



MA30215 Universal Mathematics 3

Teacher	Mr. Shiv Kumar
Contact	Science lab, 2 nd Floor Colombet Building. shiv.ku@assumption.ac.th
Class Time	EP-M5/1: Monday Period 7, Thursday Period 6 EP-M5/2: Monday Period 4, Thursday Period 4
Credits	1.5

Course Description

This course builds on previous knowledge and lays the foundation for the students' further study in mathematics. We will cover many essential topics that will be necessary when the students study Calculus and higher level mathematics. Included in this course are exponential and logarithmic functions, trigonometric functions, identities and proofs, and three dimensional vectors. We will begin with exponential functions and their applications and then use these to define the logarithmic functions. Next, we will study basic trigonometry with a focus on understanding the meaning of the basic functions and their applications. We will then cover three dimensional vectors and basic vector operations. We will use vectors to model various three dimensional situations.

Textbook

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

Course Outline & Objectives

Unit 1. Exponential Function and Logarithmic Function

1. Exponents, Rational exponents and law of exponents Pg 82-87
2. Algebraic expansion and factorization of exponents Pg 90-91
3. Interest and Money (Class worksheet and Notes)
4. Exponential function and graphing Pg 94-101
5. Logarithmic function and graphing Pg 110-126

Unit 2. Trigonometric Functions and applications

1. Sine and cosine functions Pg 236-243
2. Values of sine and cosine functions (Class worksheet and Notes)
3. Trigonometric functions in various dimensions (Class worksheet and Notes)
4. Read the value of trigonometric functions from table (Class worksheet and Notes)
5. Graphs of trigonometric functions (Class worksheet and Notes)
6. Trigonometric functions of sums and differences Pg 256-263
7. Inverse trigonometric functions (Class worksheet and Notes)
8. Sine and cosine rules (Class worksheet and Notes)

Unit 3. Three Dimensional Vectors

1. Vectors Pg 275-342
2. Vector addition Pg 276-279
3. Vector subtraction Pg 279-281
4. Scalar multiplication of vectors Pg 281-283
5. Cross multiplication Pg 284-286
(Class worksheet and Notes)



Resources

- | | |
|-----------|---|
| Required | <input type="checkbox"/> A plastic folder for worksheets. |
| | <input type="checkbox"/> White School Notebook |
| | <input type="checkbox"/> Red and blue pen. |
| Suggested | <input type="checkbox"/> Many different colored pens/markers/highlighters |
| | <input type="checkbox"/> Ruler |

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. 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

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
- 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 & Class work

Homework and class work 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 20% 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> $\geq 80\%$	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:

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

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.



THE ENGLISH PROGRAM AT ASSUMPTION COLLEGE
Course Syllabus – Semester 1/2026

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.



EN30103 Foundation English 3

Teacher Mr. Christopher Allen Reese

Contact EP Teacher Room, 2nd Floor Colombet Bldg.
christopher.re@assumption.ac.th

Class Time EP-M5 - Two Periods a Week for Each Class

Credits 1

Course Description

This course aims to prioritize learners' reading, writing, listening, and speaking skill development in General English. The course is designed to help students progress towards achieving a CEFR C1 level.

Textbooks

Cosgrove, A. and Wijayatilake, C. (2022) Prepare Level 8 Student's Book with eBook, Workbook

Course Outline & Objectives

Week 1: Icebreaker Activities and Establishing Classroom Routines

Weeks 2-4: Unit 3, *All in one piece*

- Reading: An article about the human body
- Listening: Career Advice (Summary Completion)
- Speaking: Discussing the human body and its capabilities / abilities
- Vocabulary: Describing the human body, Phrasal verbs and idioms / fixed expressions related to the human body
- Grammar: Revision of modal verbs (speculation, deduction, permission, obligation, advice)

Weeks 5-6: Unit 4, *Making your Mind Up*

- Reading: Cross-text multiple matching (opinions about gap years)
- Vocabulary: Language for making decisions, Collocations for life events
- Grammar: Revision of past modal verbs (ability, advice, obligation, permission, regret, speculation/deduction)
- Project: Making a life decision

Weeks 7-9: Unit 6, *Blockbusters and Bestsellers*

- Reading: Gapped Text activities & developing awareness of cohesion
- Writing: A review
- Vocabulary: Film and books, Collocations to describe entertainment
- Grammar: Verb patterns (gerunds and infinitives)
- Project: Creative Thinking

