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## MA30105 Foundation Mathematics

**Teacher** Mr. Keerthi Prabhakar  
**Contact** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.  
**Class Time** EP-M6/1: Wed, Period 2; Thu, Period 3  
EP-M6/2: Wed, Period 2; Thu, Period 3  
**Credits** 1.0

### Course Description

This foundation mathematics course focuses on the following topics: **Sets**, Logic, and Real Numbers. Set Theory is the foundation for all mathematics and involves operations like union and intersection. Logic is formal methodology used in mathematics to arrive at proofs and is the basis for Computer Science. Students proceed from Sets and Logic to see how the properties of equality and properties of the real number system can be used to solve quadratic and other equations as well as inequalities. Other topics studied include interval notation and absolute value. Students will practice mathematical skills and processes which are problem-solving, involve reasoning in general, mathematical implication and presentation, as well as mathematical connections and creative thinking.

### Textbooks

*Mathematics for the International Student SL (Haese Mathematics)*

ISBN 978-1-921972-08-9

*Algebra 2 (Glencoe McGraw Hill) ISBN 13:9780078738302*

### Course Outline & Objectives

Learning Units	Chapters from IGCSE Math textbook
1.Sets a. Types of sets and equality of sets* b. Subset and power set c. Venn-Euler diagram* d. Operations of sets: Union*, Intersection*, Complement, Difference e. Members of finite sets and solutions	<i>Chapter 7: Set Notation and Venn Diagrams (pg.211-230)</i>
2.Logic a. Proposition	<i>Chapter 8: Logic (pg.231-256)</i>



b. Connecting propositions. c. The negation of a proposition d. Constructing truth tables for propositions	
3. Real Numbers a. Structure and closure properties of real numbers b. Properties of real numbers about addition and multiplication, and properties of equality c. Application of properties of real numbers in solving quadratic equations. d. Intervals e. Properties of inequality and solutions of inequalities with one variable with a degree not exceeding two f. Absolute value	<i>Algebra 2 Chapter 1-2 Properties of Real Number (pg. 11-19)</i> <i>Chapter 11: Algebraic Representation and manipulation (pg. 104-123)</i> <i>Chapter 13 Equations and inequalities (pg. 127-149)</i> <i>Algebra 2 Chapter 1-4: Solving Absolute Value Equations.</i> <i>Algebra Chapter 1-5: Solving Inequalities.</i>

#### Resources

- Graphing Calculator
- Worksheets
- Writing supplies

#### Academic Integrity Policy

Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of education and will not be tolerated. Students involved in any form of academic dishonesty, including any student supplying or allowing copying, will receive a zero.

Plagiarism is taking someone else's work or ideas and passing them off as one's own work or ideas. Examples of plagiarism include the failure to give appropriate acknowledgement when repeating another's idea, phrase, sentence or paragraph, or failure to give appropriate acknowledgement when paraphrasing any of those.

#### Behavioral Expectations

Students are expected to respect themselves, their classmates, the teacher, and the facilities. Students must accept responsibility for themselves and their actions. Students must speak English in class. Students are expected to be ready at the start of every class (notebooks, textbook, scientific calculator, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed



Behaviour is monitored every class. At the end of the semester the points are accumulated and used for the student's behaviour score (10%).

Furthermore, all Thai students are expected to embrace the following *desired characteristics*:

- Love for the country and the King, faith in religion
- Possess discipline
- Be self-sufficient
- Be honest and upright
- Proud to be Thai
- Have a sense of public consciousness
- Eager to learn
- Dedicated to work
- Be an AC gentleman

### **Attendance & Tardiness**

Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher as far in advance as possible. Students are expected to catch up on all missed work outside of class time.

### **Homework & Classwork**

An assessment item must be submitted on or before the due date. **An assessment item submitted later than the due date, without an extension from the teacher, will not be graded and will result in an automatic score of zero.** Late homework, however, may be completed and submitted to qualify towards eligibility for exams. At the end of the semester, if the students have not completed a sufficient number of homework assignments to pass this aspect of the course, additional work will be set for them.

### **Grading**

This course adheres to the Assumption College grading scale:

<i>Final Score</i> $\geq$ 80%	4.0
$75\% \leq$ <i>Final Score</i> $<$ 80%	3.5
$70\% \leq$ <i>Final Score</i> $<$ 75%	3.0
$65\% \leq$ <i>Final Score</i> $<$ 70%	2.5
$60\% \leq$ <i>Final Score</i> $<$ 65%	2.0
$55\% \leq$ <i>Final Score</i> $<$ 60%	1.5
$50\% \leq$ <i>Final Score</i> $<$ 55%	1.0
<i>Final Score</i> $<$ 50%	0.0



### **Evaluation and Assessment**

The final semester grade for this course out of 100% is broken down as follows:

Assignments/Projects	20%
Tests	20%
STEM	10%
Behaviour	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

### **Recommendations for Success**

Mathematics can be complicated for many students. All students are encouraged to do the following:

1. Read the course textbook. You may need to read the material multiple times to understand. Students can responsibly manage the material and gain the most from the course by reading along at home with the lessons taught at school (typically only a few pages per night).
2. Complete all forms of assessment and submit all homework and assignments.
3. Search online, in either Thai or English, if you don't understand a topic discussed in class or to understand the topic better.
4. Do not copy your classmates' work; try to struggle independently. This will help you learn.
5. See the teacher outside of class time for assistance.
6. Do more than just the bare minimum; do the additional problems in the textbook and the review questions at the end of the chapter and check your answers.
7. Study the notes and vocabulary for at least a few minutes every day.



## **MA30217 Universal Mathematics 5**

**Teacher** Mr. Shiv Kumar  
**Contact** Science Lab, 2<sup>nd</sup> Floor Colombet Building.  
skkumarshiv100@gmail.com

**Class Time** EP-M6/1-2: Tuesday Period 7, Wednesday Period 4, Thursday Period 5,

**Credits** 1.5

### **Course Description**

This course is an introduction to Basic Calculus. We begin with an examination of functions and consider ideas such as graphing rates of change. We then go on to consider both finite and infinite limits of functions. Limits will allow us to develop the theory of derivatives along with practical applications of the techniques of differentiation. We will then use the anti-derivative to introduce integrals. The meaning of integration will be covered along with basic techniques of integration. This course is designed to prepare students for a first year university course in the subject which is often quite rigorous.

### **Textbook**

*Mathematics for the International Student Mathematics SL (Haese Mathematics)*  
ISBN 978-1-921972-08-9

### **Course Outline & Objectives**

#### **Unit 1. Basic Calculus**

1. Differentiation Pg 353-357
2. Rules of differentiation Pg 360-369
3. Finding the slope/rate of change using differentiation (Class worksheet and Notes)
4. Derivatives of composite functions Pg 371-378
5. Using turning points to solve problems (Class worksheet and Notes)
6. Application of differentiation (Class worksheet and Notes)
7. Stationary, max, and min points (Class worksheet and Notes)
8. Definite integration Pg 454 - 457
9. Area under a curve pg 475 - 479
10. Area between a curve and a straight line Pg 479 - 483

#### **Unit 2. Infinite Sequence and Infinite Series**

1. Limit of Sequence Pg 345-346
2. Limits at Infinity Pg 347-348
3. Differentiation from first principal Pg 355-357
4. Sum of Infinite Series (Class worksheet and Notes)



### Unit 3. Linear Programming

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|--|-----------------------------|
| 1. Graphs of Linear Equations and Inequalities   | (Class worksheet and Notes) |
| 2. Objective Functions and Inequality Constraint | (Class worksheet and Notes) |
| 3. Word Problems of Linear Programming           | (Class worksheet and Notes) |

### Resources

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|-----------|--|
| Required  | <ul style="list-style-type: none"><li>• A plastic folder for worksheets.</li><li>• White School Notebook</li><li>• Red and blue pen.</li></ul> |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pens/markers/highlighters</li><li>• Ruler</li></ul>                             |

### Academic Integrity Policy

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Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of the education and will not be tolerated. Students involved in any form of academic dishonesty, including any student supplying or allowing the copying to take place, will receive a zero. Students should be expected to earn their scores. Scores of pass should not be given unless the student has attained sufficient knowledge to earn a passing grade.

