

Core Curriculum Assessment Committee

Version 10 oct 2023

Core Subcomponent Core learning objectives

Note that core LOs should not be confused with program LOs in similar areas. Program LOs are typically more advanced and require deeper learning by students majoring in specific areas. Core LOs provide a less demanding foundational skill set in the broad set of areas that make up the core. It is important to be focused on learning that can be delivered well and achieved well by students in a few introductory core courses. They are thus generally less demanding, and should be focused on the most crucial foundational skills, recognizing that important additional skill sets are available for students wishing to major or minor in these areas.

Natural Science

- 1. Students will demonstrate an empirical and/or theoretical understanding of the natural world that is based upon observation and the scientific method*
- 2. Students will be able to think critically about the natural world, to offer meaningful explanations of natural phenomena, and develop and test hypotheses about natural phenomena*
- 3. Students will be able to demonstrate an understanding of the societal relevance of concepts and contemporary issues in the natural sciences*

Historical designation criteria revised and approved UGSC [9 nov 2021](#), revised and reapproved [revision 28 March 2023](#)

Computer Science

- 1. Students will be able to use computation to represent problems (i.e. abstraction) and implement solutions using an appropriate programming environment.*
- 2. Students will be able to use computation to demonstrate algorithmic thinking.*
- 3. Students will be able to utilize computational applications for modeling, simulation or visualization.*
- 4. Students will be able to explain the limitations, assumptions, and trade-offs inherent in computing models.*
- 5. Students will be able to apply a software development process (specification/ requirements, design, programming /documentation, debugging /testing).*

Historical designation criteria revised and approved UGSC [9 nov 2021](#)

Social Science

1. *Students will demonstrate an understanding of the scientific study of individual and group behavior*
2. *Students will demonstrate an understanding of fundamental concepts, theory or methods from one or more of the social/behavioral sciences (e.g., anthropology, economics, sociology, political science or psychology).*
3. *Students will demonstrate critical thinking about human behavior and society to offer meaningful explanations of social and individual behavior.*
4. *Students will be able to frame social science problems broadly in a way that is accessible to the general population (i.e., not exclusively for majors within a specific discipline)*

Historical designation criteria revised and approved UGSC [9 nov 2021](#)

Mathematics

1. *Students will be able to perform mathematical calculations by applying mathematical rules, symbolic manipulations, definitions, and/or theorems correctly.*
2. *Students will be able to demonstrate their understanding of mathematical concepts and support their work claims using valid arguments.*

*Historical designation criteria revised and approved UGSC [9 nov 2021](#)
revised and reapprived [UGSC approved 28 March 2023](#)*

Interprofessional Projects (IPRO)

1. *Students will demonstrate the ability to contribute to solutions to open-ended problems of community and societal relevance that require an interdisciplinary approach*
2. *Students will demonstrate effective interdisciplinary teamwork skills*
3. *Students will demonstrate their ability to effectively communicate across disciplinary boundaries*
4. *Students will demonstrate their ability to identify and evaluate the ethical implications of their solutions and actions.*

UGSC approved Apr 25, 2023

Introduction to the Profession (ITP)

1. *Ethics: Students will demonstrate an understanding of the ethical framework applicable to the discipline. Students will be able to understand the importance*

of ethics to the profession. Students will be able to recognize ethical issues and propose ethical responses to ethical problems.

- 2. Communication: Students will be able to understand the standards of professional communication used within the profession. Students will be able to communicate (understand, and respond) in a discipline specific fashion*
- 3. Professionalism: Students will be able to understand the norms of professional behavior within the discipline. Students will be able to discuss and understand how professional conduct reflects on and supports the discipline.*

UGSC approved: 24 Feb 2015 revised and reapproved UGSC [9 nov 2021](#)

Humanities (Draft)

- 1. Students will be able to articulate questions about human expressions and experiences.*
- 2. Students will demonstrate understanding of the language and concepts of the humanities and arts.*
- 3. Students will produce original work of creative expression (e.g., creative writing, argumentative research paper, fine arts).*

Communication (Draft)

- 1. Students can critically read and analyze a variety of texts (e.g., news articles, academic papers, data sets) in order to develop their own claims in writing.*
- 2. Students can craft a text with attention to audience, purpose, context, and conventions.*
- 3. Students can revise their text through participation in multiple phases of the writing process (e.g., pre-writing, drafting, revising, peer-review, editing).*
- 4. Students can appropriately use evidence (e.g., data, cited sources) as part of their argument.*
- 5. Students can present an effective argument in the appropriate medium of communication, which can include written visual, oral, or other emergent forms of communication.*
- 6. Students can communicate specialized knowledge appropriately for an audience.*