MIDTERM EXAM

Week 11: Reviewing the Midterm

Weeks 12-15: Unit 7, *Against All Odds*



- Reading: Multiple matching
- Speaking: Reacting to what people say
- Vocabulary: Challenges and achievements, Noun suffixes (word formation)
- Grammar: Revision of conditionals (0, 1, 2, 3)

Weeks 16-18: Unit 8, *Making Ends Meet*

- Reading: Multiple matching
- Vocabulary: Money and wealth, idioms and phrasal verbs for money
- Grammar: *Wish / If only*
- Project: Job interviews

FINAL EXAM

Resources

- | | |
|----------|--|
| Required | <ul style="list-style-type: none">• 1 notebook (1 white notebook)• Folder for English only (to keep handouts, etc.)• Textbooks• Blue or black pen + red pen for checking work• Dictionary (English to English) |
|----------|--|

Other resources such as worksheets will be given throughout the summer semester. These may be shared on Google Classroom in digital form.

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.

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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, worksheets, English Folder, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.

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

- | | |
|---|--|
| <ul style="list-style-type: none">• Possess discipline• Be an AC gentleman | <ul style="list-style-type: none">• Eager to learn• 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 but some marks will be taken off as a penalty. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero. For an assignment to be submitted after the due date, the student must provide:

- Their name & surname
- Student ID number
- A reason for explaining the delay and late submission
- A suggestion for a new due date

The grade for the summer course will be primarily taken from coursework done in class. Classwork will be provided feedback / error correction and will be handed back in a timely fashion.

Evaluation and Assessment

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

Formative	50%
Behavior	10%
Midterm	20%
Final	20%

Recommendations for Success

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

1. Have your materials for English on your desk at the beginning of class.
2. Pay attention and listen carefully while taking notes.
3. Always use English during discussions.
4. Do your homework yourself and do not copy.
5. Come see the teacher outside of class time for assistance.
6. Always do your best.



EN30203 English Reading Writing 3

Teacher Mr. Christopher Allen Reese

Contact EP Teacher Room, 2nd Floor Colombet Bldg.
christopher.re@assumption.ac.th

Class Time EP-M5 - Two Periods a Week for Each Class

Credits 1

Course Description

This course aims to prioritize learners' reading, writing, listening, and speaking skill development within the context of improving students' performance on the IELTS exam. The course is oriented towards a CEFR B2+ level (IELTS 6.5) in order to help learners transition into the higher-scoring band ranges.

Textbooks

Archer, G., Passmore, L., Crosthwaite, P., Hutchinson, S., De Souza, N., Loewenthal, M., Uddin, J. and Wijayatilake, C. (2023) Mindset for IELTS Level 2, Student's Book with Digital Pack

Course Outline & Objectives

Week 1: Icebreaker Activities and Establishing Classroom Routines

Weeks 2-4: Unit 1, *The Man-Made Environment*

- Reading
 - Task Types: Short answer questions, Sentence completion
 - Strategies: Skimming, Scanning, Understanding Paraphrase
- Listening:
 - Task Types: Short answer questions, Multiple choice questions (Part 1)
 - Strategies: Listening for specific information, dealing with distractors, understanding complex numbers and spelling
- Writing:
 - Part 1: Describing charts and diagrams
 - Selecting key features of diagrams and using accurate data
- Speaking: Part 1
 - Common exam topics and responding to common question types
 - Forming a well-constructed answer
- Vocabulary
 - Describing places
 - Adjectives and adverbs to describe trends
- Grammar
 - Revision of Continuous Aspect

Weeks 5-8: Unit 2, *Leisure and Recreation*

- Reading
 - Task types: Multiple choice questions
 - Strategies: Identifying facts and opinions
- Listening
 - Task types: Completion tasks, Matching tasks (Part 2)



- Strategies: Listening to and understanding directions, matching descriptions with people
- Writing
 - Part 1: Describing two diagrams / charts in one question
 - Structuring a Part 1 answer
 - Comparing and contrasting data and choosing relevant information
- Speaking
 - Introduction to part 2
 - Adding connecting words and giving detailed responses
 - Sentence stress and intonation
- Vocabulary
 - Describing sports and free time activities
 - Linking words for speaking
- Grammar
 - Language for comparison

Week 9 - Revision for Midterm

MIDTERM EXAM

Weeks 11-14: Unit 3, *The News and Media*

- Reading
 - Task types: Matching information
 - Strategies: Identifying different types of information
- Listening
 - Task types: Multiple choice questions
 - Strategies: Identifying speakers and opinions, understanding distractors
- Writing
 - Part 1: Describing a Process
 - Planning a Part 1 Answer
 - Interpreting scientific and technical diagrams
- Speaking
 - News and media (Part 1)
 - Describing an event (Part 2)
 - Expressing feelings, paraphrasing and reporting the news
- Vocabulary
 - Vocabulary about the media
 - Verbs for process tasks
- Grammar
 - Revision of Passives

