

CORE 2.0

The mission of CORE 2.0 is to enhance students' use of multiple perspectives in making informed critical and ethical judgments in their personal, public, and professional lives.

CORE 2.0 is built on five Foundation courses, and on Inquiry and Research & Creative Experience courses in Arts, Humanities, Natural Sciences and Social Sciences.

Foundation Courses

- ⇒ University Seminar (US)
- ⇒ College Writing (W)
- ⇒ Quantitative Reasoning (Q)
- ⇒ Diversity (D)
- ⇒ Contemporary Issues in Science (CS)

Ways of Knowing

All students must take at least one (1) Inquiry or one (1) Research & Creative Experience course in each of the following areas:

- ⇒ Arts (IA or RA)
- ⇒ Humanities (IH or RH)
- ⇒ Natural Sciences (IN or RN)
- ⇒ Social Sciences (IS or RS)

All students must take at least one (1) approved Research & Creative Experience course. Students may take an approved Research & Creative Experience course in one of the four areas OR they may take a separate Research & Creative Experience course in any discipline, including the Undergraduate Scholars Program (USP 489/490).

Notes:

1. Total number of courses: 9, if the Research and Creative Experience requirement is completed as part of the requirements in Arts, Humanities, Natural Sciences or Social Sciences; otherwise 10.
2. A grade of C- or better is required in all core courses.
3. Completion of at least two of the following courses with a grade of C- or better satisfies both the Contemporary Issues in Science and the Natural Science Inquiry requirements: ARNR 240; BCHM 122; BIOL 101, 102, 207, 208, 209, 210, 211, 213, 214, 215, 251; CHEM 121, 131, 132, 141, 142, 215; ENTO 204; ESCI 111, 112; GEOL 102, 204, 210; LRES 201; MB 201; MBEH 210; PHYS 205, 206, 211, 212, 213, 221, 222; PS 102. Individual substitutions for one requirement or the other are not permissible.
4. Completion of UH 202 with a grade of C- or better satisfies the Humanities Inquiry requirement.

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University Seminar

The Seminar is a course designed for first-year students. It provides an introduction to college studies aimed at expanding students' intellectual interests, improving critical thinking and communication skills, and creating a community of learners. The Seminar is a small class, with fewer than 20 students per section, emphasizing discussion, critical interpretation of important texts, multi-disciplinary perspectives, exploration of diverse contrasting perspectives and interpretations, and examination of arguments and evidence.

Learning Outcomes

Through the Seminar students will:

1. Improve their ability to
 - speak effectively about their ideas.
 - guide their education by asking and exploring their own questions.
 - prepare and deliver a thoughtful oral presentation.
 - listen effectively.
 - incorporate diverse points of view in developing arguments and reaching conclusions.
 - read critically and interpret complex texts.
 - write a thoughtful college paper.
2. Strengthen habits of critical thinking.
3. Expand interests in the arts, humanities, social sciences and natural sciences.
4. Come to know a faculty member, student fellow, and other first-year students.
5. Enjoy the discussion and development of ideas and participation in a community of learners.

ENGL 121: College Writing I

ENGL 121 is a multi-section, three-credit course with an enrollment cap of 33. Classes consist largely of first and second-year students. The course fulfills the *written communication* requirement of the current core and is taught by adjunct instructors, teaching assistants, and tenure-track faculty.

The departmental course design focuses on expository (vs. creative or personal) writing, requires at least four graded paper assignments per term, and calls for sections to be organized around topics/themes of the instructor's choosing. With some variation, typical sections of 121 incorporate a wide range of learning components in support of major paper assignments: reading of essays, study of writing instruction texts, short compositions in response to reading, in-class writing, small group workshops, peer review of writing, draft conferences, and class discussion.

Learning Outcomes

It is intended that students who complete ENGL 121 will have been significantly aided in their ability to:

- Use writing as a means to engage in critical inquiry through exploring ideas and challenging assumptions.
- Read texts thoughtfully, analytically, and critically in preparation for writing tasks.
- Compare and contrast the alternative perspectives of multiple texts and take a position in writing in response to them.
- Reflect on and strategically apply the individual writing process.
- Make meaningful use of source material, citing texts in ways that enhance writing content.
- Develop competence in the use of conventional structures and forms of expository discourse, including sentence mechanics, organization, and argument structure.
- Critique and receive feedback on writing and practice revision from the word- and sentence-level to that of overall reorganization and rewriting.
- Apply principles of expository composition to a variety of academic writing tasks, including writing in other courses.
- Accommodate the interests of readers through careful consideration of content and style.
- Collaborate with others in the writing process through discussion and feedback.