Plagiarism is the act of taking someone else's work or ideas and passing them off as one's own work or ideas. Examples of plagiarism include the failure to give appropriate acknowledgement when repeating another's idea, phrase, sentence or paragraph, or failure to give appropriate acknowledgement when paraphrasing any of those.

### Behavioral Expectations

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For the sake of all the members of the class, students are expected to respect themselves, their classmates, the teacher, and the facilities. Students must accept responsibility for themselves and their actions. Students are expected to be ready at the start of every class (Notebooks, textbook, scientific calculator, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.

Behavior is monitored every day as per the class rules that are set out at the beginning of the academic year (see the front of your note books). At the end of the semester the average is taken and used for the student's behavior score (10%). Students *earn* the scores they receive.

Additionally, all Thai students are expected to embrace the following *desired characteristics*:

- Love for the country and the King, faith in religion
- Possess discipline
- Be self-sufficient
- Eager to learn
- Dedicated to work



- Proud to be Thai
- Be an AC gentleman
- Have a sense of public consciousness
- Be honest and upright

### **Attendance & Tardiness**

Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher in as far in advance as possible. Students are expected to catch up on all missed work outside of class time.

### **Homework & Classwork**

Homework and classwork will be assigned often and must be submitted on or before the due date for a full score of 10 points. Late work without excuse will be deducted at the rate of 10% per day until the maximum possible score is zero. All work must be turned in before the last week of each term. Late work is discouraged.

### **Grading**

This course follows to the Assumption College grading scale:

<i>Final Score</i> ≥ 80%	4.0
$75\% \leq \textit{Final Score} < 80\%$	3.5
$70\% \leq \textit{Final Score} < 75\%$	3.0
$65\% \leq \textit{Final Score} < 70\%$	2.5
$60\% \leq \textit{Final Score} < 65\%$	2.0
$55\% \leq \textit{Final Score} < 60\%$	1.5
$50\% \leq \textit{Final Score} < 55\%$	1.0
<i>Final Score</i> < 50%	0.0

### **Evaluation and Assessment**

The final semester grade for this course out of 100% is broken down as follows:

Class work	20%
Class Participation	10%
Note book	10%
Behavior	10%
Quizzes	10%
Midterm (Summative) Exam	20% (program mandated)
Final Exam	20% (program mandated)



### **Recommendations for Success**

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Mathematics can be a difficult course for many students. All students are encouraged to try the following:

1. Read, read, read the course textbook. Often, reading the text once is not enough even for native English speakers. You may need to read the material multiple times to understand. By reading along at home with the lessons taught at school (typically only a few pages per night), students will be able to responsibly manage the material and gain the most from the course.
2. Search online, in either Thai or English, if you don't understand a topic discussed in class or simply to get a better understanding of the topic.
3. Get a Thai language introductory mathematics book.
4. Do **not** copy your classmates work; struggle through and do the work on your own! This is how you learn!
5. Come see the teacher outside of class time for assistance.
6. Do more than just the bare minimum; there are plenty of problems in the textbook. We only have time for so many of them. Do the review questions at the end of the chapter and see the teacher for the answers.
7. Study the notes and vocabulary at least a few minutes every day, such as in homeroom or during any free time you might have in other classes.





**Student Syllabus for: EP6 Foundation English EN30105**

**Teacher:** Mr. Hereward Campbell-Anderson

**Contact:** [Hereward.ca@assumption.ac.th](mailto:Hereward.ca@assumption.ac.th)

**COURSE DESCRIPTION:**

Welcome to Semester 1 of EP6 Foundation English 5. This course is designed to further your ability with analyzing reading, critical thinking, as well as strengthen your formal writing ability. We focus on academic skills, writing, time management and inter-personal communication skills. This course is reading, and writing intensive. In-class reading and writing assignments, research essays, large amounts of literary and academic vocabulary, participation, homework, quizzes and exams make up a majority of your grade. By the end of the year, you should be well prepared to write about and analyze a variety of academic topics at university.

**The course is at an intermediate level and will move quickly. If you miss a class, it is your responsibility to find out what you have missed, either from your classmates or by seeing me on your own time, not during class time.**

**COURSE OBJECTIVES:**

The main objectives of this course are:

- to strengthen the students' writing ability in formal, informal, and technical writing, according to International English language exam expectations
  - to broaden and expand the students' proficiency and knowledge in exam level English;
  - to provide material for the students to revise, consolidate and extend their command of English grammar and vocabulary;
  - to develop the students' reading skills to enable them to skim the text for main ideas, to scan the text for specific information, and to deduce meanings from the context, to identify the views/opinions of the author, to distinguish main ideas from supporting ones, to recognize connections and relationships between facts in a text and to label diagrams/flowcharts using precise information.
  - to develop the students' writing skills to enable them to respond to input applying information to a specified task, to elicit, to select, to summarize information in clear, organized essays, to give a well-organised overview of relevant information in a graph, chart, table or diagram and to present a clear, relevant, well-organised argument, giving evidence or examples to support ideas and use language accurately.



## **COURSE OUTLINE:**

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IELTS: the high-stakes English test for **study**, **migration** or **work**

- Reading: The reading component consists of 40 questions, designed to test a wide range of reading skills. These include reading for gist, reading for main ideas, reading for detail, skimming, understanding logical argument and recognizing writers' opinions, attitudes and purpose.
- Writing: You will be presented with a graph, table, chart or diagram and asked to describe, summarise or explain the information in your own words. You may be asked to describe and explain data, describe the stages of a process, how something works or describe an object or event.
- Vocabulary: Art, business & money, communication & personality, crime & punishment, economics, education, environment, family & children.

End of Midterm Exam Content – Start of Final Exam Content
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IELTS: the high-stakes English test for **study**, **migration** or **work**

- Reading: this includes three long texts which range from the descriptive and factual to the discursive and analytical. These are taken from books, journals, magazines and newspapers. They have been selected for a non-specialist audience but are appropriate for people entering university courses or seeking professional registration.
- Writing: you will be asked to write an essay in response to a point of view, argument or problem. Responses to both tasks must be in a formal style.
- Vocabulary: Food, health, language, technology, transport, travel, society, sport, work.

### **You need to have the following in class each day:**

Blue or Black ink pens and pencils.  
Plastic folder to hold materials/textbooks  
(2) White notebooks  
(1) Highlighter  
Paper Dictionary  
Paper/Electronic Thesaurus

## **COURSE POLICIES/BEHAVIOR:**

Course policies are the rules and guidelines our class follows. They can be summed up in one word: respect. Respect the teacher; respect your fellow classmates and their desire to learn. Exhibit respect and behave and act as young men.

## **CHEATING, COPYING and PLAGIARISM:**

There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of the education and **will not be tolerated**. Students



involved in any form of academic dishonesty, including any student supplying or allowing the copying to take place, **will receive a zero.**

Plagiarism is the act of taking someone else's work or ideas and passing them off as one's own work or ideas. Examples of plagiarism include the failure to give appropriate acknowledgement when repeating another's idea, phrase, sentence or paragraph, or failure to give appropriate acknowledgement when paraphrasing any of those.