Weeks 15-18: Unit 4, *Travel and Transport*

- Reading
 - Task types: Matching headings
 - Strategies: Understanding the main idea from paragraphs, recognizing synonyms
- Listening
 - Task types: Matching questions (Part 3), Multiple choice questions (Part 3)



- Strategies: Identifying different functions, identifying the subject of a conversation
- Writing
 - Part 1: Changes to a Map
 - Reading and interpreting maps
 - Proofreading for accuracy
- Speaking
 - Travel and transport (Parts 1 and 2)
 - Dealing with follow-up questions in part 2
- Vocabulary
 - Language for suggesting, complaining, disagreeing, and persuading
 - Describing maps and features of maps
- Grammar
 - Using sequencing words, developing coherence and cohesion

FINAL EXAM

Resources

- | | |
|----------|--|
| Required | <ul style="list-style-type: none">• 1 notebook (1 white notebook)• Folder for English only (to keep handouts, etc.)• Textbooks• Blue or black pen + red pen for checking work• Dictionary (English to English) |
|----------|--|

Other resources such as worksheets will be given throughout the summer semester. These may be shared on Google Classroom in digital form.

Academic Integrity Policy

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Behavioral Expectations

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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 but some marks will be taken off as a penalty. All late or missed assignments that are not turned in *before* the last week of the term will receive a zero. For an assignment to be submitted after the due date, the student must provide:

- Their name & surname
- Student ID number
- A reason for explaining the delay and late submission
- A suggestion for a new due date

The grade for the summer course will be primarily taken from coursework done in class. Classwork will be provided feedback / error correction and will be handed back in a timely fashion.

Evaluation and Assessment

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

Formative	50%
Behavior	10%
Midterm	20%
Final	20%

Recommendations for Success

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

1. Have your materials for English on your desk at the beginning of class.
2. Pay attention and listen carefully while taking notes.
3. Always use English during discussions.
4. Do your homework yourself and do not copy.
5. Come see the teacher outside of class time for assistance.
6. Always do your best.



ST30202 Periodic Movement and Static Electricity

Teacher Mr. Glenn Thomas
Contact EP Teacher Room, 2nd Floor Colombet Bldg.
Credits 1.0

Course Description

This course focuses on revision of classical mechanics to ensure that the students a sound knowledge of it as a base for future study in Physics. 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 closely follow the order and content of the International ALevel books by Pearsons

Students are encouraged to read widely from different resources which include the Internet, various (both British and American) Physics 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)

Pearson International Physics AS/A level student book 1 and 2 , 2019
ISSN: 2155-6040; ISBN: 978-1-4380-0789-2

Course Outline & Objectives

Unit 1 Revision of basic mechanics in preparation for further learning in Physics, especially in elasticity, circular motion, simple harmonic motion in preparation for the students to learn Wave Mechanics. (Indicators: 1-4, 18-22) [Refer to Teacher Notes]

- Frequency and period of oscillation
- Centripetal acceleration and force.
- Motion in a circle (horizontal and vertical)
- Angular velocity and tangential velocity
- SHM

End of Midterm Exam Content – Start of Final Exam Content

Unit 2 Wave phenomenon in daily life. (Indicators: 5-22) [Refer to Teacher Notes]

- Properties of waves: reflection, refraction, interference, diffraction, standing waves.
- Light and Vision: anatomy of the hearing organ; nature of light and properties of electromagnetic radiation; geometric properties of light; light intensity and illumination.
- Sound and Hearing: Speed of sound and effect of temperature; reflection and refraction of sound; interference of sound; beats; resonance of sound; power and intensity level of sound; Doppler's effect and shock waves.



Unit 3 Electrostatics: (Indicators: 18-22) [Refer to Teacher Notes]

- Coulomb's Law; definition of S.I. unit Coulomb.
- Electric field and definition of Electric Field Intensity
- Electrical potential and potential energy
- Potential difference and work done in moving charges.

Resources

- | | |
|-----------|---|
| Required | <ul style="list-style-type: none">• Edexcel Physics student book 1 and 2• 1 white notebook• Folder for Physics only (to keep handouts, etc.) |
| Suggested | <ul style="list-style-type: none">• Many different colored pens/markers/highlighters• Electronic Thai-English translator (not a phone-based application)• A Matayom-level physics practice book in Thai |

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 of 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.

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.

