



## EN22102 Foundation English 4

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**Teacher** Mr. Nathan Hunter  
**Contact** EP Teacher Room, 3<sup>rd</sup> Floor Colombet Bldg.  
[Nathan.hu@assumption.ac.th](mailto:Nathan.hu@assumption.ac.th)

**Credits** 1.5

### Course Description

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The Foundation English Course focuses on the skills of reading, writing with correct grammar. In semester 2 M2 students will continue using the two books from the first semester. By the end of the year the students should also be able to write a short essay with more than one paragraph using appropriate vocabulary along with various types of sentences. Each chapter focuses on one particular topic and applies writing skills towards this topic. Each week will have a specific grammar skill to focus on. Students will be given assignments from classwork exercises in the student book to doing homework in the workbook. A midterm will be given on week 10 of the course and a final exam on the 20<sup>th</sup> week. All classes will use Schoology to keep track of assignments and grades.

A second book called, “Strategic Reading 2” will be used. This book will aim at improving students reading ability and developing skills to help in different areas of study. We will include videos, vocabulary, and group work in using this book. Assignments for this book will usually be in the form of a KWL chart done in class and also on exercises text itself with a few assignments in the pink notebook.

Students will have a novel to read and book report to do. The novel we are reading is ‘the Shadow Cypher.

### TEXT BOOK:

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“Think 3, Student Book” Marcus C. Thompson  
ISBN-13: 978-981-48-2392-0

“Think 3, Workbook,” Marcus C. Thompson  
ISBN- 978-981-48-2395-1

“The Sign of Four” Macmillain Readers  
978-0-230-03521-8

“Where the Red Fern Grows,” by Wilson Rawls  
ISBN: 978-0-440-41267-0

### Resources

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- |          |   |
|----------|---|
| Required | <input type="checkbox"/> 2 notebooks.(Pink and White)                           |
|          | <input type="checkbox"/> Dictionary (English to English, not a translating one) |



- Access to the internet for quizlet, edmodo, and emails for grades
- Longman's Writing Series Book 2
- Strategic Reading Book 2 (Green Color)
- A clear folder for English to hold handouts and quizzes to study.

Suggested

- Many different colored pens/markers/highlighters

### **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 (notebooks, textbook, writing utensils, etc.) and to actively participate throughout the lesson until class is dismissed. Students will be given points for having the class materials ready for class on their desks.

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. Students scores will also be calculated weekly in giving points for behavior on occasion.

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 class work will be assigned often and must be submitted on or before the due date for a score of 20 % of the final grade. 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
$75\% \leq$ <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:

Reading Ability	5%
Writing	5%
Grammar	5%
Worksheets/Exercises	15%
Tests/Quizzes	20%
Behavior (Affective Domain)	10%
Midterm (Summative) Exam	20% (program mandated)
Final Exam	20%



Weeks:	Units/Content	Skills focus:	Reading:	Assignments:	Quizzes:
1-2	Think Book:  Unit 6: p. 56-66, Passive Voice  Novel: “Red Fern”  Sign of Four	Reading/Writing  Listening  Writing.  Reading	Think Book: (SB) p. 58-59  Think Book (WB) P. 60-61  Chapter 4-5 p. 20-51  Chapters 1-4	(SB) p.70-71 (WB) p. 54-55  Worksheet.  Summary/ Vocabulary  Points of Understanding	Quiz  Quiz
3-4	Think Book: Unit 9  Modals of the Past  Fictional Novel: “Red Fern”  Novel: A Sign of Four	Reading/Writing  Listening  Reading	Think Book: Unit 9 (SB) p. 89 (WB) p. 84  P. 88 “The Dress”  Where the Red Fern Grows Chp. 6-7  Chapters: 5-8	Summary  Points of Understanding	Quiz  Quiz
5-6	Using Semicolons and in lists and in sentences.  Novel: “Red Fern”  A Sign of Four	Reading/Writing  Reading  Reading	Notes.  Novel: “Where the Red Ferb Grows” Chapter 7-8  Chapters 9-12.	Worksheet  Summary  Vocabulary Worksheet Questions	Quiz  Quiz
Week 7-8	Adverbial Clauses/  Novel: “Where the Red Fern Grows”	Reading/Writing  Reading  Reading	Notes  Novel: Chapter 9-10 p. 102-116  Chapters 13-15	Worksheet  Summary  Vocabulary	Quiz  Quiz