### **HOMEWORK:**

All homework assignments must be completed and turned in during class the day that it is due. Late work is accepted, but if work is turned in after class or the next day, points will be deducted.

### **GRADE DETERMINATION:**

Your grades will be determined by your homework, class work, quizzes/tests and participation. You will be graded on speaking, listening, reading, writing and behaviour. Do your best in everything that we do, and do your best to keep up and not miss anything. Zeros will hurt your grade much more than a low score. **Active participation and preparedness is expected at all times!**

This course follows to the Assumption College grading scale:

<i>Final Score</i> $\geq$ 80%	4.0
$75\% \leq$ <i>Final Score</i> < 80%	3.5
$70\% \leq$ <i>Final Score</i> < 75%	3.0
$65\% \leq$ <i>Final Score</i> < 70%	2.5
$60\% \leq$ <i>Final Score</i> < 65%	2.0
$55\% \leq$ <i>Final Score</i> < 60%	1.5
$50\% \leq$ <i>Final Score</i> < 55%	1.0
<i>Final Score</i> < 50%	0.0

### **Evaluation and Assessment**

The final semester grade for this course out of 100% is broken down as follows:

Writing assignments (4)	12% (4 x 3%)
Speaking Assignments (4)	12% (4 x 3%)
Listening homeworks (4)	10% (4 x 2.5%)
Grammar homeworks (4)	8% (4 x 2%)
Reading homeworks (4)	8% (4 x 2%)
Behaviour	10%



<b>Week</b>	<b>Course Content</b>
1	<b>Listening</b> <ul style="list-style-type: none"><li>• Family and friends</li></ul> <b>Grammar</b> <ul style="list-style-type: none"><li>• Habitual actions, past and present</li></ul> <b>Vocabulary</b> <ul style="list-style-type: none"><li>• Literal vs. idiomatic phrasal verbs</li></ul>
2	<b>Vocabulary</b> <ul style="list-style-type: none"><li>• Three-part phrasal Verbs</li></ul> <b>Reading</b> <ul style="list-style-type: none"><li>• The boomerang generation</li></ul> <b>Speaking</b> <ul style="list-style-type: none"><li>• Talking about yourself</li></ul>
3	<b>Grammar</b> <ul style="list-style-type: none"><li>• Multi-word verbs</li></ul> <b>Vocabulary</b> <ul style="list-style-type: none"><li>• Colloquial expressions</li></ul>
4	<b>Writing</b> <ul style="list-style-type: none"><li>• Informal email structure</li></ul> <b>Vocabulary</b> <ul style="list-style-type: none"><li>• Food idioms and expressions</li></ul>
5	<b>Grammar</b> <ul style="list-style-type: none"><li>• Infinitive vs. gerund</li><li>• Review future tenses</li></ul> <b>Vocabulary</b> <ul style="list-style-type: none"><li>• Thinking of the future</li><li>• Commonly confused words</li></ul>
6	<b>Listening</b> <ul style="list-style-type: none"><li>• Living on Mars</li></ul> <b>Reading</b> <ul style="list-style-type: none"><li>• Could you be a forecaster</li></ul> <b>Speaking</b> <ul style="list-style-type: none"><li>• Discussing options</li></ul>
7	<b>Speaking</b> <ul style="list-style-type: none"><li>-Discussing options</li></ul> <b>Vocabulary</b> <ul style="list-style-type: none"><li>• Word formation: Suffixes</li></ul> <b>Writing</b> <ul style="list-style-type: none"><li>• Writing part 1 practice</li></ul>
8	<b>Review</b>
9	<b>Mid-term exam</b>
10	<b>Reading</b> <ul style="list-style-type: none"><li>• The pop-up revolution</li></ul>



	<b>Writing</b> Peer analysis of writing part 1
11	<b>Vocabulary</b> <ul style="list-style-type: none"><li>• Clothes and fashion</li><li>• Compound adjectives and nouns</li></ul> <b>Grammar</b> <ul style="list-style-type: none"><li>• Expressions with modals meanings</li></ul>
12	<b>Vocabulary</b> <ul style="list-style-type: none"><li>• Travel and tourism related adverbs and adjectives</li></ul> <b>Reading</b> <ul style="list-style-type: none"><li>• Travel trends</li></ul>
13	<b>Grammar</b> <ul style="list-style-type: none"><li>• Modifying comparative and superlative sentences</li></ul> <b>Listening</b> <ul style="list-style-type: none"><li>• An interview about fashion</li></ul>
14	<b>Vocabulary</b> <ul style="list-style-type: none"><li>• Landscape. Homophones, homonyms, homographs</li></ul> <b>Grammar</b> <ul style="list-style-type: none"><li>• Conditionals</li><li>• Conjunctions</li></ul>
15	<b>Speaking</b> <ul style="list-style-type: none"><li>• Contrasting opinions</li></ul> <b>Listening</b> <ul style="list-style-type: none"><li>• Innovative technologies and the environment</li></ul>
16	<b>Reading</b> The wonderful world of waymarking  <b>Vocabulary</b> <ul style="list-style-type: none"><li>• Celebrity. Dependent prepositions.</li></ul> <b>Reading</b> <ul style="list-style-type: none"><li>• Celebrity worship syndrome</li></ul> <b>Grammar</b> <ul style="list-style-type: none"><li>• Compound / complex sentences</li><li>• Reflective pronouns</li></ul>
17	<b>Writing</b> <ul style="list-style-type: none"><li>• High level opinion language</li><li>• Linking words</li><li>• Topic vocabulary</li></ul> <b>Grammar</b> <ul style="list-style-type: none"><li>• Relative clauses</li><li>• Participle clauses</li></ul>
18	<b>Writing</b> <ul style="list-style-type: none"><li>• Formal emails</li></ul>
19	<b>Review</b>
20	<b>Final Exam</b>



## **Student Syllabus for: EP6 *English for Life Skills 6*: EN30246**

**Teacher:** Mr. Joshua Bolen, J.D. (Mr. Bolen)

### **COURSE DESCRIPTION:**

Welcome to English for Life Skills M6! Through a series of engaging and enriching lessons using Mr. Bolen's selected materials, students will continue to strengthen their core knowledge of the language.

The Students will study and listen to a range of English texts. The Students will study and learn how to give effective presentations. They will use learning skills in the 21st century, which encourages the students to be able to have listening, critical thinking and problem solving skills. The learning skills will be used to make students possess learners' key competencies, which are thinking capability, problem solving capability, capability in applying life skills and capability in technological application. This will be done through the teaching and learning focusing on promoting Thai wisdom with respect to the language and literature and religion and tradition. Teaching and learning also promotes students to live under the Sufficiency Economy Philosophy. Students will be provided with desirable characteristics such as love of nation, religion and king, honesty and integrity and self-discipline. Additional important characteristics are avidity for learning, observance of principles of Sufficiency Economy Philosophy in one's way of life, dedication and commitment to work, cherishing Thai-ness, public-mindedness and gentlemen of Assumption College.