Classwork

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:

Classwork	20%
Quiz	20%
Lab	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.
6. Ability for find the time to read Thai Physics (e.g., from the library) would be an additional asset.



ST30232 Universal Chemistry 2

Teacher	Ms. Cherise Nieuwoudt
Contact	EP Teacher Room, 2 nd Floor Colombet Bldg.
Class Time	EP-M 5/1 Monday 2 nd Period, Tuesday 6 th Period, Thursday 3 rd Period EP-M 5/2 Tuesday 3 rd Period, Thursday 2 nd Period, Friday 4 th Period
Credits	1.5

Course Description

Although this course is technically called Universal Chemistry 2, in reality it is the third installment within the comprehensive Chemistry program offered here at Assumption College English Program. At this point in the student's progression within the discipline, course material will gradually advance into more concrete, fundamental areas of Chemistry. Within this semester, Chemical quantities (the concept of the "mole"), Chemical reactions, Behavior of Gases, States of Matter and Properties of Water are introduced.

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 ST30233 Universal Chemistry 3.

Textbook

- *International A Level Chemistry*, Oxford (2016), by Ted Lister and Janet Renshaw.
Supplementary:
- *BMAT Past Paper Worked Solutions (2003-2017)* 2018 by Black Stone Tutors

Course Outline & Objectives

Chemical Reactions (Chapter 11)

Section 1: Describing Chemical Reactions

- Balance a chemical equation.

Section 2: Types of Chemical Reactions

- Classify chemical reactions as one of the five general types of reactions.

Section 3: Reactions in Aqueous Solutions

- Interpret a net ionic equation.
- Predict the formation of a precipitate in a double replacement reaction.

States of Matter (Chapter 13)

Section 1: The Nature of Gases

- Explain gas pressure in terms of kinetic theory.
- Describe and explain the relationship between the temperature in kelvins and the average kinetic energy of particles.

Section 2: The Nature of Liquids

- Identify the factors that determine the physical properties of a liquid.
- Define evaporation in terms of kinetic energy.



- Identify the conditions under which boiling occurs.

Section 3: The Nature of Solids

- Describe how the structure and properties of solids are related.

Section 4: Change of State

- Interpret a phase diagram.

The Behavior of Gases (Chapter 14)

Section 1: Properties of Gases

- Identify the three factors that affect gas pressure

Section 2: The Gas Laws

- Describe the relationship among the pressure, volume, and temperature of a gas.
- Calculate the pressure, temperature and volume of a gas using gas laws.

Section 3: Ideal Gases

- Calculate the amount of a contained gas when the pressure, volume, and temperature are specified.
- Calculate the molar mass of a gas using the ideal gas law.

Section 4: Gases: Mixtures and Movements

- Relate the total pressure of a mixture of gases to the partial pressures of the component gases.
- Explain how the molar mass of a gas affects the rate at which gas diffuses and effuses.

Water and Aqueous Systems (Chapter 15)

Section 1: Water and Its Properties

- What factor causes the surface tension, low vapor pressure and high boiling point.
- Describe the structure of ice.

Section 2: Homogeneous Aqueous Systems

- What type of substances dissolve most readily in water?
- Why are all ionic compounds electrolytes?
- Why do hydrates easily lose and gain water?

Section 3: Heterogeneous Aqueous System

- What is the difference between a suspension and a solution?
- Define colloids.

Solutions (Chapter 16)

Section 1: Properties of Solutions

- What factors affect how fast a substance dissolves?
- Define the equilibrium of a saturated solution.
- Factors affecting the solubility of a substance

Section 2: Concentration of Solutions

- Molarity.
- Making Dilutions
- Percent Solutions

Section 3: Colligative Properties of Solutions

- Describing Colligative Properties.



Resources

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

Academic Integrity Policy

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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

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/Labs	30%
Quizzes	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.



OC30105 Occupational Works 2

Teacher Dr. Hermann Gruenwald

Contact EP Teacher Room, 2nd Floor Colombet Building
Hermann_gr@assumption.gmail.com

Website <https://classroom.google.com/c/ODYzNTIwODQwMTk0>
<https://classroom.google.com/c/ODYzNTE5ODgzNjU2>
<https://classroom.google.com/c/ODYzNTIyMDkxMDMz>

Class Time M5/1 Wednesday 14:50 - 15:40
M5/2 Monday 13:00 – 13:50
M5/3 Wednesday 14:00 – 14:50

Credits 0.5

The goals of the Occupational Works subject are to:

- endow students with creative opportunities and curiosity
- refine skills for individual and group working processes such as management, teamwork, problem-solving and attention to detail
- develop and apply research and investigation skills to coursework
- improve awareness of human impact on the environment for one's life and family
- acquire technological knowledge for occupational development
- promote awareness of nationalism, religiosity, royalty, honesty, self-discipline, studiousness, self-sufficiency, endeavor, love of being Thai, and public-mindedness.

