ST. PAUL’S CATHOLIC SEMINARY, ACCRA
BA STUDY OF RELIGIONS AND SOCIOLOGY
SEMESTER TWO
2018/2019 ACADEMIC YEAR

COURSE SYLLABUS
SPRC 140: SCIENCE AND TECHNOLOGY IN OUR LIVES

Credits: 3

Lecture Period and Venue: Monday, 9.45 am – 11.20am /P 1 Hall
Tutorials: Tuesday, 8.05am – 8.50am

Prerequisites: Admitted to degree programme

Course Instructor
• Name  (Fr. Paul A. Agbodza, PhD)
• Office  St Paul’s Catholic Seminary, Sowutuom
  Contact  0200269701/0542520030
• Office Hours (Everyday; e-platform: Class Platform on WhatsApp)
  WhatsApp: +233200269701
• E-mail  pagbodza@gmail.com

Teaching Assistants
• Fr Evans Halolo, BA (Hons), PGDE
• Fr Clement Ntiamoah, BA (Hons), PGDE

Introduction: Course Overview

This course corresponds to UGRC 141: Science and Technology in our Lives/Everyday Physics. The course will deal with topics to assist seminarians to appreciate the foundations of scientific thought, the application of science and technology and demands of changing societies for scientific and technological advancement. The course is expected to foster broad familiarity with key advances in science and technology. The course will be in two parts: the first part will give a general overview of the application of science and technology to everyday living. The second part presents some of the basic principles of physics that are useful for understanding and explaining everyday physical phenomena. Topics to be treated include: the laws of motion
and how principles of mechanics are applied in everyday objects such as seat belts and airbags; the properties of semiconductors and their application to microelectronics; and concepts in energy, both renewable and non-renewable, electricity, and electrical safety measures will be discussed. Artificial intelligence and its related innovations will also be introduced.

**Course Objective/Goals**

The long-term objectives of the course are:

i) To enhance the scientific literacy of seminarians,

ii) To foster broad familiarity with the advances of science and technology for seminarians;

iii) to initiate students into concepts studied in science and technology to enable them dialogue with their peers on such matters;

iv) to prepare seminarians for action to play a role in sustainability of the environment as future pastors;

v) to introduce seminarians to the philosophical bases of science and technology;

vi) to help seminarians appreciate the compatibility of religion and science;

vii) to initiate seminarians into developing ethical principles to guide scientific and technological development.

**Learning Outcomes**

At the end of the course, students should be able to:

- appreciate the importance of science and technology in daily life
- explain scientific terms used in popular discussions;
- discover areas of scientific and technological development that require ethical principles;
- assess the impact of science and technology on the environment;
- appreciate how the use of technology can help in academic research;
- apply knowledge of natural resources in the care of the environment.

**Course Delivery:**

The course will be delivered through lectures, tutorials, class exercises, homework assignments, and examinations.

**Plagiarism policy**

Plagiarism in any form is unacceptable and shall be treated as a serious offence. Appropriate sanctions, as stipulated in the Plagiarism Policy, will be applied when students are found to have violated the Plagiarism policy. The policy is available at [http://www.ug.edu.gh/aqau/sites/aqau/files/images/UG%20Plagiarism%20Policy-April%202015.pdf](http://www.ug.edu.gh/aqau/sites/aqau/files/images/UG%20Plagiarism%20Policy-April%202015.pdf)

ALL students are expected to familiarize themselves with the contents of the Policy.
Assessment and Grading

1) A set of questions will be distributed every time in class and students are expected to provide correct responses. Such quizzes are graded over 5;
2) Groups are formed to work on topics and make a power-point presentation in class and graded over 25;
3) A two-and-a-half hour final examinations would be conducted, graded 70%.

Grading Scale

Refer to Undergraduate Handbook.

Reading List


Other Information

This outline may change when circumstances require it. Students would be notified appropriately. Each holiday or lost period would be made up at an appropriate time. Each student is encouraged to participate in computer lab work as well as group projects and tutorial sessions.
## Course Delivery Schedule

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>LECTURE</th>
<th>TOPIC</th>
<th>COMMENTS / REFERENCES</th>
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<tr>
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<td>2</td>
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<td>Common terms in Science and Technology</td>
<td><a href="http://www.tutorialspoint.com">www.tutorialspoint.com</a> 2019</td>
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<td>4</td>
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<td>Demands of changing societies for scientific and technological advancement</td>
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<td>5</td>
<td>18/2/19</td>
<td>4</td>
<td>Key advances in Science and Technology: Information and Communication Technology</td>
<td><a href="http://www.tutorialspoint.com">www.tutorialspoint.com</a> 2019</td>
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<tr>
<td>6</td>
<td>25/2/19</td>
<td>5</td>
<td>Basic principles of Physics for understanding and explaining everyday physical phenomena</td>
<td>Shipman et al., 2000</td>
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<tr>
<td>7</td>
<td>4/3/19</td>
<td>6</td>
<td>Laws of motion and application of principles of mechanics in everyday objects, e.g. seatbelts, airbags</td>
<td>Glencoe, 2006</td>
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<tr>
<td>8</td>
<td>11/3/19</td>
<td>7</td>
<td>Principles of Mechanics and its application to automobiles.</td>
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<td>9</td>
<td>18/3/19</td>
<td>8</td>
<td>Energy: Renewable and Non-renewable</td>
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<td>10</td>
<td>25/3/19</td>
<td>9</td>
<td>Electricity, and Electrical safety measures</td>
<td>Glencoe, 2006</td>
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<td>11</td>
<td>1/4/19</td>
<td>10</td>
<td>Artificial Intelligence and related innovations</td>
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<td>12</td>
<td>8/4/19</td>
<td>11</td>
<td>Revision: Concepts in Science</td>
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<td>13</td>
<td>15/4/19</td>
<td>12</td>
<td>Revision: What is Technology?</td>
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<td>1/5/19</td>
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<td>Exam</td>
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<td>8/5/19</td>
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