### **COURSE OBJECTIVES:**

#### **Indicators**

1. Listen to speakers from a range of countries, using different accents and talking in a range of contexts and situations.
2. Predict content before a listening exercise. Use contextual clues to anticipate topics, potential vocabulary and potential grammatical structures before listening.
3. Listen for gist. Show an understanding of the main ideas of a listening exercise after one listen.
4. Understand signposting language when listening. Show a knowledge and understanding of signposting language and how and why it is used. Make lists of the most common signposting language.
5. Listen for detail. Pick out specific information in a listening passage.
6. Infer relevant details when listening. Use contextual clues to gather information about meaning, who is speaking, what is happening and other questions appropriate to the listening exercise.
7. Practice listening activities that are connected to relevant international exams. Some of these should be done with past-paper questions and done in exam conditions.
8. Explain/discuss how listening can be improved, what techniques can be used and useful sources of practice material.
9. Watch examples of good and bad presentations. Have an accurate understanding of the characteristics of good and bad presentations and be able to plan presentations using the good



characteristics and avoiding the bad characteristics. The focus should be on presentation skills that may be useful for university admissions and studying at university.

10. Use verbal communication to effectively present information. Use various techniques such as variation of tone of voice and the stress of important words to convey ideas more clearly and concisely.
11. Use non-verbal communication effectively. Use various techniques such as body language and eye contact to show confidence to the audience.
12. Use signposting language effectively when presenting. Show a knowledge and understanding of signposting language and how and why it is used. Make lists of the most common signposting language that are used during presentations.

### **Learning Contents**

Study English on the topics of news, announcements, poems, skits, pictures, different non-text information styles such as maps, graphs, and initiatives. Study non-fictions, fictions, personal information, various experiences, incidents, themes from analyzed stories, languages, voices, social manners and cultures, traditions and customs, festivals, language structures, idioms, proverbs, poems, ways of life, beliefs and cultures of native speakers, and information related to other learning content groups. Use process of establishing knowledge and understanding, reading process, process of establishing practical skills, working process, process of language skills, process of establishing attitudes, process of conceptualization, process of analysis, process of establishing realization, and process of establishing communicative knowledge and understanding to create knowledge and understanding, communicative ability, thinking ability, problem-solving ability, life skills, and ability to use technology. At the same time, students will have the following intended characteristics which are nationalism, religiosity, loyalty, disciplines, diligence, self-sufficiency, endeavor, love of being Thai, and public mind.

### **Resources**

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|-----------|---|
| Required  | <ul style="list-style-type: none"><li>• At least 1 white notebook.</li><li>• Dictionary (English to English, not a translating one)</li><li>• Extra lines A4 paper for written assignments.</li></ul> |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pens/markers/highlighters</li></ul>  |

### **Academic Integrity Policy**

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Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of the education and will not be tolerated. Students involved in any form of academic dishonesty, including any student supplying or allowing the copying to take place, will receive a zero.

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## **Behavioral Expectations**

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For the sake of all the members of the class, students are expected to respect themselves, their classmates, the teacher, and the facilities.

Students must accept responsibility for themselves and their actions. Students are expected to be ready at the start of every class (notebooks, textbook, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.

Behavior is monitored every day as per the class rules that are set out at the beginning of the academic year (see the front of your note books). At the end of the semester the average is taken and used for the student's behavior score (20%). Students *earn* the scores they receive.

Additionally, all Thai students are expected to embrace the following *desired characteristics*:

- Love for the country and the King, faith in religion
- Possess discipline
- Be self-sufficient
- Proud to be Thai
- Be an A.C. gentleman
- Eager to learn
- Dedicated to work
- Have a sense of public consciousness
- Be honest and upright

## **Attendance & Tardiness**

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Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher in as far in advance as possible. Students are expected to catch up on all missed work outside of class time.

## **Homework & Classwork**

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Homework and classwork will be assigned often and must be submitted on or before the due date for a score of 20 points. If the work is not done for the start of class, a maximum score of 15 will be possible. After more than one day has lapsed, a maximum score of 10 will be available. Late assignments can be submitted for a maximum of 50% (10 points) up until the last week of the term. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero.

## **Grading**

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This course follows to the Assumption College grading scale:

$Final\ Score \geq 80\%$	4.0
$75\% \leq Final\ Score < 80\%$	3.5
$70\% \leq Final\ Score < 75\%$	3.0
$65\% \leq Final\ Score < 70\%$	2.5
$60\% \leq Final\ Score < 65\%$	2.0
$55\% \leq Final\ Score < 60\%$	1.5
$50\% \leq Final\ Score < 55\%$	1.0
$Final\ Score < 50\%$	0.0





## **Evaluation and Assessment**

The final semester grade for this course out of 100% is broken down as follows:

Total Score of all Assessment	Homework 80%
Behavior	10%
Attendance	10%

## **Recommendations for Success**

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English can be a difficult course for many students. All students are encouraged to try the following:

1. Be on task during class. Focus and follow instructions and do the required activities to your best abilities. Do not worry about making mistakes as they are the best way for us to incorporate the materials into our long-term memories.
2. Watch Movies, or TV shows, or YouTube with British / Australian accents, with the English subtitles is a good way to improve your speaking and listening skills; it also helps with vocabulary too.
3. Search online (in English) if you don't understand a topic discussed in class to get a better understanding of the topic.
4. Do not copy your classmate's work; struggle through and do the work on your own. This is how you learn.
5. Come see the teacher outside of class time for assistance.
6. Revise your work, as recommended by your teacher and work to continuously improve your work. Learning is a process, not a product.

## **Precise resources:**

- **Teacher** Handouts, Worksheets, Presentations.
- Whiteboards & Projector.



## **Student Syllabus for: EPM6 Reading and Writing 5: EN30205**

**Teacher:** Mr. Joshua Bolen, J.D. (Mr. Bolen)

### **COURSE DESCRIPTION:**

Welcome to EP6 Reading & Writing. This course is designed to further your ability with analyzing reading, and to strengthen formal writing ability. We focus on academic skills. You will regularly practice advancing your vocabulary, understanding of question types, and responding formally to a variety of questions. In-class assignments, participation, and exams make up your grade.

The course is at an upper- intermediate level and will move quickly. If you miss a class, it is your responsibility to find out what you have missed, either from your classmates or by seeing me on your own time, not during class time.

### **Assignment Types:**

**Question Types:** This topic will be repeated throughout the Term, almost in every class. Most students are unsure how to respond to question types, generate ideas and respond accordingly. Therefore, in almost every class students will analyze question types, breakdown the question, and prepare responses. These skills are critical for University.

**Vocabulary:** Students will do various in class assignments which will be matched to the topics, and include learning meaning in context. This activity will be connected to question types, writing and reading assignments.

**Writing Assignments:** Writing assignments will be matched to the topics. This will include the analysis of question types, preparing responses, outline and planning. Developing complex sentence structures, properly organized task responses, including coherent and cohesive responses to task questions.

**Reading:** Reading assignments will be coordinated with the topics. These assignments will be used as a vehicle for developing vocabulary, complex structures and increased understanding of the topics.

### **Resources**

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|-----------|---|
| Required  | <ul style="list-style-type: none"><li>• At least 2 white notebooks.</li><li>• Dictionary &amp; Thesaurus (English to English)</li><li>• Extra lines A4 paper for written assignments.</li></ul> |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pens/markers/highlighters</li></ul>  |



## **Academic Integrity Policy**

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Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of the education and will not be tolerated. Students involved in any form of academic dishonesty, including any student supplying or allowing the copying to take place, will receive a zero.

Plagiarism is the act of taking someone else's work or ideas and passing them off as one's own work or ideas. Examples of plagiarism include the failure to give appropriate acknowledgement when repeating another's idea, phrase, sentence or paragraph, or failure to give appropriate acknowledgement when paraphrasing any of those.

## **Behavioral Expectations**

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For the sake of all the members of the class, students are expected to respect themselves, their classmates, the teacher, and the facilities. Students must accept responsibility for themselves and their actions. Students are expected to be ready at the start of every class (notebooks, textbook, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.