Learning Content Description

Understanding of concept of work; endowment with creativity and skills for various aspects and work processes, management, problem solving, collaboration, investigation for seeking knowledge, morality, diligence, and awareness of the need to economise on the use of energy and the environment for one's life and for family.

And also understand and have necessary skills, experiences, and proper perception of future careers; use technology for occupational development; have morality and positive attitudes towards professions and understand general knowledge about legal forms of business and the registration of business.

Resources

- | | |
|------------|---|
| Required | <ul style="list-style-type: none">• A pink A.C. notebook (minimum A4 size)• Basic stationary (pen, pencil, eraser, ruler, sharpener etc.)• Extra stationary (glue stick, stapler, tape, liquid paper etc.)• AC Portfolio A4 with clear front cover |
| Suggested | <ul style="list-style-type: none">• Various colored pens / markers / highlighters / pencils |
| Occasional | <ul style="list-style-type: none">• Smart phones for research in class• USB thumb drives to save typed work onto• Materials potentially needed for special projects <p><i>The above will be requested a week in advance of use</i></p> |



Academic Integrity Policy

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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 (sketch book, basic stationary, materials, ingredients etc.) and to actively participate throughout the lesson until class is dismissed.

Behavior and participation is monitored during every class and points are deducted for misbehavior, non-participation or disruption to the class. This is averaged throughout the semester and calculated as a score of 10 at the end of semester.

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

- Possess discipline
- Be an AC gentleman
- Be honest and upright
- Be eager to learn
- Be dedicated to work
- Have a sense of public-consciousness
-

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 check schoology for the content of the lectures and the in-class assignments and homework and project assignments.

Homework & Class Work

Homework and class work will be assigned often, must be completed to a high standard and be submitted on or before the due date. Late assignments are subject to 50% less marks for each week they are late. All missed assignments will receive a zero and will dramatically reduce the averaged class work and homework scores of the individual.



Grading

This course follows to the Assumption College grading scale:

$Final\ Score \geq 80\%$	4.0	A
$75\% \leq Final\ Score < 80\%$	3.5	B+
$70\% \leq Final\ Score < 75\%$	3.0	B
$65\% \leq Final\ Score < 70\%$	2.5	C+
$60\% \leq Final\ Score < 65\%$	2.0	C
$55\% \leq Final\ Score < 60\%$	1.5	D+
$50\% \leq Final\ Score < 55\%$	1.0	D
$Final\ Score < 50\%$	0.0	F

Evaluation and Assessment

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

Behavior & Participation	10%	Affective Domain
Class Work	10%	Formative
Home Work	10%	Formative
Presentation	10%	Formative
Portfolio	10%	Formative
Team Work	10%	Formative
		50% Formative
Midterm Exam	20 %	Exams
Final Exam	20%	Exams

Recommendations for Success

1. Bring all the materials that are needed to complete projects on the day of class
2. Be creative and work hard for your own success and learning.
3. Don't be afraid to experiment and have fun studying
4. Plan projects carefully and have the required materials for your project
5. Keep your notebook tidy, attractive and up-to-date and submit work on time
6. Check schoology.com for assignments and course materials and grades



ST30247 Animal Physiology

Teacher Mr. Nicholas Crook

Contact General Office, 2nd Floor Colombet Bldg.
epacnic@gmail.com

Class Time EP-M 5/2H: Mon period 2&3; Wed period 4.

Credits 1.5

Course Description

Students will study the following topics: Functions responsible for gas exchange among sponge, hydra, planaria, earthworm, insect, fish, frog and bird, the structure of lung in mammals, the structure used for gas exchanging and the process of gas exchanging in humans, the functions of lung and the experiment to measure the air quantity of exhalation in humans, the process of cellular respiration in the conditions that oxygen supply is sufficient and insufficient, the open and closed blood circulatory system, the flowing direction of blood and the movement of blood cells in the fish tail, summary of the relationship between size of blood vein and speed of blood circulation, the structure and the functions of heart and blood vein in humans, heart structure of mammals, the direction of blood flow through human heart, blood circulation in humans, the difference of red blood cell, white blood cell, platelet and plasma, blood type and the principles of blood transfusion in ABO and Rh systems. Students will also study the components and the functions of lymph as well as the structure and functions of lymphatic vessel and lymph node, comparison of the mechanism of non-specific immunity with specific immunity, comparison of the active immunity with the passive immunity, immune system disorder that leads to AIDS, allergies and autoimmune disorders. Students will additionally learn about asexual and sexual reproduction in animals, structures and functions of male and female sexual organs, the process of spermatozoa production, egg cell creation and fertilization in human, the embryonic growth and post embryonic phase in frogs, chickens, and humans. The course will closely follow the order and content of the latest version of the American high school textbook *Biology*, by Pearson. The course is prerequisite to ST30256 Universal Biology 1.

