p> <ol style="list-style-type: none"> <li>Describe and analyze sets of numerical data visually and quantitatively.</li> <li>Draw valid and meaningful inferences and conclusions from data using appropriate methods.</li> <li>Assess the validity of conclusions drawn from statistical methods.<sup>3</sup> (critical thinking)</li> </ol> <p><sup>1</sup> "known relationships" refers to the existing collection of functions and formulas used to describe the world around us.  <sup>2</sup> "physical world" includes phenomena that we may encounter in the study of the physical, life, and social sciences.  <sup>3</sup> "statistical methods" includes research design, data collection, and data analysis</p>	<p>Students completing Mathematics and Quantitative Reasoning courses will meet the outcomes listed below in (i) or (ii).</p> <p>(i) <u>Problem Solving and Abstract Reasoning</u></p> <p>Students will:</p> <ol style="list-style-type: none"> <li>Represent and analyze known relationships<sup>1</sup> using algebraic and geometric models</li> <li>Represent phenomena of the physical world<sup>2</sup> in abstract, symbolic form</li> <li>Solve problems using appropriate methods through logical relationships and reasoning</li> </ol> <p>(ii) <u>Statistical Analysis and Reasoning</u></p> <p>Students will:</p> <ol style="list-style-type: none"> <li>Describe and analyze sets of numerical data visually and quantitatively.</li> <li>Draw valid and meaningful inferences and conclusions from data using appropriate methods.</li> <li>Assess the validity of conclusions drawn from statistical methods.<sup>3</sup></li> </ol> <p><sup>1</sup> "known relationships" refers to the existing collection of functions and formulas used to describe the world around us.  <sup>2</sup> "physical world" includes phenomena that we may encounter in the study of the physical, life, and social sciences.  <sup>3</sup> "statistical methods" includes research design, data collection, and data analysis</p>	<p>Students will demonstrate the ability to:</p> <ol style="list-style-type: none"> <li>Interpret and draw inferences from mathematical models such as formulas, graphs, tables and schematics;</li> <li>Represent mathematical information symbolically, visually, numerically and verbally;</li> <li>Employ quantitative methods such as, arithmetic, algebra, geometry, or statistics to solve problems;</li> <li>Estimate and check mathematical results for reasonableness; and,</li> <li>Recognize the limits of mathematical and statistical methods.</li> </ol>

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Natural Science	<ol style="list-style-type: none"> <li>1. Describe the methods natural scientists use to explore natural phenomena, including observation, the framing of scientific questions, the development of hypotheses, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis</li> <li>2. Apply natural science data, concepts, and models to natural science (critical thinking)</li> </ol> <p>For inclusion in the Natural Science category, all courses must demonstrate clearly:</p> <ul style="list-style-type: none"> <li>-how the course is focused on the methods listed in the first student learning outcome for the traditional natural sciences of astronomy, biology, chemistry, earth sciences, or physics,</li> <li>-a rationale for which discipline(s) in the natural sciences is(are) drawn upon for content concepts and models, and</li> <li>-that the majority of the resources used (texts, periodicals, electronic) fall within the traditional natural sciences.</li> </ul> <p>For inclusion in the Natural Science category, courses must have a scheduled laboratory <b>and/or</b> experimental experience, satisfied by one or more hours of scheduled traditional natural science laboratory, experimental and/or problem-solving session. Course credit hours must reflect that a scheduled non-lecture experience is accommodated, e.g., with 2 hours lecture, and 2 hours laboratory scheduling for a 3-credit-hour course, meeting 4 hours per week. The experience must be focused on the hands-on nature of such activities, and is encouraged to be in the form of a formal traditional natural science laboratory period each week.</p> <ul style="list-style-type: none"> <li>-Courses must be approved for the Natural Science category by a committee of natural science professors from the School of Natural and Social Sciences</li> </ul>	<ol style="list-style-type: none"> <li>1. Students will demonstrate an understanding of the methods that scientists use to explore natural phenomena including observation, hypothesis development, measurement, data collection, experimentation, evaluation of evidence and quantitative analysis.<sup>1</sup></li> <li>2. Students will be able to use the terminology of a life science and a physical science to demonstrate cognition, interpretation and communication of information in the natural sciences.<sup>2</sup></li> <li>3. Students will be able to evaluate or test hypotheses by analyzing evidence.<sup>3</sup></li> </ol> <p><b><u>Desirable but Optional Learning Outcome</u></b></p> <ol style="list-style-type: none"> <li>4. Students will be able to demonstrate an understanding that what distinguishes science from pseudoscience is the demand for objective evidence as the ultimate test of scientific validity.</li> </ol>	<ol style="list-style-type: none"> <li>1. 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</li> <li>2. Application of scientific data, concepts, and models in one of the natural sciences.</li> </ol>