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Course Syllabus – Semester 2/2025

	Novel: A Sign of Four			Short Summery	
9-10	Review Week	Reading Writing	No Reading	Catch up on previous assignments.	Midterm Review
Week 10	Midterm Exams				
11-12	Adjective Clauses  Novel: “Where the Red Fern Grows”	. Reading/Writing	Note	Worksheet  Chapter questions	Quiz
Week 13-14	Think Book  Novel: “Where the Red Fern Grows”	Listening  Reading  Reading	Think Book: (SB) p. 100 (WB) p. 96	Chapter Questions  Crossword Puzzle	Quiz
15-16	Reported Speech  Grammar: Colons  Supporting Sentences  Novel: “Red Fern”	Reading/Writing  Writing  Writing	Notes	Worksheets  Worksheets  Summary/ Vocabulary	Quiz   Quiz
17	Review for Midterm	Writing/Reading		Review Sheet for Midterm	
Week 18	Final Exam Week				



## **EN20216 M2 Supplemental English 16**

**Teacher** Mr. Paul Griffiths

**Contact** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.

paul.gr@assumption.ac.th

**Class Time** EP-M2 - Three Periods a Week for Each Class

### **Course Description**

This class will focus on improving skills in English, in particular reading, writing, listening and speaking. One of the primary goals of the course is to prepare students for the Cambridge PET English exam which we will sit during this semester.

### **Textbooks**

*Complete Preliminary 2<sup>nd</sup> edition – Student’s Book* - Cambridge Course  
book *Complete Preliminary 2<sup>nd</sup> edition - Workbook* - Cambridge Course  
book

**NOTE:** Week numbers in the following outline may change due to school schedule changes.

### **Course Outline & Objectives**

**Week 1 & 2** - Intensifiers (gradable, non-gradable, too and so) and modal verbs.

**Week 3 & 4 - Complete Preliminary Unit 6 – That’s Entertainment**

✓ Vocabulary – Types of shows /genres

✓ Grammar – Present Perfect with ‘just’, ‘already’ and ‘yet’

✓ PET Reading – Selecting Matching Events (*PET part 2*)

✓ PET Speaking – Making suggestions and reaching a conclusion

(*PET part 3 & 4*) **Week 5** – PET Writing Part 2 (writing a creative story)

**Week 6 & 7 - Complete Preliminary Unit 7 – Getting Around**

✓ Vocabulary – Weather Vocabulary

✓ Grammar – the future

✓ PET Reading – Short signs and messages (*PET reading part 1*)

✓ PET Listening – Long listening (*PET listening part 4*)

**Week 8 – Revision of Skills / Catch up on missed classes**

**Week 9-10 – Midterm Exams**

*Christmas / New Year break (week 11)*

**Week 12 – Speaking skills (PET Speaking parts 1-4)**

**Week 13-14 – PET Reading and Writing review (before PET exams)**

**Week 15-17 - Complete Preliminary Unit 8 – Influencers**

✓ Vocabulary – Phrasal verbs / Describing people

✓ Grammar – 0, 1<sup>st</sup> & 2<sup>nd</sup> conditionals / when, if &

unless ✓ PET Reading – Fill in the missing words

(*PET reading part 6*) ✓ PET Listening – Fill in the

missing words (*PET listening part 4*)



## **Week 18 – Revision of Skills and content / Catch up on missed classes Week 19 – Final Exams**

### **Resources**

- Required  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 semester.

### **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, 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:*
- 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 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.



### 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:

Formative Score	50% or less
Behavior	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

### 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.



## **MA22102 Foundation Mathematics 4**

**Teacher** Mr. Ryan Rogers

**Contact** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.  
ryan.ro@assumption.ac.th

**Class Time** EP-M2/1: Monday, period 7; Tuesday, period 7; Wednesday, period 5  
EP-M2/2: Monday, period 2; Tuesday, period 2; Friday, period 2  
EP-M2/3: Monday, period 5; Tuesday, period 3; Thursday, period 2

**Credits** 1.5

### **Course Description**

This foundation mathematics course focuses on the topics within algebra and geometry. These topics include the Pythagorean Theorem, surface area of a cylinder and prism, volume of a cylinder and prism, statistics, probability, and geometric transformations. This course enables students to learn and use mathematical skills and processes which include problem-solving, reasoning, communications, mathematical implication and presentation, mathematical connections, and creative thinking. Students are encouraged to have responsibility, discipline, self-confidence, and positive attitudes toward mathematics. The course closely follows the content of the Thai syllabus while also exposes students to questions and word problems from an international syllabus.

