# Course Syllabus (Semester 2/2017)

**Learning Group:** Language      **Subject Code:** EN31202      **Subject:** English Enrichment

**Year Level:** 10      **Total:** 2 periods / week      **Credit:** 1.0

| Week | Period | Topic | Contents | Objectives: The students should be able to... |
|------|--------|-------|----------|-----------------------------------------------|
| 1 | 1-2 | Nutritional Science | Definition of Nutritional science<br><br>Reading - Article 1:- Eating well: Less science, more common sense | Eating habits.<br><br>Differentiation between Healthy eating habits and unhealthy eating habits.<br><br>How to make a balance between work and personal life?<br><br>Using the vocabulary in daily life. |
| 2 | 3-4 | Nutritional Science | Worksheet – Verb Conjugation<br><br>     Definitions<br><br>Sentence constructions<br><br>Identification of errors | Define vocabulary properly.<br><br>Improve their grammar.<br><br>Form grammatically correct sentences.<br><br>Able to conjugate the verbs correctly. |
| 3 | 5-6 | Nutritional Science | Reading - Article 2: Anatomy of a Nutrition Trend.<br><br>Vocabulary skills: Cause and Effect collocations | Define and use the vocabulary taught in the class.<br><br>Improve their listening, and reading skills |
| 4 | 7-8 | Nutritional Science | Worksheet – Verb Conjugation<br><br>     Definitions<br><br>     Phrasal verbs | Gain better understanding of grammar.<br><br>Improve their grammar.<br><br>Form grammatically correct sentences. |

| | | | | Able to conjugate the verbs correctly. |
|---|---|---|---|---|
| 5 | 9-10 | Education | Reading Article 1: From students to employee: A difficult transition<br><br>Reading skills: Using an outline.<br><br>Vocabulary: Verb conjugation and definitions. | Importance of handwriting<br><br>Difference between Handwriting and typewriting.<br><br>Conjugate the verbs and define them. |
| 6 | 11-12 | Education | Reading - Article 2: Making my first post –<br><br>College career decision<br><br>Vocabulary: Verb conjugation and definitions<br><br>Writing skills: Writing a summary | Conjugate the verbs and define them.<br><br>Use the vocabulary in their daily life.<br><br>Word forms. |
| 7 | 13-14 | Education | Grammar – Reported speech with the present tense and shifting tenses. | Grammar rules and how to use them correctly. |
| 8 | | | Mid-term | |
| 9 | 3-4 | Anthropology | Reading Article 1: A tribe is discovered<br><br>Vocabulary: Verb conjugation and definitions<br><br>Reading skills: Understanding the purpose of quoted speech | Sentence structure<br><br>Part of speech<br><br>Different types of Anthropology |
| 10 | 5-6 | Anthropology | Worksheet – Verb Conjugation | Conjugate the verbs and define them. |

| | | | Definitions | Use the vocabulary in their daily life. |
| --- | --- | --- | --- | --- |
| | | | Phrasal verbs | Word forms. |
| 11 | 7-8 | Anthropology | Reading Article 2: Alaska's Pebble Mine: Minerals vs Nature<br><br>Vocabulary: Etymology<br><br>Verb conjugation and definitions<br><br>Writing:  Writing a summary | Learn the roots of the words in the article<br><br>Form grammatically correct sentences<br><br>How to summarize an essay or an article etc. |
| 12 | 9-10 | Psychology | Reading Article 1: The promise of play<br><br>Reading skills: Identifying counterarguments and refutations | Learn the roots of the words in the article<br><br>Form grammatically correct sentences<br><br>Understand what Psychology is. |
| 13 | 9-10 | Psychology | Reading Article 2: Child's play: It's not just for fun<br><br>Verb conjugation and definitions<br><br>Grammar: Adverb clauses of concession<br><br>Vocabulary: Collocations with prepositions. | Learn the roots of the words in the article<br><br>Form grammatically correct sentences<br><br>Grammar: Adverb clauses of concession<br><br>Vocabulary: Collocations with prepositions. |
| 14 | 9-10 | Psychology | Worksheet – Verb Conjugation<br><br>Definitions | Conjugate the verbs and define them.<br><br>Use the vocabulary in their daily life. |

| | | | Phrasal verbs | Use of phrasal verbs |
|---|---|---|---|---|
| 15 | 11-12 | | Revision | |
| 16 | | | Final Exam | |