Quantitative Reasoning

Every person is inundated daily with numerical information, often in the form of graphical representations, statistical summaries, or projections from mathematical models. Comprehension of the elementary quantitative concepts, development of quantitative reasoning skills, and the ability to reasonably ascertain the implications of quantitative information are goals of a core course in quantitative reasoning (QR).

In a QR course, the student will be exposed to the methods employed in the mathematical sciences. This will include the application of mathematical or statistical models to complex problems which can then lead to potential solutions of these problems.

There are two types of QR courses: foundation and terminal. The type of course taken is dependent on a student's program of study.

- A foundation QR course (e.g. calculus or introductory statistics) provides the mathematical foundation prerequisite for successful completion of courses contained in a student's program of study. Thus, a core goal of the foundation course is to provide the quantitative and logical tools required in subsequent courses that demand a high level of mathematical sophistication and preparedness.
- A terminal QR course stresses QR over a broad array of topics. 'Mathematics for the Liberal Arts' addresses QR through the topics related to mathematical literacy in today's world. 'Language of Math' emphasizes understanding, expressing, proving, and thinking mathematical thoughts and doing so in the language of mathematics. 'Quantitative Reasoning' (first offering Spring 2001) focuses on statistical literacy through critical interpretation of statistical information presented in various media, and conceptual understanding of statistical principles.

QR courses enable students to develop those skills that lead to an understanding of quantitatively-based problems related to contemporary society. They provide practical applications that relate to their current daily and future professional lives as consumers of quantitative information. Ultimately, after having developed certain QR skills, they can apply them to make informed decisions in their personal and professional lives.

Learning Outcomes

A QR course will improve a student's ability to

- reason analytically and quantitatively.
- think critically and independently.
- apply the acquired skills to other courses.

More so for the terminal QR course, students will also

- increase their interest in current events.
- improve their ability to make informed decisions that involve interpreting quantitative information.

Diversity

Rationale

Graduates of Montana State University face an ever changing and increasingly complex world. An understanding and sensitivity to other cultural perspectives prepares them to function in the global community and creates a campus climate that is conducive to academic growth for all students.

Diversity courses will address the study of identities (e.g. race, class, gender, sexual orientation, ability, etc.), societies, nations, or national languages and cultures.

Criteria

The course must address criterion #1 below and one of the remaining four criteria (#s 2 – 5).

1. The course provides opportunities for students to participate in discussion and dialogue so that they may actively engage issues of diversity.
2. The course examines the concept and meaning of difference, and the social, political, or economic conflicts that result from it.
3. The critical examination of difference is the central concern of the course, and comparisons are offered that allow students to see what is and is not generalizable about the specific diversity concerns being discussed.
4. The course critically examines categories of human difference and explores commonalities that are sometimes overlooked in the study of diversity.
5. The course examines the historical, political, and cultural forces that foster systematic disparities based on ascribed characteristics, and critically examines strategies for addressing such disparities.

Learning Outcomes

Through courses in diversity studies students will do at least two of the following:

- Understand diversity within societies as well as diversity among societies.
- Understand diversity through the ability to engage peoples from other cultures in their own language and on their own terms.
- Understand the conditions and contributions of world societies OR of disproportionately represented groups in the U.S.
- Become aware of how world societies perceive and/or pursue social justice OR how disproportionately represented groups affect decisions about social justice.

Contemporary Issues in Science

Contemporary Issues in Science (CIS) is a course focused on natural science or technology that examines the ways in which science contributes to the study of significant problems in the contemporary world, and can help individuals and society make informed decisions about these issues.

CIS courses explore how knowledge is created in the natural sciences. They have a central goal of providing an understanding of the methods used to discover and create factual and theoretical scientific knowledge. These courses will examine particular scientific or technological issues and at the same time explore the methodological and theoretical foundations of scientific inquiry.