### **Textbook**

*Mastering Mathematics 2B, Aksorn Charoen Taet 2024*  
ISBN- 8858649136657 & ISBN- 8858649136664

### **Course Outline & Objectives**

#### **Pythagorean Theorem (Chapter 2)**

- ✓ Using the pythagorean theorem formula
- ✓ Using the converse of the pythagorean theorem

#### **Surface Area and Volume (Chapter 3)**

- ✓ Surface Area of a Prism
- ✓ Volume of a Prism
- ✓ Surface Area of a Cylinder
- ✓ Volume of a Cylinder

<b>End of Midterm Exam Content – Start of Final Exam Content</b>
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#### **Statistics (Chapter 4)**

- ✓ Basic Statistic Concepts
- ✓ Frequency Histograms
- ✓ Stem-and-Leaf Plot
- ✓ Central Tendency



- ✓ Probability

### **Geometry and Geometric Transformations** (*Chapter 5*)

- ✓ Geometric transformations
- ✓ Parallel transformations
- ✓ Reflection
- ✓ Rotation
- ✓ Fundamental knowledge of geometry

<b>End of Final Exam Content</b>
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### **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.

Behavior is monitored every class. At the end of the semester the points are accumulated and used for the student's behavior 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
- Have a sense of public consciousness
- Eager to learn
- Dedicated to work
- Proud to be Thai
- 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:

$Final\ Score \geq 80\%$	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:

Tests	20%
Quizzes	10%
Homework/Classwork	20%
Behavior	<u>10% (program mandated)</u>
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)



### **Recommendations for Success**

Mathematics can be difficult 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. 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. 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 simply to get a better understanding of the topic.
4. Do not copy the work of your classmates; try to struggle through on your own. This will help you learn.
5. Come 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 at least a few minutes every day.



## **MA20204 Universal Mathematics 4**

<b>Teacher</b>	Dr. Keerthi Prabhakar P.S.
<b>Contact</b>	EP Teacher Room, 2 <sup>nd</sup> Floor Colombet Bldg. epackeerthi@gmail.com
<b>Class Time</b>	EP-M2/1: Mon, period 5; Wed, period 4. EP-M2/2: Wed, period 1; Fri, period 3. EP-M2/3: Tue, period 1; Fri, period 2.
<b>Credits</b>	1.0

### **Course Description**

This universal mathematics course focuses on the topics of Algebraic Expressions, Quadratic Equations, Exponents, and Real Numbers and Surds. The course enables students to use mathematical skills and processes which are problem-solving, reasoning, communications, mathematical implication and presentation, mathematical connections, and creative thinking along with having systematic work, discipline, responsibilities, caution, self-confidence, and positive attitude toward mathematics.

### **Textbook**

*International GCSE MATHEMATICS Extended, Fearnley et Al* Oxford University Press 2016  
ISBN-978-0-19-837587-6

This book has been specially created for the Oxford AQA International GCSE Mathematics examination. It will be treated as the primary resource to be used to support our wider learning objectives.

### **Course Outline & Objectives**

#### **1. Algebraic Expressions (Review)**

- Expansion using Distributive law
- Factorisation

#### **Quadratic Equations**

- Solving Quadratic Equations using factorisation
- **Algebraic Fractions**
  - Multiplication of Algebraic Fractions
  - Division of Algebraic Fractions
  - L.C.M and H.C.F. of Algebraic Expressions
  - Addition and Subtraction of Algebraic Fractions
  - Equations Involving Algebraic Fractions
  - Practical Applications of Algebraic Fractions

#### **2. Exponents**

- Introduction
- Number 1 as Base and Power
- Laws of Exponents
- Laws of Exponents Applied to Negative Exponents