Textbook

A, As level Biology, by Oxford 2021 (ISBN-13: 978-0-328-92512-4)

Course Outline, Objectives and Indicators.

Part 1: Respiration and Systems. (Chapters 3, 7 and 8)

- Search data, explain and compare the structure that is responsible for gas exchange among sponge, hydra, planaria, earthworm, insect, fish, frog and bird. (1)
- Observe and explain about the structure of lung in mammals. (2)
- Search for information and explain about the structure used for gas exchanging and the process of gas exchanging in humans. (3)
- Explain about the functions of lung and conduct an experiment on measuring the air quantity of exhalation in humans. (4)



- Explain, compare and summarize the process of cellular respiration in the conditions that oxygen supply is sufficient and insufficient. (5)
- Search data, explain and compare the open blood circulatory system with the closed blood circulatory system. (6)
- Observe, and explain about the flowing direction of blood and the movement of blood cell in the fish tail and summarize the relationship between size of blood vein and speed of blood circulation. (7)
- Explain about the structure and the functions of heart and blood vein in humans. (8)
- Observe and explain heart structure of mammals, the direction of blood flow through human heart and draw a diagram to present blood circulation in humans. (9)
- Search data, identify the difference of red blood cell, white blood cell, platelet and plasma. (10)
- Explain about blood type and the principles of blood transfusion in ABO and Rh systems. (11)
- Explain and make a conclusion on the components and the functions of lymph as well as the structure and functions of lymphatic vessel and lymph node. (12)
- Search data, explain and compare the mechanism of non-specific immunity with specific immunity. (13)
- Search data, explain and compare the active immunity with the passive immunity. (14)
- Search data and explain about the immune system disorder leading consequently to AIDS, allergies and autoimmune disorders. (15)

End of Midterm Exam Content – Start of Final Exam Content

Part 2: Reproduction and Growth. (Chapters 7 and 8)

- Search data, explain and give examples of the asexual reproduction and the sexual reproduction in animals. (16)
- Search data and explain about the structures and functions of male and female sexual organs. (17)
- Explain about the process of spermatozoa production, egg cell creation and fertilization in humans. (18)
- Explain about the embryonic growth and post embryonic phase in frogs, chickens, and humans. (19)
- Learn, and develop the learning skills that address the needs in the 21st century. (20)

Resources

- | | |
|-----------|--|
| Required | <ul style="list-style-type: none">• Plastic Folder for F. Biology only (to keep handouts, etc.)• 2 notebooks (white and pink) |
| Suggested | <ul style="list-style-type: none">• Many different colored pens/markers/highlighters• Electronic Thai-English translator (not a phone-based application)• Ruler• Glue stick, stapler, or tape |



Academic Integrity Policy

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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 (textbook, plastic folder for handouts, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.

A behavior score (out of 3 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*:

- 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. No late assignments will be accepted unless the student is absent the day the assigned work is due. If a student is absent the day an assignment is due, the assigned work will be due at the beginning of the following class. Remember- it is the student's responsibility to remember what and when assignments are due.



Grading

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:

Homework/Classwork	45%
Quizzes	5%
Behavior	10% (program mandated)
Midterm (Summative) Exam	20% (program mandated)
Final Exam	20% (program mandated)

Recommendations for Success

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

1. Read, read, read the *Biology*, by Pearson 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 biology 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.



ST30293 Health Science

Teacher: Mr. Grant Shorten

Contact: Teachers Room, 2nd Floor Colombet Building.
grant.sh@assumption.ac.th

Class Time: EP-M5/2H

Credits: 1

Course Description

The M5 Health Science course offers an advanced exploration of key health topics including hormones, communicable diseases, and non-communicable diseases. This course is designed to deepen students' understanding of how hormonal systems regulate the body, the mechanisms of disease transmission, and the global rise of chronic health conditions. Through an integrated approach, students will gain valuable insights into disease prevention, health management, and the interplay between biological and environmental factors that impact public health.

