**MOHAWK VALLEY COMMUNITY COLLEGE**

**UTICA, NEW YORK**

**COURSE OUTLINE**

**INTRODUCTION TO EARTH SCIENCE**

 **GL 100**

**REVIEWED & FOUND ACCEPTABLE 1/10/17**

**GL 100 COURSE OUTLINE**

**Course Number:** GL 100

**Course Title:** Introduction to Earth Science

**Credit Hours:** 4

 **I. Course Description**

This course is intended for non-science major students. It provides an introduction to the primary components of Earth science: oceanography, meteorology, geology, & astronomy. Prerequisites: none. Credit hours: 4.

**II. Student Learning Outcomes**

**Lecture**

 A. The student will classify and categorize common minerals & rocks

 B. The student will examine basic surficial processes, which are responsible for making the Earth as it appears

 C. The student will examine the Earth’s oceans & recognize the oceans’ effect on the shorelines

 D. The students will examine various components of the atmosphere, and will summarize how they interact to produce the Earth’s weather

 E. The student will examine the structure & organization of the cosmos, with an emphasis on our solar system and its origins & organization

**Laboratory**

A. The student will be able to classify and categorize specimens of the common rock forming minerals

B. The student will be able to classify and categorize specimens of common examples of the three types of rocks that the Earth is composed of: Igneous, Sedimentary, & Metamorphic

 C. The student will evaluate how the Earth’s oceans function as a system and how the oceans interact with the continents

 D. The student will explore how the Earth’s weather is a function of its atmosphere & the oceans

 E. The student will examine how weather maps are constructed and will demonstrate the ability to interpret them

 F. The student will evaluate early astronomical observations were made in order to better understand their origins

 G. The student will examine the solar system to better understand its organization and structure

**III. Organization and Procedures**

 A. Time Allotment (4 credit hours)

 1. Lecture: 3 hours per week for 15 weeks

 2. Laboratory: 2 hours per week for 15 weeks

 Laboratory

 a. 15 weekly laboratory projects or experiments

**Introduction to Earth Science (GL100)**

**Lecture Outline**

**Week Topic Chapter**

 1 Introduction to Earth Science 1

 Matter & Minerals 2

 2 Rocks: Materials of the Solid Earth 3

 3 Weathering, Soil, and Mass Wasting 4

 4 *Lecture Test #1*

 5 The Ocean Floor 13

 Ocean Water and Ocean Life 14

 6 The Dynamic Ocean 15

 7 The Atmosphere 16

 8 Moisture, Clouds, and Precipitation 17

 9 *Lecture Test #2*

 10 Air Pressure and Wind 18

 11 Weather Patterns and Severe Storms 19

 12 Glaciers, Deserts, and Wind 6

 13 *Lecture Test #3*

 14 Touring Our Solar System 22

 15 Light, Astronomical Observations, and the Sun 23

 Beyond Our Solar System 24

 16 *Final Exam*

**Introduction to Earth Science (GL100)**

**Laboratory Outline**

**Week Topic Chapter**

1 Math, Science & Measurement Review 23

2 Introduction to Minerals 1

3 Introduction to Rocks 2

4 Earthquakes 8

5 Oceanography 9

6 Waves, Currents & Tides 11

7 Earth – Sun Relationships 12

8 Heating in the Atmosphere 13

9 Atmospheric Moisture, Pressure & Wind 14

10 Air Masses & Weather Maps 15

11 Astronomical Observations 16

12 Patterns in the Solar System 18

13 Earth / Moon Interactions 21

14 Locating the Planets 19
15 Surveying the Terrestrial Planets 20