Behavior is monitored every day as per the class rules that are set out at the beginning of the academic year. At the end of the semester the average is taken and used for the student's behavior score (20%). Students *earn* the scores they receive.

Additionally, all Thai students are expected to embrace the following *desired characteristics*:

- Love for the country and the King, faith in religion
- Possess discipline
- Be self-sufficient
- Proud to be Thai
- Be an A.C. gentleman
- Eager to learn
- Dedicated to work
- Have a sense of public consciousness
- Be honest and upright

## **Attendance & Tardiness**

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Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher in as far in advance as possible. Students are expected to catch up on all missed work outside of class time.

## **Homework & Classwork**

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Homework and classwork will be assigned often and must be submitted on or before the due date. If the work is not done for the start of class, your maximum score will be reduced. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero.



## **Grading**

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This course follows to the Assumption College grading scale:

<i>Final Score</i> $\geq$ 80%	4.0
$75\% \leq$ <i>Final Score</i> < 80%	3.5
$70\% \leq$ <i>Final Score</i> < 75%	3.0
$65\% \leq$ <i>Final Score</i> < 70%	2.5
$60\% \leq$ <i>Final Score</i> < 65%	2.0
$55\% \leq$ <i>Final Score</i> < 60%	1.5
$50\% \leq$ <i>Final Score</i> < 55%	1.0
<i>Final Score</i> < 50%	0.0

## **Evaluation and Assessment** (program mandated)

The final semester grade for this course out of 100% is broken down as follows:

Total Score of all Formative Assessment	50%
Behavior	10%
Midterm (Summative) Exam	20%
Final Exam	20%

## **Recommendations for Success**

All students are encouraged to try the following:

1. Be on task during class. Focus and do the required activities to your best abilities.
2. Watch English language media with the English subtitles is a good way to improve English.
3. Search online (in English) if you don't understand a topic discussed in class to get a better understanding of the topic.
4. Do not copy your classmate's work; struggle through and do the work on your own. Come see the teacher outside of class time for assistance.
5. Revise your work as recommended by your teacher and work to continuously improve your work. ***Learning is a process, not a product.***

## **Precise resources:**

- **Teacher** Handouts, Worksheets, Presentation.
- White notebooks and folder.
- Schoology Course



<b>ST30204</b>	<b>Mechanical Properties of Matter and Modern Physics</b>
<b>Teacher</b>	Mr. Glenn Thomas
<b>Contact</b>	EP Teacher Room, 2 <sup>nd</sup> Floor Colombet Bldg.
<b>Credits</b>	1.0

### **Course Description**

This course focuses on a continuation of properties of materials this time exploring solids, liquids and gases. This is followed by radiation physics. The effects of latent heat and its effects on volume, density and energy will be introduced. The course offers both a conceptual foundation and an algebra-based presentation of Physics. Critical thinking skills in solving problems will be the emphasis with a sound basic understanding of conventional Mathematics. The course will use the American high school textbook, Holt *Physics* as a base. Students are encouraged to read widely from different resources which include the Internet, various Physics (both British and American), books published for improving examination skills as well as from Thai Physics books. They can always approach the teacher for references should they require.

### **Textbook (as a base)**

*Physics*, Holt McDougal 2012

ISBN-13: 978-0-547-58669-4; ISBN-10: 0-547-58669-8

Miscellaneous references available from the teacher upon request.

### **Course Outline & Objectives**

#### Unit 1 Properties of Solids (Indicators 1, 18-20)-

Define the volume of elasticity of solid, stress, and strain and calculate the value of Young's modulus.

Define and explore the general properties of fluid which are density and pressure of fluid, Pascal's principle, surface tension, and buoyancy.

Define and apply Bernoulli's equation which is related to the flow of streamline fluid without calculating viscosity as the principle of conservation of energy.

#### Unit 2 Properties of Liquids (Indicators 2-3, 18-20) [Refer to Teacher Notes]

-Define and explore the general properties of fluid which are density and pressure of fluid, Pascal's principle, surface tension, and buoyancy.

-Define and apply Bernoulli's equation which is related to the flow of streamline fluid without calculating viscosity as the principle of conservation of energy.



Unit 3 Effects of Heat (Indicators: 4-6, 18-20) [Refer to Teacher Notes]

- Defines and applies the effects of heat on matter, namely, change of state and temperature change.
- Explain and experiment with the properties of a substance when it is heated: heat capacity, latent heat, specific heat capacity and latent heat.
- Explain, experiment and analyze about other energy transformations, go into heat energy Mixture temperature including the calculation of various quantities from a given situation.

End of Midterm Exam Content – Start of Final Exam Content

Unit 4 Properties of Gases (Indicators: 7-9, 18-20) [Refer to Teacher Notes]

- physical characteristics of the gas, including Boyle's gas properties, Charles' Law, Gay-Lussac's Law including the ideal gas law.
- Relationships between pressure, volume, temperature, number of molecules, and kinetic theory of gas Include calculations of relevant quantities from the given situation.
- the changes in energy within the gas system in accordance with the laws of thermodynamics associated with gas kinetic theory and energy conservation rules.

Unit 5 Radiation and Nuclear Physics (Indicators 10-20) [Refer to Teacher Notes]

- The unstable nuclei, decay series, different types of radioactive decay and study of the natures of emitted particles/radiation. S.I. and non-S.I. units in radioactivity.
- Application of radiation in industry, medical therapy and everyday life.

**Resources**

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- |           |   |
|-----------|---|
| Required  | <ul style="list-style-type: none"><li>• Notebooks</li><li>• Scientific calculator (not a phone-based application)</li><li>• Ruler</li></ul>   |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pens/markers/highlighters</li><li>• Electronic Thai-English translator (not a phone-based application)</li><li>• A Matayom-level physics practice book in Thai</li></ul> |



### **Academic Integrity Policy**

Students are expected to following the guidelines laid down in the Assumption College Student Handbook in terms of academic pursuits and excellence. They are strongly and constantly reminded that it is of paramount importance to understand one topic intensively before being able to move on to the next one. However, all the topics are inter-related. Therefore, any forms of idleness or poor attitude in learning Physics will not be tolerated and remedial actions immediately instigated to rectify the situation. Students are always welcome to consult the teacher for guidance of whatever issues related to learning which may arise.

### **Behavioral Expectations**

A good sense of behavioral awareness in the classroom will be strictly reinforced which is essential to the ultimate success of the learning process. Students are not allowed to do other subjects in the Physics class or play with electronic gadgets not related to what is being taught in the classroom. Infraction of behavioral rules will be handled accordingly.

A behavior score (out of 5 points) is taken every day. At the end of the semester the average is taken and used for the student's behavior score (10%). Students *earn* the scores they receive.

Additionally, all Thai students are expected to embrace the following *desired characteristics*:

- Love for the country and the King, faith in religion
- Possess discipline
- Be self-sufficient
- Proud to be Thai
- Be an AC gentleman
- Eager to learn
- Dedicated to work
- Have a sense of public consciousness
- Be honest and upright

### **Attendance & Tardiness**

Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher in as far in advance as possible. Students are expected to catch up on all missed work outside of class time.

### **Homework & Classwork**

Homework and classwork will be assigned often and must be submitted on or before the due date. Late assignments can be submitted for a maximum of 50% up until the last week of the term. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero.