Textbook

No Textbook

External Resources

Course Outline & Objectives

1. Hormones:

- Investigate the function of hormones and their role in regulating vital processes such as metabolism, growth, and reproduction.
- Study the endocrine system and how hormonal imbalances contribute to disorders like diabetes, thyroid conditions, and hormonal cancers.
- Explore how hormones influence mood, stress responses, and overall mental well-being.

2. Communicable Diseases:

- Understand the causes and transmission methods of communicable diseases, including bacteria, viruses, and parasites.
- Study common and emerging infectious diseases such as influenza, HIV/AIDS, and COVID-19.
- Learn about strategies for disease prevention and control, including vaccinations, sanitation, and public health measures, as well as the role of global health organizations in managing outbreaks.

3. Non-Communicable Diseases:

- Examine the rise of non-communicable diseases (NCDs) such as heart disease, cancer, diabetes, and respiratory diseases, and their impact on global health.
- Explore the lifestyle factors and environmental contributors to NCDs, including diet, physical inactivity, and exposure to harmful substances.
- Learn about prevention strategies, early detection, and the role of health policies in managing and reducing the burden of NCDs on society.



Learning Outcomes:

By the end of the course, students will be able to:

- Understand the function and significance of hormones in maintaining health and identify hormonal disorders.
- Recognize how communicable diseases spread and apply knowledge of prevention and control methods.
- Analyse the risk factors, prevention, and management of non-communicable diseases on both individual and public health levels.

If you have questions about the class or your grade you can email me at:

grant.sh@assumption.ac.th

Resources Required

A plastic folder for worksheets.

White School Notebook

Black and blue pen

Ruler

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. 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.

Behavioural 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 (Notebooks, textbook, scientific calculator, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed.

Behaviour 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 behaviour 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 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
<i>75%</i> ≤ <i>Final Score</i> < 80%	3.5
<i>70%</i> ≤ <i>Final Score</i> < 75%	3.0
<i>65%</i> ≤ <i>Final Score</i> < 70%	2.5
<i>60%</i> ≤ <i>Final Score</i> < 65%	2.0
<i>55%</i> ≤ <i>Final Score</i> < 60%	1.5
<i>50%</i> ≤ <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:

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

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

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.

1. 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. Do **not** copy your classmates work; struggle through and do the work on your own! This is how you learn!
4. Come see the teacher outside of class time for assistance.
5. 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.
6. 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.



ST30106 Data Analytics Technology

Teacher Mr. Dave Thomas
Contact EP Computer Lab 5th Floor 2003 building
Class Time EP-M5/1-3
Credits 0.5

Course Description

This course is designed to use data analysis in a programming environment. The course will focus on introducing students to the general terminology and concepts of programming and use application of python as a tool capable of solving real world problems, and advanced python syntax. Students will build on knowledge from M3 computer programming to learn about more theoretical computer science topics (algorithms, data structures, abstraction, software design). Additionally students will learn how to use python to solve problems and learn practical use cases for python programming. Finally students will learn advanced python syntax not covered in M3 programming.

Additional skills will be taught in Excel as a method for data analysis in a business/scientific environment

Course Outline & Objectives

Topics include: [Indicator 1,2,3,4]

Topics
<ul style="list-style-type: none"> • Logic and set theory • Operators, assignment, precedence • Data operations • Advanced control flow • Functional programming • Algorithms and data structures • Problems solving and program design • Advanced Syntax • Formulas and graphs/charts in Excel

Resources

Required • EP Computer Lab

Academic Integrity Policy

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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. A behavior score (out of 10 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

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:

STEM	10%
Homework/Classwork	30%
Coursework	30%
Behavior	10% (program mandated)
Midterm Exam/Project	10% (program mandated)
Final Exam	10% (program mandated)



Recommendations for Success

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

1. Read, read, read the teacher's online notes. 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. Do **not** copy your classmates work; struggle through and do the work on your own! This is how you learn!
4. Come see the teacher outside of class time for assistance.
5. Do more than just the bare minimum; there are plenty of problems in the teacher's online notes. 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.
6. 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.



MA30103 **Foundation Mathematics 3**

Teacher Dr. Keerthi Prabhakar
Contact EP Teacher Room, 2nd Floor Colombet Bldg.
Keerthi.pr@assumption.ac.th

Class Time EP-M5/1: Tue, Period 3; Fri, Period 4
EP-M5/2: Wed, Period 1; Thu, Period 1
EP-M5/3: Mon, Period 2; Thu, Period 6

Credits 1.0

Course Description

This fundamental statistics course provides students with a comprehensive toolkit for data analysis and interpretation, crucial for research and decision-making across fields. Starting with data collection methods, students learn to gather accurate, relevant data, forming the basis for any analysis.