- Fractional Exponents
- Equations Involving Indices

### 3. Real Numbers

- Introduction
- Irrational Numbers
- Properties of Irrational Numbers
- **Surds**
  - Laws of Surds
  - Classification of Surds
  - Multiplication and Division of Surds
  - Standard form of a Mixed Surd
  - Addition and Subtraction of surds
  - Rationalising the Denominator
  - Rationalising a Binomial Surd

### Academic Integrity Policy

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### 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
$75\% \leq \textit{Final Score} < 80\%$	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:

Online	20%
Projects	10%
Homework/Classwork	20%
Behaviour	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

### Recommendations for Success

Mathematics can be difficult 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. 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.
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Course Syllabus - Semester 2/2025

4. Do not copy the work of your classmates; try to struggle through on your own. This will help you learn.
5. Come 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 at least a few minutes every day.



## MA20224 Supplemental Mathematics 4

**Teacher** Mr. Chris Won  
**Contact** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.  
**Class Time** EP-M2/1: Tues, Period 4  
 EP-M2/2: Tues, Period 1  
 EP-M2/3: Wed, Period 1  
**Credits** 0.5

### Course Description

This mathematics course focuses on the topics of square roots of real numbers and single variable quadratic equations. This course enables students to learn and use mathematical skills and processes which include problem-solving, reasoning, communications, mathematical implication and presentation, mathematical connections, and creative thinking. Students are encouraged to have responsibility, discipline, self-confidence, and positive attitudes toward mathematics. The course closely follows the content of the Thai syllabus while also exposes students to questions and word problems from an international syllabus.

### Textbook

*Haese, Michael, et al. Cambridge IGCSE International Mathematics (0607) Extended (2nd Edition). Haese Mathematics Pty, Limited, 2021. ISBN 978-1-925489-65-1*

### Course Outline & Objectives

Learning Units	Chapters from the textbook
<p><b>Square roots of real numbers</b></p> <p><b>1.1.</b> Find the square roots of real numbers</p> <p><b>1.2.</b> Calculate sum and differences of square roots of real numbers</p> <p><b>1.3.</b> Calculate product and quotient of square roots of real numbers</p> <p><b>1.4.</b> Radical conjugates</p>	<p><i>Chapter 8. Surds and other radicals</i></p>

### 2. Single variable quadratic equations

- 2.1. Solve quadratic equations by the factoring method
- 2.2. Solve quadratic equations by the quadratic formula
- 2.3. Solve word problems involving quadratic equations

*Chapter 23. Quadratic equations*

### Resources

- Google Classroom
- MyOpenMath



- A4 plastic portfolio (to keep all student work and handouts)
- A4 paper or notebook
- Ruler
- Writing supplies

### Academic Integrity Policy

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

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

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

### 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.

### Assignments & Projects

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 be subject to a penalty (deduction of marks).** Late homework 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:

Formative (Tests, Quizzes, Assignments)	50%
Behavior	10%
Midterm Exam	20%
Final Exam	20%

### Recommendations for Success

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

1. Read the provided course notes. You may need to read the material multiple times to understand. By reading along at home with the lessons taught at school, students will be able to responsibly manage the material and gain the most from the course.
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 simply to get a better understanding of the topic.
4. Do not copy the work of your classmates' work; try to struggle through on your own. This will help you learn.
5. Seek the teacher 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 daily.



## **ST20224 Supplemental Science 4**

**Contact:** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.

**Class Time:** EP-M 2/1: Wed period 7

EP-M 2/2: Tues period 4

EP-M 2/3: Wed period 4

**Credits:** 0.5

### **Course Description**

Study, research, tell, explain, practice, experiment and calculate about the use of basic science equipment, practices for science laboratory use; use and maintenance of microscopes and calculation of microscope magnification; simple experiments in relation to chemistry, biology and physics. Students will apply the scientific process: knowledge search, exploration, investigation, data research, data record, data classification, and discussion. They will acquire knowledge, ideas, and understanding and will be able to present and communicate what is learned. Students will also have the ability to make decisions and apply knowledge to everyday life. Scientific mind, ethics and morals, together with proper social values will be promoted. See course outline and objectives below.

