

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                  |                   |                     |                     |                             |                        |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------|---------------------|-----------------------------|------------------------|------|
| <b>Course Name</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Basic Science Nonmedical                                                                                                                                                                                                         |                   |                     |                     |                             |                        |      |
| <b>Course Information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Course Code</b>                                                                                                                                                                                                               | <b>Course No.</b> | <b>Course Level</b> | <b>Credit Hours</b> | <b>Weekly contact hours</b> | <b>Prerequisite(s)</b> |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2417-306                                                                                                                                                                                                                         | 306               | Preparatory Year    | 2                   | 4                           | —                      |      |
| <b>Course Track</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/> University Requirement <input checked="" type="checkbox"/> College Requirement <input type="checkbox"/> Specialized Core <input type="checkbox"/> Electives                                             |                   |                     |                     |                             |                        |      |
| <b>Course Description:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                  |                   |                     |                     |                             |                        |      |
| <p>Basic Science Non-medical introduces basic concepts and key ideas while providing opportunities to learn reasoning skills and a new way of thinking about our environment. This course is to provide help to students in the preparatory year to understand the basic concepts of the subjects of Chemistry, Biology and Physics. This course will focus on atoms, periodic properties, chemical bonds, chemical reactions, organic chemistry. The students will recognize motion, and laws of motion, momentum, work, potential energy and kinetic energy, energy conservation, light, electricity and electromagnetic induction.</p> <p>This course will also focus on biological science, including an introduction to the disciplines of biochemistry, cell organization and genetics. Students will develop a basic understanding of the biological macromolecules (proteins, carbohydrates, lipids, and nucleic acids) their structure and function. Naming and describing the structure and function of cells. Introduce students to the core concepts of what genes are and how they work, enabling students to appreciate the transfer of genetic information in living cells.</p> |                                                                                                                                                                                                                                  |                   |                     |                     |                             |                        |      |
| <b>Course Outcomes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                  |                   |                     |                     |                             |                        |      |
| <ul style="list-style-type: none"> <li>• Define and explain minor concepts in the biological sciences.</li> <li>• Recognize the relationship between structure and function at level of cellular and molecular basis.</li> <li>• Recall basic concepts of chemistry.</li> <li>• Describe and recognize the atomic structure in addition to molecular structure and reactivity of matter.</li> <li>• Reproduce the basic laws and principle in the physics, which include motion, energy and electricity.</li> <li>• Differentiate between different phenomena of light physics in life. Recognize different aspects of light.</li> <li>• Conceptual problem solving skill, numerical skill and communications skill.</li> <li>• Developing ability to think critically and analytically.</li> <li>• Demonstrate different problems and situations in basic sciences.</li> <li>• Illustrate the different biological, physical and chemical phenomena and their applications in the real life.</li> </ul>                                                                                                                                                                                       |                                                                                                                                                                                                                                  |                   |                     |                     |                             |                        |      |
| <b>Assessment Policy</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Assignment</b>                                                                                                                                                                                                                | 15 %              | <b>Quiz</b>         | 45 %                | <b>Lab (Virtual lab)</b>    | <b>Project</b>         | 10 % |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Midterm</b>                                                                                                                                                                                                                   | ----              | <b>Final</b>        | 30 %                | <b>Others</b>               | ---                    | %    |
| <b>Textbook</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Natural Science - ( Custom edition + Access code) A custom edition for: Basic Sciences Department, Preparatory Year Deanship, King Faisal University ISBN: 9781839619342                                                         |                   |                     |                     |                             |                        |      |
| <b>References</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1- Physical Science, 9th edition. By: Bill W. Tillery. McGraw-Hill. 2012.<br>2- Campbell Essential Biology with physiology, Simon. Reece. Dickey, Pearson, 2016-fifth edition ISBN: 10 1-292-10236-5 & ISBN: 13 978-1-29210236-8 |                   |                     |                     |                             |                        |      |