# Course Syllabus (Semester 2/2017)

**Learning Group: Math**    **Subject Code:    MA 31212**    **Subject: Math**

**Year Level: 10**    **Total: 2 periods / week**    **Credit: 1.0**

| Week | Period | Topic | Contents | Objectives: The students should be able to... |
|------|--------|-------|----------|-----------------------------------------------|
| 1 | 1-2 | Relations and functions | Introduction to relations and functions | Understand what relations and functions are |
| 2 | 3-4 | Relations and functions | Ordered-pair numbers and relation | Identify ordered-pair and relation properly |
| 3 | 5-6 | Relations and functions | Types of functions | Identify all types of functions correctly |
| 4 | 7-8 | Relations and functions | Domain | Find the domain of a given function accurately |
| 5 | 9-10 | Relations and functions | Range | Find the range of a given function correctly |
| 6 | 11-12 | Relations and functions | Graphs of functions | Draw a graph of a function given clearly |
| 7 | 13-14 | Relations and functions | Inverse functions | Find the inverse function of a given function |
| 8 | 15-16 | Relations and functions | Graphs of inverse functions | Draw a graph of an inverse function |

| Week | Period | Topic | Contents | Objectives: The students should be able to... |
|------|--------|-------|----------|-----------------------------------------------|
| 1 | 1-2 | Trigonometric ratios | The definitions of sine, cosine and tangent | Write correct definitions of sine, cosine and tangent |
| 2 | 3-4 | Trigonometric ratios | Sine and how to use it to solve problems | Solve problems using sine correctly |
| 3 | 5-6 | Trigonometric ratios | Cosine and how to use it to solve problems | Solve problems using cosine correctly |
| 4 | 7-8 | Trigonometric ratios | Tangent and how to use it to solve problems | Solve problems using tangent correctly |
| 5 | 9-10 | Trigonometric ratios | Sine A = Cosine B when A and B are complementary angles | Solve problems involving sine A and cosine B when A+B = 90 degrees |
| 6 | 11-12 | Trigonometric ratios | Applications of sine, cosine and tangent altogether in word problem solving | Solve word problems regarding all of the three ratios |
| 7 | 13-14 | Trigonometric ratios | The sine rules | Solve problems on sine rules |
| 8 | 15-16 | Trigonometric ratios | The cosine rules | Solve problems on cosine rules |

**Learning Group: Science**          **Subject Code:   SC 31102**                          **Subject: Science**

**Year Level: 10**                         **Total: 2 periods / week**                              **Credit: 1.0**

| Week | Period | Topic | Contents | Objectives: The students should be able to... |
|------|--------|-------|----------|-----------------------------------------------|
| 1 | 1-2 | Earth structure | The interior structure of the Earth is layered in spherical shells. These layers can be defined by their chemical and their geological properties. Earth has an outer silicate solid crust, a highly viscous mantle, a liquid outer core that is much less viscous than the mantle, and a solid inner core. | 1.  Describe and explain the physical structure of the Earth. |
| 2 | 3-4 | Earth Structure:<br><br>Earth processes:<br><br>Volcanic eruption | Lava, rocks, dust, and gas compounds are some of these "ejecta". Eruptions can come from side branches or from the top of the volcano. Some eruptions are terrible explosions that throw out huge amounts of rock and volcanic ash and kill many people. Some are quiet outflows of hot lava. | 1.  Describe and explain the different Earth processes: Volcanic eruption |
| 3 | 5-6 | Plate Tectonics | Plate tectonics is the theory that Earth's outer shell is divided into several plates that glide over the mantle, the rocky inner layer above the core. The plates act like a hard and rigid shell compared to Earth's mantle. This strong outer layer is called the lithosphere | 1.  Understand, explain the formation of tectonic plates |

| | | | | |
|---|---|---|---|---|
| 4 | 7-8 | Plate Tectonics: Earth quakes | Earthquakes are the vibrations caused by rocks breaking under stress. The underground surface along which the rock breaks and moves is called a fault plane. Earthquakes in Australia are usually caused by movements along faults as a result of compression in the Earth's crust. | 1. Understand, describe and explain earthquake as a phenomenon involving the movement of the tectonic plates |
| 5 | 9-10 | Paleontology principles | Paleontology is a rich field, imbued with a long and interesting past and an even more intriguing and hopeful future. Many people think paleontology is the study of fossils. In fact, paleontology is much more. | 1. State, explain the basic principles of paleontology |
| 6 | 11-12 | Paleontology: Dating fossils | Relative dating is used to determine a fossils approximate age by comparing it to similar rocks and fossils of known ages. Absolute dating is used to determine a precise age of a fossil by using radiometric dating to measure the decay of isotopes, either within the fossil or more often the rocks associated with it. | 1. Explain and demonstrate the popular methods of dating fossils |
| 7 | 13-14 | Geologic Time Scale | The geologic time scale (GTS) is a system of chronological dating that relates geological strata (stratigraphy) to time, and is used by geologists, paleontologists, and other Earth scientists to describe the timing and relationships of events that have occurred during Earth's history. | 1. Cite, describe the various strata of the Earth's crust |
| 8 | 15-16 | Stratigraphy | The branch of geology concerned with the order and | 1. Cite, describe and explain the basic principles of stratigraphy: superimposition, original |