### **Textbook**

Science Fusion - Module K: Introduction to Science and Technology, ISBN: 9780547589343

### **Course Outline & Objectives**

[Indicator 1 - 4]

UNIT 2: Measurement and Data [Indicator 1]

Lesson 1: Representing data – Weeks 1-3

- ✓ Understand tables, graphs and models.
- ✓ Explain the characteristics of graphs
- ✓ Define what is involved with scientific models
- ✓ Understand the importance of representing data correctly
- ✓ Visual Summary – Representing data

Lesson 2: Scientific Tools and Measurement [Indicator 3] – Week 4-5

- ✓ Understand how to use different measurement systems
- ✓ Explain what a measurement tool is used for.
- ✓ Differentiate between scientific tool and measurement tool.
- ✓ Understand the scientific tool uses.

✓ Visual Summary – Scientific Tools and Measurement

Lesson 3: Models and Simulations [Indicators 1] – Week 6 -7

- ✓ Understand the types of models.
- ✓ Describe different models and simulations.
- ✓ Explain where we use models and simulations.
- ✓ Difference between models and simulations
- ✓ Visual Summary – Models and simulations

### **Midterm Exam**

Using the Microscope: [Indicators Standard 3] – Week 11-13



- ✓ Explain how scientists use microscopes.
- ✓ Describe what microscopes do and how they get evidence.
- ✓ Understand how microscopes have changed over time.
- ✓ Visual Summary – Microscopes

Conducting experiments [Indicator 4]– Week 14 -15

- ✓ Explain how science experiments are to be conducted.
- ✓ Evaluate how bad experiments are done.
- ✓ Describe the different scientific experiments.
- ✓ Learn how to ask scientific questions and then test it.
- ✓ Explain how the different sciences use experiments
- ✓ Visual Summary – Conducting experiments.

Inquiry base project [Indicator 4] – Week 16 - 17

- ✓ Explore the scientific method by doing their own project.
- ✓ Test their project and make adjustments.
- ✓ Present their work to the class.
- ✓ Explain the process of the scientific method.
- ✓ Visual Summary – My project

## Final Exam

### Resources

- Required
- 1 notebook
  - 1 plastic folder for course materials
  - Science Text Book
  - Red and blue pen. Liquid paper. Pencils. Ruler
  - Internet -Schoology
  - Headphones
- Suggested
- Many different colored pens/markers/highlighters
  - Electronic Thai-Eng translator / calculator (phone-based application acceptable **after** teacher approval)

### 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 dishonestly 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 and to actively participate throughout the lesson until class is dismissed.

All students are given a full score for behavior (10 points) which must be maintained throughout the course of the subject. Any student whose behavior score slips below 5 points over the course of time will be referred to the discipline master.

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

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 will be assigned intermittently by the teacher. Any late work submitted may result in point's penalization. A student may request for more time to complete their homework which may or may not be granted by the subject teacher. This is granted at the discretion of the subject teacher.

### 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:

Class work & homework	10%
Labs and quiz's	10%
Essays and projects	20%
Notebook work	10%
Behavior (speaking in English / on task / punctual)	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

### Recommendations for Success

Don't play games or watch TV until your homework is done. Don't stay up late. You should be in bed at 9 pm so you can get a good night sleep. If you can't get a good 8 hours of sleep per night, it will affect both your attention span in class and your overall ability to learn.



**HP22103 Foundation Health Studies 4**

**Teacher:** Mr. Grant Shorten

**Contact:** Teachers Room, 2nd Floor Colombet Building.

grant.sh@assumption.ac.th

**Class Time:** EP-M2/1-3

**Credits:** 0.5

**Textbook**

McGraw Hill Teen Health Book

External Resources

**Resources Required**

- IPad or similar device
- White School Notebook
- Black and blue pen
- Pencil
- Ruler

**M2 Health Education – Semester 2 Syllabus**

**Unit 5: Nutrition, Food Choices & Consumer Health**

(Aligned with Thai Syllabus: Nutrition and Consumer Health)

Week	Topic	Objective	Activity	Glencoe Module
1	Basics of Nutrition	Identify food groups and nutrients	Food chart activity	8
2	Healthy Eating Habits	Explain balanced diet	Meal plan creation	8
3	Food Labels & Consumer Choices	Interpret nutrition labels	Label-reading workshop	11
4	Advertising & Food Choices	Evaluate media influence	Ad critique	slides
5	Unit Test + Project Submission	Assess knowledge	Test + Project	Unit Test

Practical Project (Teacher-Guided): 'Healthy Menu Design' – Students design a 3-day healthy meal plan with explanations.