CIS courses, for example, might devote some time to examining the history of particular contemporary scientific issues and the ways in which truths or assumptions about these issues have changed over time. They might examine the social and political consequences of scientific and technological discoveries, or ethical issues arising from their use, or how science and scientific methods can aid public, personal, and professional decision-making.

CIS, like Inquiry courses, will build on the critical thinking and communication skills developed in other core courses, particularly those of the University Seminar and College Writing courses. By enhancing students' understanding of the process of scientific inquiry, they will enrich students' experience of the core Research and Creative Experience and may incorporate non-traditional teaching methods, including small group learning activities and guided research projects.

Specific Criteria

To receive a CIS designation, a course should:

- Have a clearly defined science and/or technology focus, and explore a contemporary science or technology issue.
- Examine ways in which science and/or technology can contribute to the study of a significant problem in the contemporary world, and can help individuals and society make informed decisions about such issues.
- Explore how knowledge is created in science and/or technology (at least one-third of the course should be devoted to this goal).
- Include at least one major, discovery-based learning activity.
- Emphasize critical thinking, writing and oral communication skills.
- Ask students to independently analyze information from multiple sources.
- Develop students' abilities to work effectively in small groups.

Learning Outcomes

These courses will improve students'

- Understanding of how science contributes to analyzing complex problems in the contemporary world

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- Understanding of scientific methods, including the kinds of questions asked by scientists and the methods used to explore those questions
- Critical thinking, writing and oral communication skills
- Ability to independently analyze information from multiple sources
- Ability to work effectively in small groups

Inquiry

General Description

The central goal of every Inquiry course is to provide students with an understanding of the methods used to discover and create the factual and theoretical knowledge of the discipline. Each course will examine particular issues in the discipline while exploring its methodological and theoretical foundations.

Inquiry courses, for example, might devote some time to examining the history of the discipline and the ways in which its truths or assumptions have changed over time. They might focus on major paradigm shifts or on contested ethical and interpretive issues within the discipline.

Inquiry courses will build on the critical thinking and communication skills developed in other core courses, particularly those of the University Seminar and College Writing courses. By enhancing students' understanding of the process of academic inquiry, they will enrich students' experience of the core Research and Creative Experience.

Inquiry courses are encouraged to incorporate non-traditional teaching methods, including small group learning activities and guided research projects.

Criteria

A substantial proportion of the course will be devoted to exploring ways in which the discipline creates knowledge.

The course must include at least one major learning activity based on methods of inquiry appropriate to the discipline.

Learning Outcomes

Inquiry courses are intended to improve students'

- Understanding of disciplinary methods, including the kinds of questions asked in the discipline and the methods that practitioners use to explore those questions
- Understanding of how ideas and methods in the discipline have developed or changed
- Critical thinking and written or oral communication skills
- Proficiency in analyzing information from different viewpoints

Research and Creative Experience

The Research and Creative Experience builds on the competencies students have developed in the foundation courses. These experiences will not be limited to a student's major field of study and will incorporate a range of authentic experiences from traditional one-on-one mentoring to group Research and Creative Experience courses. Because research and creative projects vary from one discipline to the next, some general guidelines have been developed to determine what constitutes a Research and Creative Experience.

Guidelines

- Students experience the process of research and creative experience as a unique intellectual activity and generate a scholarly product.
- Student autonomy directs the research and creative experience, while faculty and staff provide the framing concepts and contexts.
- Research and Creative Experience courses provide frequent and early benchmarks for student progress to encourage early engagement in the research and creative process.
- The research and creative experience component done individually or in small groups constitutes at least 1/3 of the course. The remaining part of the course should provide sufficient information about the subject to enable the student to formulate a project as well as provide the student with the tools to do a research and creative project.
- Courses geared toward sophomore level students are particularly encouraged, but Research & Creative Experience courses can be at any level. Research & Creative Experience courses may have prerequisites.

Learning Outcomes

Through the Research and Creative Experience students will:

- Improve their ability to put concepts and facts into practice.
- Increase their understanding of the processes and dynamic nature of knowledge.
- Strengthen their habits of critical and creative thinking while seeking and synthesizing information from broad and diverse sources.
- Deepen their understanding of the importance of team work and collaboration.
- Develop responsibility, competency, and confidence.
- Expand intellectual curiosity and interest in the subject area.

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