

## MASTER SYLLABUS GUIDELINES

### 1. Course Information

**College:** College of Science and Mathematics  
**Department:** College of Science and Mathematics  
**Course Title:** Scientific Thought and Method  
**Course Designation and Number:** SM 101  
**GE Area(s):** (Lists all area(s) that apply.)

VI: College Component

**Writing Intensive:**  Yes  No

**For WI Courses:**  All sections  Selected Sections are WI.

**Method(s) of Instruction:**  Lecture  
 Discussion  
 Web-enhanced  
 Web-only  
 Other (Explain below.)

**Includes Lab:**  Yes  No

Lab incorporated into lecture/lab meet times

**Prerequisites:** (Specify or state 'None'.) MPL level 3 or higher or DEV 095

### 2. Objectives

#### GE Program Objectives:

- ? Sharpen critical thinking, problem solving, and communication skills;
- ? Learn about the aesthetic, ethical, moral, social, and cultural dimensions of human experience needed for participation in the human community;
- ? Increase knowledge and understanding of the past, of the world in which we live, and of how both past and present have an impact on the future.

#### GE Area VI Objectives:

- ? Understand the experimental basis of scientific inquiry
- ? Understand the theoretical, practical, creative and cultural dimensions of scientific inquiry
- ? Discuss some of the fundamental theories underlying modern science
- ? Understand the dynamic interaction between society and the scientific enterprise
- ? Communicate with individuals who are the science and mathematics majors

**Course Objectives and GE Learning Outcomes:**

This course has been designed specifically for science and math majors in an effort to increase student retention, motivation, and success. Students will have the opportunity to explore the physical and natural sciences through a small number of modern day multidisciplinary skills-based units. Students will develop an understanding of how the sciences relate to one another and to everyday life. The course will enable students to sharpen critical thinking, problem solving, and communication skills; all of which are important in performing scientific inquiry. Also integrated within the curriculum will be opportunities for students to strengthen basic math skills. Emphasis will be placed on the experimental basis of scientific inquiry, model and theory building, and the ethical uses of the results of scientific endeavors.

**For WI Courses: WAC Objectives**

Students will be required to keep detailed notebooks of all activities and experiments performed during class, which falls under the informal writing requirement for WAC. In addition, formal writing will be assigned in the form of three lab reports assigned during the quarter.

**3. Suggested Course Materials**

None – all materials provided to student as part of course.

**4. Suggested Methods of Evaluation**

**Exams:** These announced evaluations will be scattered throughout the course. The evaluations will be based on scientific reasoning, rather than the memorization of facts and formulas.

**Writing Assignments:** Students will be assigned several writing assignments throughout the quarter which may include lab reports and/or critiques of scientific articles. Details and supporting information for these assignments will be given in class.

Weighted Grade Distribution	Percent
Attendance/Participation	10%
Homework	20%
Exams 1, 2, 3	30%
Writing Assignments/lab manual	40%

### 5. Grading Policy

(This section is to be reproduced on all master syllabi exactly as it appears here.)

All GE courses are graded A-F.

WI component is graded Pass/Unsatisfactory.( Include only for WI courses)

Grading Scale:

A (90% and above)

B (80%-89%)

C (70%-79%)

D (60%-69%)

F (59% and under)

### 6. Suggested Weekly Course Outline Including Typical Assignments

Tentative Course Schedule:

Weeks 1-3	Observation, Measurement, Classification ? Rock Classification ? Measuring the Size of Large Objects ? Measuring the Size of Small Objects ? Exam 1	Exam 3: (during Finals Week)  Date and time: TBA
Weeks 4-7	Forming and Testing Hypotheses ? Genetically Modified Foods: How Can You Tell? ? What Factors Affect Chemical Reaction Rates? ? Population Growth of Bacteria ? Exam 2	Student Code of Ethics Please understand the policies of the university. They will be adhered to in this course.
Weeks 8-10	Developing and Applying Models ? Tree Biometrics ? Conceptual Modeling of Groundwater Flow ? How Green Are You? ? Exam 3	

**7. Other** (This section is to be reproduced on all master syllabi exactly as it appears here.)

Syllabus distributed to students should employ the format approved by UCAPC and must include:

- Instructor name, office hours, and contact information
- Office of Disability Services information
- Information on how grades will be determined
- Attendance policy