**Unit 6: Mental Health, Stress & Coping Skills**

(Aligned with Thai Syllabus: Mental and Emotional Health)

Week	Topic	Objective	Activity	Glencoe Module
6	Understanding Emotions	Recognize emotions and responses	Emotion wheel activity	4
7	Stress Awareness	Identify causes of stress	Stress diary	4
8	Healthy Coping Strategies	Apply stress management skills	Breathing & relaxation exercises	4
9	Building Resilience	Develop problem-solving skills	Resilience role-play	4
10	Unit Test + Project Submission	Assess knowledge	Test + Project	Unit Test

Practical Project (Teacher-Guided): 'Stress Management Journal' – Students keep a 5-day log of stress triggers and coping strategies.

**Unit 7: Community Health & Environment**

(Aligned with Thai Syllabus: Community and Environmental Health)

Week	Topic	Objective	Activity	Glencoe Module
11	Community Health Basics	Explain importance of community health	Class discussion	17,19,slides
12	Environmental Health Issues	Recognize pollution and waste issues	Case study	17,19,slides
13	Disease Prevention in Community	Discuss public health practices	Poster design	17,19,slides
14	Health Services Awareness	Identify local health resources	Research project	17,19,slides
15	Unit Test + Project Submission	Assess knowledge	Test + Project	Unit Test

Practical Project (Teacher-Guided): 'Community Clean-up Campaign Plan' – Students create a campaign idea for school or neighborhood.



**Unit 8: Substance Abuse & Decision-Making**

(Aligned with Thai Syllabus: Substance Abuse Prevention)

Week	Topic	Objective	Activity	Glencoe Module
16	Understanding Addictive Substances	Identify tobacco, alcohol, drugs	Brainstorm list	Own Slides. 13, 14, 15
17	Effects of Substance Abuse	Recognize health consequences	Video & reflection	Own Slides. 13, 14, 15
18	Decision-Making Skills	Practice refusal and decision-making	Role-play	Own Slides. 13, 14, 15
19	Peer Pressure & Risky Behavior	Evaluate real-life scenarios	Scenario debate	Own Slides. 13, 14, 15
20	Unit Test + Project Submission	Assess knowledge	Test + Project	Unit Test

Practical Project (Teacher-Guided): 'Substance Abuse Awareness Poster' – Students design a poster warning against drug or alcohol use.

**Academic Integrity Policy**

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

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Health 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. 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.



## ST20253 & ST20254 Computer for Education 3 & 4

**Teacher** Mr. Matt Harris

**Contact** Location: 5th Floor Computer Lab

**Class Time** EP-M 2/1: Tuesday 8:30 – 10:10  
EP-M 2/2: Thursday 12:10 - 13:50

**Credits** 1.0

### Course Description

Study basic knowledge of robots and robotics. Student centered learning using a STEM framework to create mobile robots. Explore how the mechanics of robots work and can be developed. Understand use of Pseudo-code and control flow charts in program planning stage, Investigate how robots can be programmed to interact and react to the environment and environmental changes. To study knowledge of how robots are used in the modern world as well as current and future impact of robotics on society. Use analytical and technological processes to create knowledge and understanding, communicative ability, thinking ability, ability to use technology and apply the knowledge to real-life situations with morality, ethics, endeavor, and studiousness.

### Course Outline & Objectives

Indicators

1. Discuss principles of operation, roles, and advantages of robots.
2. Explore knowledge of how to create and develop robots.
3. Explore knowledge of how to create and develop basic programs for robotics.