## **Grading**

Universal Physics follows to the Assumption College grading scale:

$Final\ Score \geq 80\%$	4.0
$75\% \leq Final\ Score < 80\%$	3.5
$70\% \leq Final\ Score < 75\%$	3.0
$65\% \leq Final\ Score < 70\%$	2.5
$60\% \leq Final\ Score < 65\%$	2.0
$55\% \leq Final\ Score < 60\%$	1.5
$50\% \leq Final\ Score < 55\%$	1.0
$Final\ Score < 50\%$	0.0

## **Evaluation and Assessment**

The final semester grade for this course out of 100% is broken down as follows:

Homework/Classwork	20%
Quiz	20%
Notebook	10%
Behavior	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

## **Recommendations for Success**

Physics can be a difficult course for many students. All students are should do the following:

1. Take good notes in the classroom. Go home and revise the notes; make sure every single part is clearly understood. For any doubts, queries, clarifications, the student should immediately note down and ask the teacher either in the classroom or individually in the teachers' room.
2. Students are encouraged to read widely from various textbooks available in the market, from the school library and from the Internet. (e.g., YouTube, Google, etc.)
3. Students must do the prescribed homework.
4. It is useful to organize small study group among the students.
5. Students can consult the teacher individually for techniques in getting high or full scores in external Physics tests like CU-ATS and SAT Subject Test.  
Ability for find the time to read Thai Physics (e.g., from the library) would be an additional asset.





## **ST30234 Universal Chemistry 4**

**Teacher** Mrs. Anu Sunny  
**Contact** EP Teacher Room, 2- Floor, Colombet Bldg.  
**Class Time** EP-M 6/1: Monday Period 2, Tuesday Period 5, Thursday Period 6

**Credits** 1.5 (3 Period /week)

### **Course Description**

This course on chemistry focuses on Electrochemistry, Chemical kinetics, Equilibrium, Acids and Bases, and Organic chemistry. The course offers both a conceptual foundation and a mathematical presentation of chemistry. As with many courses within EP, critical thinking skills are emphasized over those of rote learning. The course will closely follow the order and content of the latest version of the American high school textbook, *Pearson Chemistry*. The course provides foundation for university level chemistry.

Demonstrations, computer-simulated activities and laboratory sessions will allow students to learn basic laboratory techniques, lab safety and get a hands-on experience of the theories and concepts learned in the lectures. As with many courses within the English Program, critical thinking skills are emphasized over those of rote learning and BMAT- style questions are a part of the evaluation process. The course will follow the content of BMAT Past Paper Worked Solutions (2003-2017) 2018 by Black Stone Tutors. The course is prerequisite to SC30235 Universal Chemistry 5.

### **Textbook**

- *International A Level Chemistry, Oxford International AQA Examinations.*  
By Ted Lister & Janet Renshaw

Supplementary:

- *BMAT Past Paper Worked Solutions (2003-2017) 2018* by Black Stone Tutors

### **Course Outline & Objectives**

#### **Chapter 11: Introduction to Organic Chemistry**

- 11.1 Carbon Compounds
- 11.2 Nomenclature: Naming of Organic Compounds
- 11.3 Isomerism

#### **Chapter 12: Alkanes**



- 12.1 Alkanes
- 12.2 Fractional Distillation of Crude Oil
- 12.3 Industrial Cracking
- Combustion of Alkanes
- The formation of Halogenoalkanes

### **Chapter 13: Halogenoalkanes**

- 13.1 Halogenoalkanes: Introduction
- 13.2 Nucleophilic Substitution Reaction
- 13.3 Elimination reaction of Halogenoalkanes

### **Chapter 14: Alkenes**

- 14.1 Alkenes
- 14.2 Reactions of Alkenes
- 14.3 Addition Polymers
- 14.4 Epoxyethane

### **Chapter 15: Alcohols**

- 15.1 Alcohols: Introduction
- 15.2 The reactions of Alcohols

### **Chapter 16: Organic Analysis**

- 16.1 Test – tube reactions
- 16.2 Mass Spectrometry
- 16.3 Infrared Spectroscopy

### **Chapter 25: Nomenclature and Isomerism**

- 25.1 Naming organic Compounds
- 25.2 Optical Isomerism
- 25.3 Synthesis of Optically Active Compounds

### **Chapter 26: Compounds Containing Carbonyl Group**

- 26.1 Introduction to aldehydes and ketones
- 26.2 Reactions of Carbonyl group in aldehydes and ketones
- 26.3 Carboxylic acid and esters
- 26.4 Reactions of Carboxylic acid and esters
- 26.5 Acylation

### **Chapter 27: Aromatic Chemistry**

- 27.1 Introduction to Arenes
- 27.2 Arenes Physical properties, naming and reactivity
- 27.3 Reactions of Arenes
- 27.4 Further reactions of Arenes



### **Chapter 28: Amines**

- 28.1 Introduction to amines
- 28.2 The properties of amines as bases
- 28.3 Amines as Nucleophiles and their synthesis

### **Chapter 29: Polymerization**

- 29.1 Condensation Polymers

### **Resources**

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- |           |   |
|-----------|---|
| Required  | <ul style="list-style-type: none"><li>• Assumption Notebook (2)</li><li>• Binder/ folder</li><li>• Scientific calculator (not a phone-based application)</li><li>• Ruler</li></ul>  |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pens/markers/highlighters</li><li>• Electronic Thai-English translator (not a phone-based application)</li><li>• A Matayom-level chemistry practice book in Thai</li></ul> |

### **Academic Integrity Policy**

Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of the education and will not be tolerated. Students involved in any form of academic dishonesty, including any student supplying or allowing the copying to take place, will receive a zero.

Plagiarism is the act of taking someone else's work or ideas and passing them off as one's own work or ideas. Examples of plagiarism include the failure to give appropriate acknowledgement when repeating another's idea, phrase, sentence or paragraph, or failure to give appropriate acknowledgement when paraphrasing any of those.

### **Behavioral Expectations**

For the sake of all the members of the class, students are expected to respect themselves, their classmates, the teacher, and the facilities. Students must accept responsibility for themselves and their actions. Students are expected to be ready at the start of every class (Notebook, textbook, scientific calculator, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.



A behavior score (out of 5 points) is taken every day. At the end of the semester the average is taken and used for the student's behavior score (10%).

Additionally, all Thai students are expected to embrace the following *desired characteristics*:

- Possess discipline - Eager to learn
- Be an AC gentleman - Dedicated to work

### **Attendance & Tardiness**

Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher in as far in advance as possible. Students are expected to catch up on all missed work outside of class time.

### **Homework & Classwork**

Homework and classwork will be assigned often and must be submitted on or before the due date. Late assignments can be submitted for a maximum of 50% up until the last week of the term. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero.

### **Grading**

Foundation Chemistry follows to the Assumption College grading scale:

$Final\ Score \geq 80\%$	4.0
$75\% \leq Final\ Score < 80\%$	3.5
$70\% \leq Final\ Score < 75\%$	3.0
$65\% \leq Final\ Score < 70\%$	2.5
$60\% \leq Final\ Score < 65\%$	2.0
$55\% \leq Final\ Score < 60\%$	1.5
$50\% \leq Final\ Score < 55\%$	1.0
$Final\ Score < 50\%$	0.0



### Evaluation and Assessment

The final semester grade for this course out of 100% is broken down as follows:

Homework/Classwork/Projects	30%
Class Test	20%
Behavior	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

### Recommendations for Success

Chemistry can be a difficult course for many students. All students are encouraged to try the following:

1. Read, read, read the Chemistry textbook. Oftentimes, reading the text once is not enough even for native English speakers. You may need to read the material multiple times to understand. By reading along at home with the lessons taught at school (typically only a few pages per night), students will be able to responsibly manage the material and gain the most from the course.
2. Search online, in either Thai or English, if you don't understand a topic discussed in class or simply to get a better understanding of the topic.
3. Get a Thai language introductory chemistry book.
4. Do **not** copy your classmate's work; struggle through and do the work on your own! This is how you learn!
5. Come see the teacher outside of class time for assistance.
6. Do more than just the bare minimum; there are plenty of problems in the textbook. We only have time for so many of them. Do the review questions at the end of the chapter and see the teacher for the answers.
7. Study the notes and vocabulary at least a few minutes every day, such as in homeroom or during any free time you might have in other classes.



