

# BASC 1414: NATURAL SCIENCE

## NATURAL SCIENCE COURSE OVERVIEW

This course is an integrated introduction to the natural sciences designed for non-science majors. Students explore key concepts from physics, chemistry, astronomy, earth science, ecology, biology, and genetics through observation, experimentation, and case studies in the development of scientific ideas.

The course emphasizes the scientific method as a way of investigating the natural world and includes 45 clock hours of laboratory work. Scientific inquiry is presented as a means of understanding the order, complexity, and coherence of creation.

## COURSE LEARNING OBJECTIVES

Upon completion of this course, students will be able to:

1. Know and make God known by examining our natural surroundings, the intricate complexity of God's creation, and the infinity of the universe;
2. Apply the scientific method and deductive reasoning to investigate scientific questions as a method of seeking truth;
3. Identify the basic principles of physics and chemistry that govern everything from microscopic cells to the orbits of the celestial bodies;
4. Comprehend the details of God's creation through our knowledge of the earth's composition and atmosphere;
5. Examine the delicate balance of ecosystems and environment with the intent of environmental stewardship as God's image bearers;
6. Recognize the sophisticated complexity of the human body and genetics, which point to an all-knowing Creator.

## ADDITION OF A SIGNATURE ASSIGNMENT

The **BASC 1414 Weekly Nature Journal** is a semester-long assignment in which students spend 15–20 minutes each week observing the natural world in an outdoor setting, such as a park, backyard, or campus space, and recording their findings in a structured journal entry. Each entry includes the date, location, a labeled hand-drawn sketch, a detailed scientific observation (1–2 paragraphs describing features like shape, texture, behavior, and interactions), and a personal reflection on how the experience deepens appreciation for nature and God's creation. Weekly prompts guide students to focus on different aspects of nature—such as trees, familiar objects viewed with fresh perspective, comparisons, the sky, water ecosystems, living structures, and numerical patterns—helping them develop observation skills, recognize complexity and design, and connect scientific exploration with meaning and stewardship.

“THE HEAVENS DECLARE THE GLORY OF GOD, AND THE SKY ABOVE  
PROCLAIMS HIS HANDIWORK.” PSALM 19:1

# CORE OUTCOME MAPPING

## 1. KNOW AND MAKE KNOWN GOD, THE CREATOR AND REDEEMER

“GREAT ARE THE WORKS OF THE LORD, STUDIED BY ALL WHO DELIGHT IN THEM. FULL OF SPLENDOR AND MAJESTY IN HIS WORK, AND HIS RIGHTEOUSNESS ENDURES FOREVER.” PSALM 111: 2-3

- **Biblical Literacy:** Students connect observations of the natural world with scriptural understanding, recognizing themes of creation, order, and purpose within the broader biblical narrative.
- **Christian Wisdom:** Students reflect on the ethical implications of scientific knowledge, including stewardship of creation and responsible use of resources.
- **Theological Proficiency:** Students understand how the study of the natural world has historically related to Christian thought and doctrine concerning creation.

## 2. KNOW AND MAKE KNOWN GOD’S CREATION

“OH SING TO THE LORD A NEW SONG; SING TO THE LORD, ALL THE EARTH! SING TO THE LORD, BLESS HIS NAME; TELL OF HIS SALVATION FROM DAY TO DAY. DECLARE HIS GLORY AMONG THE NATIONS, HIS MARVELOUS WORKS AMONG ALL THE PEOPLES! FOR GREAT IS THE LORD, AND GREATLY TO BE PRAISED... THE LORD WHO MADE THE HEAVENS.” PSALM 96 : 1-4A,5B

- **Scientific Literacy:** Students engage in scientific investigation through observation, experimentation, and analysis across multiple scientific disciplines.
- **Quantitative Literacy:** Students apply mathematical reasoning and data analysis in laboratory work and scientific problem-solving.
- **Aesthetic Literacy:** Students cultivate appreciation for the beauty, complexity, and coherence of the natural world through observation and reflection.

## 3. KNOW AND MAKE KNOWN HUMANS AS GOD’S IMAGE-BEARERS

“SO GOD CREATED MAN IN HIS OWN IMAGE, IN THE IMAGE OF GOD HE CREATED HIM; MALE AND FEMALE HE CREATED THEM.” GENESIS 1:27

- **Human Dignity:** Students explore the complexity of human biology and genetics, recognizing the uniqueness and value of human life.
- **Interdependence:** Students examine ecological systems and human relationships to the environment, understanding interconnectedness within creation.
- **Flourishing:** Students develop a sense of responsibility for environmental stewardship and the well-being of others through informed scientific understanding.

“HE IS THE IMAGE OF THE INVISIBLE GOD, THE FIRSTBORN OF ALL CREATION. FOR BY HIM ALL THINGS WERE CREATED, IN HEAVEN AND ON EARTH, VISIBLE AND INVISIBLE, WHETHER THRONES OR DOMINIONS OR RULERS OR AUTHORITIES—ALL THINGS WERE CREATED THROUGH HIM AND FOR HIM.”  
COLOSSIANS 1:15-16