**Computer for Education 3 & 4** [Indicators 1, 2, 3]

<b>Data Communications &amp; Networking</b>
<p>Week 1-2: Number Systems for Computers</p> <ul style="list-style-type: none"> <li>• Binary number system</li> <li>• Floating point arithmetic</li> </ul> <p>Week 3-7: Networking</p> <ul style="list-style-type: none"> <li>• Physical</li> <li>• Network</li> <li>• Transport</li> <li>• Application</li> <li>• Client-server architecture</li> <li>• TCP/IP</li> <li>• Networks Topologies</li> </ul> <p><b>Midterm Exam (Week 8 and 9; Dec 15-23)</b></p> <p>Week 10-15: Web Technologies</p> <ul style="list-style-type: none"> <li>• JavaScript/ HTML/ CSS</li> <li>• Developer tools</li> </ul>



- Network/ Resource monitoring
- Databases

**Final Exam (Week 16; Feb 8–12)**

### **Resources**

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- |           |                   |
|-----------|-------------------|
| Required  | • EP Computer Lab |
| Suggested | • Headphones      |

### **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. 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**

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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 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:

STEAM	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.



## **ST22103 Technology and computer Science 2**

**Teacher** Mr. Dave Thomas

**Contact** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.

**Credits** 0.5

### **Course Description**

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Further study into intermediate level of knowledge of robots and robotics. Student centered learning using a STEM framework to create mobile robots and automatic mechanical systems. Explore how the mechanics of robots work and can be developed. Deeper understanding of the use of and development of international standard pseudo-code and control flow charts in program planning stage. Additional study into current effects of automation. Development of analytical and technological processes to create knowledge and understanding, communicative ability, thinking ability, ability to use technology and apply the knowledge to real-life situations with morality, ethics, endeavor, and studiousness.

### **Course Outline & Objectives**

#### **Indicators [1, 2, 3, 4, 5]**

Topics include:

#### **Roles and Operation of Robots [Indicator 1, 2]**

Numbering systems

Boolean logic

Algorithms to aid problem solving

#### **Creation and Development [Indicator 3,4,5]**

Advance constructions in robotics

Robotic appendages

Sensors: acting on and reacting to the environment

#### **Programming [Indicator 1,3,4,5]**

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Intermediate level programming

Variables-use in programming

Advancement of the concept of planning to program (pseudo-code and control flow,

Logical systems)

### **Resources**

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- Required
- EP Computer Lab
  - Robots

### **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. 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:

<i>Final Score</i> ≥ 80%	4.0
75% ≤ <i>Final Score</i> < 80%	3.5
70% ≤ <i>Final Score</i> < 75%	3.0
65% ≤ <i>Final Score</i> < 70%	2.5
60% ≤ <i>Final Score</i> < 65%	2.0
55% ≤ <i>Final Score</i> < 60%	1.5
50% ≤ <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:

STEM	10%
Homework/Classwork	10%
Quiz	10%
Coursework	20%
Behavior	10% (program mandated)
Midterm Exam/Project	20% (program mandated)
Final Exam	20% (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 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. 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.



## **ST21102 Foundation Science 2**

**Teacher:** Mr. James Harvey

**Contact:** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.

**Credits:** 1.5

**Classes:** EP-M2/1: Monday P4; Thursday P5; Friday P6  
EP-M2/2: Monday P5; Wednesday P4;  
EP-M2/3: Tuesday P2; Friday P7

### **Course Description**

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This comprehensive science course acts as an introduction to a broad range of science topics to form a solid foundation for future learning. This specific course will cover basic classical physics and the electromagnetic spectrum. It will then progress onto geography based topics, looking at soil, geological processes and the water cycle. The course will encourage students to use independent and critical thinking to address the themes as opposed to simple rote learning. It will prioritise understanding the concepts over simply memorizing them. The course a prerequisite to ST21103 Foundation Science.

### **Textbooks**

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*Science Fusion Holt McDougal – Sound & Light*

*Science Fusion Holt McDougal – Matter & Energy*

*Mathayom 2 Science Textbook by Pelangi*

### **Course Outline & Objectives**

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#### Unit 1: Force & Movement

Lesson 1: Introduction to Net Force [Indicator 14]

- Define net force/resultant force, introduce vectors and Newtons Laws of Physics

Lesson 2: Parallel & Non-Parallel Forces [Indicator 15]

- Compare and contrast parallel and non-parallel forces using real world examples, interactive activities

Lesson 3: Static & Moving Objects

- Students will compare & contrast the differences between forces acting on static and moving objects

Lesson 4-6: Lab based preparations and assignments

- Students will prepare a lab experiment based on net force and concepts of motion & complete assignments related to the topic