| | | | relative position of strata and their relationship to the geological time scale. | horizontal, lateral continuity, superimposition, etc. |
|---|---|---|---|---|
| | | | The analysis of the order and position of layers of archaeological remains. | |
| | | | the structure of a particular set of strata. | |
| | | SEMESTER 2 MIDTERM EXAM | | |
| 9 | 17-18 | Measurements in Astronomy | Dealing with the numbers involved with the distances to the stars or even with those found in the solar system can be hard going. Astronomers make their lives easier by using a number of rulers (units of distance) for the distances and although they have some strange names they can be very useful for comparing the distances to stars, other galaxies and even the planets in our solar system. | 1. Cite, calculate or convert magnitude from one unit to another unit using a given conversion factors. |
| 10 | 19-20 | Origin of the Universe | All existing matter and space considered as a whole; the cosmos. The universe is believed to be at least 10 billion light years in diameter and contains a vast number of galaxies; it has been expanding since its creation in the Big Bang about 13 billion years ago. | 1. Cite, state and explain some theories on the origin of the universe |
| 11 | 21-22 | Big Bang | The rapid expansion of matter from a state of extremely high density and temperature that according to current cosmological theories marked the origin of the universe. | 1. State and explain the Big-bang theory |

| 12 | 23-24 | Solar System | The collection of eight planets and their moons in orbit around the sun, together with smaller bodies in the form of asteroids, meteoroids, and comets. | 1. Describe and explain the solar system and its components |
|---|---|---|---|---|
| 13 | 25-26 | Group Presentation on chosen topic | | 1. Present an oral presentation following a set of guidelines |
| 14 | 27-28 | Galaxy | A system of millions or billions of stars, together with gas and dust, held together by gravitational attraction. | 1. Describe and explain the components of the galaxy |
| 15 | 29-30 | Celestial Sphere | An imaginary sphere of which the observer is the center and on which all celestial objects are considered to lie. Parts of the celestial sphere etc. | 1. Describe and explain the celestial sphere |
| 16 | 31-32 | Celestial Sphere | We can locate any object on the celestial sphere by giving it two coordinates, called the Right Ascension and the Declination. These are called celestial coordinates.<br><br>Analogous to the longitude on Earth, the Right Ascension of an object on the celestial sphere is measured along the celestial equator, as the angular distance to some fiducial direction for with R.A. = 0 degrees. By convention, this fiducial direction is the point on the celestial where the Sun is found on the first day of spring (the vernal equinox).<br><br>Analogous to the latitude on Earth, the Declination of an object on the celestial sphere is measured northward | 1. Describe and explain the relative positions and movements of planets and parallax effects |

| | | | or southward from the plane containing the equator. The declination of the equator is 0 degrees, the North Celestial Pole, +90 degrees, the South Celestial Pole, -90 degrees. | |
|---|---|---|---|---|
| 17 | 33-34 | Kepler's laws | Johannes Kepler, working with data painstakingly collected by Tycho Brahe without the aid of a telescope, developed three laws which described the motion of the planets across the sky. 1. The Law of Orbits: All planets move in elliptical orbits, with the sun at one focus. | 1. State and explain Kepler's laws and be able to use the formula in problem solving. |
| 18 | 35-36 | **SEMESTER 2 Final Exam Revision** | | |