## **ST30289 Biochemistry Laboratory and Microbiology**

<b>Teacher</b>	Mrs. Anu Sunny
<b>Contact</b>	EP Teacher Room, 2- Floor, Colombet Bldg.
<b>Class Time</b>	EP-M 6/1H Wednesday Period 1
<b>Credits</b>	0.5 (1 Class/week)

### **Course Description**

This course is a supplemental course which provides additional information in Biology and chemistry. This course will be beneficial for those who are aspiring for medical related courses. This course will have topics which will run in depth to mold students to their university level

In this course students will be learning Chemistry and Biology and how to bridge these two subjects. The practical classes coming along with this course will be a hands-on experience for students. Added simulations and videos will enhance the learning curve of students.

### **Textbook**

- *Biology for Cambridge International AS &A level Course Book by Mary Jones, Richard Fosbery, Dennis Taylor & Jennifer Gregory.*

### **Course Outline & Objectives**

#### **Unit 1: Chemistry of Life**

- Photosynthesis
- Carbon Cycle

#### **Unit 2: Carbohydrates**

- Classification of carbohydrates
- Chemical and Physiological properties of carbohydrates.

#### **Unit 3: Amino Acids and Their Polymers**

- General Structure of amino acids
- Properties of proteins and peptides
- Role of enzymes in living things.

#### **Unit 4: Lipids**

- What distinguish lipids from other biological molecules?

#### **Unit 5: Nucleic Acids**

- Gene Mutation.
- Application of Technology



### **Unit6: Metabolism**

- Metabolism reactions and importance of ATP.
- Nitrogen Cycle
- DNA testing

### **Unit7: Immunity**

- Infectious Disease
- Antibiotics
- Defense against disease
- Cells of the immune system
- Active and Passive Immunity

### **Resources**

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- |           |   |
|-----------|---|
| Required  | <ul style="list-style-type: none"><li>• Assumption Notebook (2)</li><li>• Binder/ folder</li><li>• Scientific calculator (not a phone-based application)</li><li>• Ruler</li></ul>  |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pens/markers/highlighters</li><li>• Electronic Thai-English translator (not a phone-based application)</li><li>• A Matayom-level chemistry practice book in Thai</li></ul> |

### **Academic Integrity Policy**

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Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of the education and will not be tolerated. Students involved in any form of academic dishonesty, including any student supplying or allowing the copying to take place, will receive a zero.

Plagiarism is the act of taking someone else's work or ideas and passing them off as one's own work or ideas. Examples of plagiarism include the failure to give appropriate acknowledgement when repeating another's idea, phrase, sentence or paragraph, or failure to give appropriate acknowledgement when paraphrasing any of those.

### **Behavioral Expectations**

For the sake of all the members of the class, students are expected to respect themselves, their classmates, the teacher, and the facilities. Students must accept responsibility for themselves and their actions. Students are expected to be ready at the start of every class (Notebook, textbook, scientific calculator, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.



A behavior score (out of 5 points) is taken every day. At the end of the semester the average is taken and used for the student's behavior score (10%).

Additionally, all Thai students are expected to embrace the following *desired characteristics*:

- Possess discipline - Eager to learn
- Be an AC gentleman - Dedicated to work

### **Attendance & Tardiness**

Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher in as far in advance as possible. Students are expected to catch up on all missed work outside of class time.

### **Homework & Classwork**

Homework and classwork will be assigned often and must be submitted on or before the due date. Late assignments can be submitted for a maximum of 50% up until the last week of the term. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero.

### **Grading**

Foundation Chemistry follows to the Assumption College grading scale:

$Final\ Score \geq 80\%$	4.0
$75\% \leq Final\ Score < 80\%$	3.5
$70\% \leq Final\ Score < 75\%$	3.0
$65\% \leq Final\ Score < 70\%$	2.5
$60\% \leq Final\ Score < 65\%$	2.0
$55\% \leq Final\ Score < 60\%$	1.5
$50\% \leq Final\ Score < 55\%$	1.0
$Final\ Score < 50\%$	0.0

### **Evaluation and Assessment**

The final semester grade for this course out of 100% is broken down as follows:

Homework/Classwork/Projects	50%
Quizzes	10%
Behavior	10% (program mandated)
Class Test	30% (program mandated)





### **Recommendations for Success**

Chemistry can be a difficult course for many students. All students are encouraged to try the following:

1. Read the materials provided. Oftentimes, reading the text once is not enough even for native English speakers. You may need to read the material multiple times to understand. By reading along at home with the lessons taught at school (typically only a few pages per night), students will be able to responsibly manage the material and gain the most from the course.
2. Search online, in either Thai or English, if you don't understand a topic discussed in class or simply to get a better understanding of the topic.
3. Get a Thai language introductory chemistry book.
4. Do **not** copy your classmate's work; struggle through and do the work on your own! This is how you learn!
5. Come see the teacher outside of class time for assistance.
6. Do more than just the bare minimum; there are plenty of problems in the textbook. We only have time for so many of them. Do the review questions at the end of the chapter and see the teacher for the answers.
7. Study the notes and vocabulary at least a few minutes every day, such as in homeroom or during any free time you might have in other classes.



## **ST30249 Molecular Biology and Human Physiology**

**Teacher** Mr. Michael Salutin  
**Contact** EP Teacher Room, 2- Floor, Colombet Bldg.  
**Class Time** EP-M 6/1H Mon, Tue, Thu  
**Credits** 1.5 (1 Class/week)

### **Course Description**

This course is a supplemental course which provides additional information in Biology and Physiology. This course will be beneficial for those who are aspiring for medical related courses.

In this course students will be learning the application of biotechnology in a number of different fields (e.g., agriculture, bioremediation, medical). Added simulations and videos will enhance the learning curve of students.

### **Textbook**

- *International A Level Biology*. Fran Fuller, Glenn Toole and Susan Toole (authors). Oxford University Press. 2016.

### **Course Outline & Objectives**

#### **Unit 1: Genetics**

- Ch. 7 – DNA, genes, and chromosomes
- Ch. 8 – Protein synthesis
- Ch. 9 – Genetic diversity, species & taxonomy
- Ch. 28 – Control of transcription and translation
- Ch. 17 – Cell division

#### **Unit 2: Cellular Biology**

- Ch. 2 – Cells and cell structure
- Ch. 3 – Biochemical reactions in cells
- Ch. 4 – Transport in and out of cells

#### **Unit 3: Human Organ Systems**

- Ch. 5 – Gas exchange and transport of oxygen
- Ch. 15 – Mammalian blood
- Ch. 24 – Response to stimuli
- Ch. 25 – Skeletal muscles as effectors



## **Resources**

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- |           |  |
|-----------|--|
| Required  | <ul style="list-style-type: none"><li>• Assumption Notebook (2)</li><li>• Binder/ folder</li></ul> |
| Suggested | <ul style="list-style-type: none"><li>• tablet</li></ul>   |

## **Academic Integrity Policy**

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Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of the education and will not be tolerated. Students involved in any form of academic dishonesty, including any student supplying or allowing the copying to take place, will receive a zero.