Basic data analysis introduces students to the organization and preliminary examination of data, setting the stage for deeper insights. Measures of central tendency—including the arithmetic mean, median, mode, harmonic mean, geometric mean, and mid-range—allow students to summarize data by identifying central values, while relative standing measures like quartiles, deciles, and percentiles enable comparisons within data sets. Students also explore measures of dispersion such as standard deviation and box-and-whisker plots, which reveal data variability and outliers. Standard deviation is particularly emphasized for understanding the spread of data around the mean. This leads into the study of the normal distribution, a foundational concept in statistics that describes how data naturally clusters around the mean, with applications in natural and social sciences.

Finally, students delve into correlation, which assesses the relationship between variables, providing insight into how changes in one variable might predict or impact changes in another. Altogether, this course equips students with statistical methods to analyze, interpret, and communicate data findings effectively, preparing them for data-driven roles in research, business, healthcare, and beyond.

Textbook / Worksheets

Mathematics for the International Student: Mathematics SL, 3rd Edition

Teacher will also provide handouts

Course Outline & Objectives

Unit	Topic
1	Fundamental Statistics
	1. Data collection
	2. Basic data analysis
	3. Finding central tendency by using arithmetic means, median, mode*, harmonic mean, geometric mean, and mid-range
	4. Finding relative standing by using quartile, deciles, and percentile
	5. Measures of dispersion by using standard deviation
	6. Measures of dispersion by using box-and-whisker plots
	7. Standard Deviation
	8. Normal Distribution
9. Correlation	



Resources

- Required
- Scientific calculator (not a phone-based application)
 - Ruler
 - Glue stick, stapler, or tape
- Suggested
- Many different coloured pens/markers/highlighters
 - Electronic Thai-English translator (not a phone-based application)

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 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.

Behavioural Expectations

For the sake of all the class members, 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 participate throughout the lesson until class is dismissed actively.

Behaviour is monitored daily per the class rules set out at the beginning of the academic year (see the front of your notebooks). Students earn the scores they receive. 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*:

- 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. Students are expected to catch up on all missed work outside class time. Unexcused absences or tardiness will not be tolerated. In the case of planned absences, please notify the teacher as soon as possible.



Homework & Classwork

Homework and classwork will be assigned often and must be submitted on or before the due date. If the work is not done by the start of class, a maximum score of 15 will be possible. All late or missed assignments not turned in *before* the last week of the term will receive a zero.

Grading

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:

Quiz & Projects	20%
Home/class work	20%
Affective Domains (Behavior)	10% (program mandated)
STEM	10% (program mandated)
Midterm (Summative) Exam	20% (program mandated)
Final Exam	20% (program mandated)

Recommendations for Success

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

1. Read, read, read the course textbook. Reading the text once is often insufficient, even for native English speakers. 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. Search online, in either Thai or English, if you don't understand a topic discussed in class or to better understand the topic.
3. Get a Thai language introductory mathematics book.
4. Get a math and physics tutor. The tutor should be helping you learn, not doing the work for you!
5. Do **not** copy your classmate's work; struggle through and do the work on your own! This is how you learn!
6. See the teacher outside of class time for assistance.



THE **ENGLISH PROGRAM** AT ASSUMPTION COLLEGE
Mathematics Department
Course Syllabus – Semester 1/2026

7. Do more than just the bare minimum; the textbook has plenty of problems. 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.
8. 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: EP5 English for Life Skills 3: EN30243

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

COURSE DESCRIPTION:

Welcome to English for Life Skills M5! 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.4. Talk and write interactively about personal information and other surrounding incidents, experiences, situations, news/events, and interesting issues in public attention, and communicate continuously and properly.

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

- | | |
|-----------|---|
| Required | <input type="checkbox"/> At least 1 white notebook. |
| | <input type="checkbox"/> Dictionary (English to English, not a translating one) |
| | <input type="checkbox"/> Extra lines A4 paper for written assignments. |
| Suggested | <input type="checkbox"/> Many different colored pens/markers/highlighters |

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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 (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

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 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

This course follows to the Assumption College grading scale:

<i>Final Score</i> $\geq 80\%$	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:

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

Recommendations for Success

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.

Parent/Guardian Acknowledgement

Dear Parent/Guardian:

Please sign below to acknowledge that you have reviewed this course syllabus with your son. Thank you. I look forward to teaching your son this year!

Student's Name

Student's ID No.

Parent/Guardian Signature

Date