**Learning Group: Social Studies**    **Subject Code: SO 31102**    **Subject: Social Studies**

**Year Level: 10**    **Total: 2 periods / week**    **Credit: 1.0**

| Week | Period | Topic | Contents | Objectives: The students should be able to... |
|---|---|---|---|---|
| 1 | 1-2 | Culture | - Culture – Introduction<br>- Early Systems of Beliefs<br>- Beliefs and Society<br>- Religion and Philosophy | • Define culture.<br>• Differentiate religion and philosophy.<br>• Define the term 'belief' |
| 2 | 3-4 | Culture | **Religion**<br>- Hinduism<br>- Buddhism<br>- Islam | • Outline the basic beliefs of Hinduism, Buddhism and Islam.<br>• Understand how religions and philosophies spread. |
| 3 | 5-6 | Culture | **Philosophy**<br>- Confucianism<br>- Philosophy of Confucianism during<br>- Tang Dynasty<br>- Taoism<br>- Legalism<br>- Philosophy of Legalism during Qin Dynasty | • Outline the basic beliefs of Confucianism and Taoism.<br>• Outline the basic beliefs of Legalism.<br>• Understand the spread of Legalism in China, Hinduism in Southeast Asia and Islam in Southeast Asia. |
| 4 | 7-8 | Culture | - Golden Age<br>- Artistic and Scientific Development<br>- Golden age in China, India and Southeast Asia | • Outline the characteristics that make up a 'Golden Age'.<br>• Understand the development of Golden Age in China, India and Southeast Asia. |
| 5 | 9-10 | Contact and | - Contact and Interaction: Introduction | • Understand the term 'contact' and 'interaction' |

| | | Interaction | - Making contact | • Identify the reasons why people made contact. |
|---|---|---|---|---|
| 6 | 11-12 | Contact and Interaction | - Two types of contact 'Hostile contact' and 'Peaceful contact' | • Identify the features of 'hostile contact' and 'peaceful contact'. <br> • Compare the impact of the two types of contact on countries. |
| 7 | 13-14 | Contact and Interaction | - Interaction | • Define the term 'interaction. <br> • List the advantages and disadvantages of having interaction. |
| 8 | 15-16 | Revision Midterm Exam | | |
| 9 | 17-18 | Midterm Exam Semester 1 | | |
| 1 | 1-2 | Contact and Interaction | - Trade 'Direct trade' and 'Indirect trade' | • Define the term 'interaction'. <br> • List the advantages and disadvantages of having interaction. <br> • Differentiate direct trade from indirect trade |
| 2 | 3-4 | Contact and Interaction | - Political contacts <br> - Political envoys <br> - Religious contacts 'Missionaries' and 'Pilgrims' <br> - Effects of contacts and interactions in Southeast Asia | • Define the term 'envoy'. <br> • Understand the importance of having envoys. <br> • Identify the different types of religious contacts. <br> • Define the term 'missionary' and 'pilgrims' <br> • Define trading contacts and understand the impact of contact on Southeast Asia. |
| 3 | 5-6 | Threats and Responses | - Types of threats <br> - Examples of external threats and internal threats | • Define the term 'threats'. <br> • Identify the types of threats. <br> • Give examples of internal and external threats. |

| | | | | |
|---|---|---|---|---|
| 4 | 7-8 | Threats and Responses | **External threats**<br>- Natural disasters<br>- Attacks by other countries<br>- Trade rivalry | • Understand natural disasters such as The Black Death.<br><br>• Do an in-depth study of external threats (attacks by other countries an d trade rivalry) |
| 5 | 9-10 | Threats and Responses | - Internal threats<br>- How internal factors affected Indus Valley<br><br>Other internal factors that weakens governments:<br><br>- Weak government<br>- Corrupt and incompetent governments<br>- Problems with succession<br>- A trouble free succession<br>- A failed succession<br>- Rebellion<br>  Civil war | • Do an in-depth study on how internal factors affected Indus Valley Civilisation.<br><br>• Do a study of internal factors such as weak government, corrupt and incompetent governments and problems with succession that could weaken the government.<br><br>Study all the other internal factors that could weaken the government, e.g., trouble-free succession, failed succession, rebellion and civil war. |
| 6 | 11 -12 | Threats and Responses | - Another response to external threats: Fortifications and defenses<br>- The ways countries deal with a successful invasion<br>- Responses to internal threats such as natural disasters.<br>- Responses to internal threats such as earthquakes, volcanic eruptions and problems | • State fortifications and defenses as another response to external threats.<br><br>• List the ways the countries deal with a successful invasion.<br><br>• Understand the responses to internal threats such as natural disasters.<br><br>Understand responses to internal threats such as |

| | | | of government | earthquakes, volcanic eruptions and problems of government. |
|---|---|---|---|---|
| 7 | 13-14 | | Final Exam Revision | |
| 8 | 15-16 | | Final Exam Semester 1 | |