Plagiarism is the act of taking someone else's work or ideas and passing them off as one's own work or ideas. Examples of plagiarism include the failure to give appropriate acknowledgement when repeating another's idea, phrase, sentence or paragraph, or failure to give appropriate acknowledgement when paraphrasing any of those.

## **Behavioral Expectations**

For the sake of all the members of the class, students are expected to respect themselves, their classmates, the teacher, and the facilities. Students must accept responsibility for themselves and their actions. Students are expected to be ready at the start of every class (Notebook, textbook, scientific calculator, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.

A behavior score (out of 5 points) is taken every day. At the end of the semester the average is taken and used for the student's behavior score (10%).

Additionally, all Thai students are expected to embrace the following *desired characteristics*:

- Possess discipline
- Be an AC gentleman
- Eager to learn
- Dedicated to work

## **Attendance & Tardiness**

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Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher in as far in advance as possible. Students are expected to catch up on all missed work outside of class time.



### Homework & Classwork

Homework and classwork will be assigned often and must be submitted on or before the due date. Late assignments can be submitted for a maximum of 50% up until the last week of the term. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero.

### Grading

This class follows to the Assumption College grading scale:

$Final\ Score \geq 80\%$	4.0
$75\% \leq Final\ Score < 80\%$	3.5
$70\% \leq Final\ Score < 75\%$	3.0
$65\% \leq Final\ Score < 70\%$	2.5
$60\% \leq Final\ Score < 65\%$	2.0
$55\% \leq Final\ Score < 60\%$	1.5
$50\% \leq Final\ Score < 55\%$	1.0
$Final\ Score < 50\%$	0.0

### Evaluation and Assessment

The final semester grade for this course out of 100% is broken down as follows:

Homework/Classwork/Projects	50%
Quizzes	10%
Behavior	10% (program mandated)
Class Test	30% (program mandated)

### Recommendations for Success

Biology can be a difficult course for many students. All students are encouraged to try the following:

1. Read the materials provided. Oftentimes, reading the text once is not enough even for native English speakers. You may need to read the material multiple times to understand. By reading along at home with the lessons taught at school (typically only a few pages per night), students will be able to responsibly manage the material and gain the most from the course.
2. Search online, in either Thai or English, if you don't understand a topic discussed in class or simply to get a better understanding of the topic.
3. Get a Thai language introductory chemistry book.



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4. Do **not** copy your classmate's work; struggle through and do the work on your own! This is how you learn!
5. Come see the teacher outside of class time for assistance.
6. Do more than just the bare minimum; there are plenty of problems in the textbook. We only have time for so many of them. Do the review questions at the end of the chapter and see the teacher for the answers.
7. Study the notes and vocabulary at least a few minutes every day, such as in homeroom or during any free time you might have in other classes.



## **ST30294 H6/2 Health Science**

<b>Teacher</b>	Mr. Michael Dew
<b>Contact</b>	EP Teacher Room, 2- Floor, Colombet Bldg.
<b>Class Time</b>	EP-M 6/2: Tuesday Period 3, Thursday Period 3 and 4
<b>Credits</b>	0.5 (1 Period /week)

### **Course Description**

This course on health science focuses on several body systems, health disorders, and prevention. Risk factors, signs, and symptoms will also be covered. The course offers both a conceptual foundation and qualitative presentation of health science. As with many courses within EP, critical thinking skills are emphasized over those of rote learning. The course will closely follow the order and content of the latest version of content as a part of this course, which provides some of the major topics in university level health science.

Demonstrations, computer-simulated activities and laboratory sessions will allow students to learn basic laboratory techniques, lab safety and get a hands-on experience of the theories and concepts learned in the lectures. As with many courses within the English Program, critical thinking skills are emphasized over those of rote learning and BMAT- style questions are a part of the evaluation process.

### **Textbook**

- *International A Level Health Science, Oxford International AQA Examinations.*  
Supplementary:
- *BMAT Past Paper Worked Solutions (2003-2017) 2018*

### **Course Outline & Objectives**

#### **Chapter 1: Urinary System**

- 1.1 Structure and Function of the human urinary system organs
- 1.2 Urinary system disease and disorders
- 1.3 Kidney dialysis

#### **Chapter 2: Reproductive System**

- 2.1 Structure and function of the human reproductive system organs
- 2.2 Reproductive system disease and disorders
- 2.3 Diagnosis, treatment, and prevention of sexually transmitted infections



### **Chapter 3: Endocrine System**

- 3.1 Structure and Function of the human endocrine system organs
- 3.2 Endocrine system disease and disorders
- 3.3 Endocrine system health and homeostasis

### **Chapter 4: Skeletal System**

- 4.1 Structure and Function of the human skeletal system organs
- 4.2 Skeletal system disease and disorders
- 4.3 Skeletal system health and homeostasis

### **Resources**

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|-----------|---|
| Required  | <ul style="list-style-type: none"><li>• Assumption Notebook (2)</li><li>• Binder/ folder</li><li>• Ruler</li></ul>  |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pens/markers/highlighters</li><li>• Electronic Thai-English translator (not a phone-based application)</li></ul> |

### **Academic Integrity Policy**

Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic dishonesty lower the quality of the education and will not be tolerated. Students involved in any form of academic dishonesty, including any student supplying or allowing the copying to take place, will receive a zero.

Plagiarism is the act of taking someone else's work or ideas and passing them off as one's own work or ideas. Examples of plagiarism include the failure to give appropriate acknowledgement when repeating another's idea, phrase, sentence or paragraph, or failure to give appropriate acknowledgement when paraphrasing any of those.

### **Behavioral Expectations**

For the sake of all the members of the class, students are expected to respect themselves, their classmates, the teacher, and the facilities. Students must accept responsibility for themselves and their actions. Students are expected to be ready at the start of every class (Notebook, textbook, scientific calculator, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.

A behavior score (out of 5 points) is taken every day. At the end of the semester the average is taken and used for the student's behavior score (10%).



Additionally, all Thai students are expected to embrace the following *desired characteristics*:

- Possess discipline - Eager to learn
- Be an AC gentleman - Dedicated to work

### **Attendance & Tardiness**

Attendance will be taken at the start of every class. Students are expected to be in class on-time, every time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher as far in advance as possible. Students are expected to catch up on all missed work outside of class time.

### **Homework & Classwork**

Homework and classwork will be assigned often and must be submitted on or before the due date. Late assignments can be submitted for a maximum of 50% up until the last week of the term. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero.

### **Grading**

Foundation Chemistry follows to the Assumption College grading scale:

$Final\ Score \geq 80\%$	4.0
$75\% \leq Final\ Score < 80\%$	3.5
$70\% \leq Final\ Score < 75\%$	3.0
$65\% \leq Final\ Score < 70\%$	2.5
$60\% \leq Final\ Score < 65\%$	2.0
$55\% \leq Final\ Score < 60\%$	1.5
$50\% \leq Final\ Score < 55\%$	1.0
$Final\ Score < 50\%$	0.0

### **Evaluation and Assessment**

The final semester grade for this course out of 100% is broken down as follows:

Homework/Classwork/Projects	30%
Class Test	20%
Behavior	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

### **Recommendations for Success**

All students are encouraged to try the following:





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1. Oftentimes, reading the text once is not enough even for native English speakers. You may need to read the material multiple times to understand. By reading along at home with the lessons taught at school (typically only a few pages per night), students will be able to responsibly manage the material and gain the most from the course.
2. Search online, in either Thai or English, if you don't understand a topic discussed in class or simply to get a better understanding of the topic.
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