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Other World (N-W)	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Summarize: (a) a broad outline of world history, or (b) at least one other world civilization or multi-cultural region in one or more historical period, including cultures, geography, institutions, societies, polities, and economies</li> <li>2. Analyze ways of thought in one or more historical period, in one or more other world civilization or multi-cultural region, including at least two foundational fields of thought (e.g., science and religion, or artistic expression and political philosophy).</li> <li>3. Classify an era in terms of the historical periodization, continuities and discontinuities, in the development of other-world civilization or multi-cultural region.</li> <li>4. Identify information and ideas from at least one other world civilization or multi-cultural region and apply the information and ideas to other world civilizations and multi-cultural regions (critical thinking).</li> </ol> <p>Definitions: The term "civilization implies the existence of a society with a relatively advanced degree of occupational specialization and the evolution of classical religious, philosophical and literary traditions. Courses in ancient civilizations generally must be comparative. The term "multi-cultural region" implies the existence of several cultures that approach the definition of "civilization" or did at one time. Sub-Saharan Africa or Latin American might be examples. The term "non-western" implies a primary focus outside of Europe, the U.S., and Canada or on the indigenous peoples of North America.</p>	<ol style="list-style-type: none"> <li>1. Demonstrate knowledge of ways of thought in one or more historical period, in one or more non-western civilization or multi-cultural region, including at least two foundational fields of thought (e.g., science and religion, or artistic expression and political philosophy)</li> <li>2. Demonstrate knowledge of the development of at least one non-western civilization or multi-cultural region in one or more historical period, including its cultures, geography, institutions, societies, polities and economies.</li> <li>3. Demonstrate knowledge of an era in terms of the historical periodization, continuities and discontinuities, in the development of a non-western civilization or multi-cultural region.</li> <li>4. Relate the development of a non-western civilization or multi-cultural region to that of other regions of the world.</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge of either a broad outline of world history, or</li> <li>2. The distinctive features of the history, institutions, economy, society, culture, etc., of one non-Western civilization.</li> </ol>

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Social Science	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Describe social environments, behaviors, and social issues in the context of course subject matter.</li> <li>2. Apply basic concepts and terminology of social science.</li> <li>3. Evaluate the basic knowledge of methods of gathering evidence in the social science field (critical thinking)</li> </ol>	<p>Students will</p> <ol style="list-style-type: none"> <li>1. The ability to describe accurately the critical social environments, behaviors, and social issues in the context of the course subject matter.</li> <li>2. An understanding of the basic concepts and terminology of a social science and the ability to apply them.</li> <li>3. A basic knowledge of methods of gathering evidence in the social sciences and an understanding of what constitutes acceptable and appropriate evidence.</li> <li>4. An ability to evaluate the implications of social diversity.*</li> <li>5. The ability to articulate and critically evaluate varying positions taken on social science topics</li> </ol> <p>*This may include domestic, international and historical approaches.</p>	<ol style="list-style-type: none"> <li>1. 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</li> <li>2. Knowledge of major concepts, models and issues of at least one discipline in the social sciences.</li> </ol>

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Western	<p>Students will:</p> <ol style="list-style-type: none"> <li>1. Identify characteristics of Western Civilization and its influence on the modern world through multiple cognate areas of the liberal arts (Humanities, Natural Sciences, Social Sciences, and Art)</li> <li>2. Apply fundamental concepts to describe the development of Western Civilization over a significant period of time* (critical thinking)</li> <li>3. Relate the development of Western Civilization to that of other regions of the world</li> </ol> <p>_____ *“Significant period of time” should be construed in terms of centuries, rather than decades.</p> <p>Note: The first two learning outcomes implement the first of the SUNY Trustee’s learning outcomes. The third is identical to the second of the SUNY Trustee’s learning outcomes.</p> <p>The committee expects that courses proposed for inclusion in the IF Western Civilization category will be designed to be effectively self-contained, neither presuming previous coursework nor intended as feeder courses themselves.</p>	<ol style="list-style-type: none"> <li>1. Demonstrate knowledge of Western ways of thought in one or more historical period, including at least two foundational fields of thought (e.g., science and religion, or artistic expression and political philosophy)</li> <li>2. Demonstrate knowledge of the development of Western civilization in one or more historical period, including its cultures, geography, institutions, societies, politics and economies.</li> <li>3. Demonstrate knowledge of an era in terms of the historical periodization, continuities and discontinuities, in Western civilization.</li> <li>4. Relate the development of Western civilization to that of other regions of the world.</li> </ol> <p>Note: The first three learning outcome correspond to the first of the SUNY Trustee’s learning outcomes. The fourth is identical to the second of the SUNY Trustee’s learning outcomes. The committee responded to the following passage SUNY’s commentary, requiring that Western Civilization courses have</p> <p><i>(i) a focus on an aspect of western civilization that is reasonably construed as foundationally important; and</i></p> <p><i>(ii) relate that focus to the overall development of western civilization</i></p>	<ol style="list-style-type: none"> <li>1. Demonstrate knowledge of the development of the distinctive features of the history, institutions, economy, society, culture, etc., of Western civilization; and</li> <li>2. Relate the development of Western civilization to that of other regions of the world.</li> </ol>

Writing	<p>Students will:</p> <ol style="list-style-type: none"><li>1. Refine habits conducive to good writing developed at earlier stages in core education and education in the major, per the SUNY Basic Communication Requirements.<ul style="list-style-type: none"><li>▪ produce coherent texts within common college-level written forms</li><li>▪ demonstrate the ability to revise and improve such texts</li><li>▪ research a topic (as defined in accordance with disciplinary practices), develop an argument (as defined in accordance with disciplinary practices), and organize supporting details)</li></ul></li><li>2. Use writing as both a tool for learning and a means for communicating about ideas within a discipline or profession.</li></ol>		
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