#### Unit 2: Electromagnetic Spectrum & Visible Light

Lesson 1: Introduction to the EM spectrum [Indicator 7]

- Students will be given a broad overview of the nature of EM waves & how this relates to visible light

Lesson 2: Interaction of Light/EM with Matter 1 [Indicators 1-6]

- Students will study how light interacts with matter and its impact on perceived colours

Lesson 3: Interaction of Light with Matter 2

- Further analysis of how light interacts with matter - students will look at case studies and learn about how the properties of light are affected by certain objects eg. scattering, slowing



Lesson 4: Mirrors & Lenses

- Students will study how mirrors and lenses work using real life examples such as microscopes and lasers

Lesson 5: Light in Biology

- Students will examine how organisms make use of light for vision, energy & communication.

End of Midterm Exam Content – Start of Final Exam Content
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Unit 3: Earth Science

Lesson 1: Layers of the Earth

- Students will study the structure of the planet

Lesson 2: Geological processes

- Students will learn how processes such as erosion take place and how these can shape the surface of the planet using case studies

Lesson 3-6: Energy Sources

- Students will look at and compare fossil fuels with renewables and where their respective sources of energy originate from
- There will be an assignment based upon the previous lessons

Unit 4: Soil & Water

Lesson 1: Examining the importance of soil and water

- Students will learn about how soil and water affect our lives and its importance.
- Introduce students to the science behind soil types and the water cycle

Lesson 2-4: Applying knowledge of soil and water

- Students will learn and apply their knowledge based on case studies and practical assignments

**Resources**

Required Workbook: *Mathayom 2 Science Workbook by Pelangi*

**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**

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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.

### **Assignments & Classwork**

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Assignments 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**

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The course follows 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**

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

Assignments/Classwork/Lab	30%
Quiz/Test	15%
Notebook	5%
Behavior	10% (program mandated)
Midterm (Summative) Exam	20% (program mandated)
Final Exam	20% (program mandated)



### **Recommendations for Success**

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1. Don't just read – you will only learn and understand if you write down, revise and APPLY the knowledge. Try to do so without the aid of AI – Your brain needs to be trained; if you let AI do the thinking for you, you will lose the ability to think!
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 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.



## **ST20204 Universal Science 2**

**Teacher:** Mr. James Harvey

**Contact:** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.

**Credits:** 1.5

**Classes:** EP-M2/1: Tuesday P5; Wednesday P1;

EP-M2/2: Monday P1; Tuesday P3;

EP-M2/3: Tuesday P6; Wednesday P7

### **Course Description**

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This comprehensive science course acts as an introduction to a broad range of science topics to form a solid foundation for future learning; it is run side-by-side with the Foundation Science Course. This specific course will cover essential chemistry concepts that can be applied to everyday examples & lead into the collection and analysis of data. It will then progress onto nutritional sciences and biotechnology giving an in depth understanding of the science behind common biological processes and observations. The course will encourage students to use independent and critical thinking to address the themes as opposed to simple rote learning. It will prioritise understanding the concepts over simply memorizing them. The course a prerequisite to ST20205 Universal Science.

### **Textbooks**

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*Science Fusion Holt McDougal – The Human Body*

*Science Fusion Holt McDougal – Matter & Energy*

### **Course Outline & Objectives**

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#### Unit 1: Everyday Chemistry

##### Lesson 1: Properties of Everyday Chemicals

- Students will learn a broad overview of the properties and structures of metals, acids, water, oxygen and carbonates.

##### Lesson 2: Handling of Dangerous Chemicals

- Students will learn what dangers we need to be aware of and how to handle these chemicals in the lab.

##### Lesson 3: Reactions 1

- Students will learn about how metals react with water and oxygen

##### Lesson 4: Reactions 2

- Students will learn how acids react with metals and carbonate compounds

##### Lesson 5-8: Lab & Assignments

- The topic will be reinforced through practical lab work and demonstrations
- Students will apply what they have learnt in lesson to complete the laboratory assignment

#### Unit 2: Working with Scientific Data & Problem Solving

##### Lesson 1: Introduction to Scientific Data

- Students will be given an overview of why research is carried out, how it is carried out and the data that can be collected.



Lesson 2: Collection & Analysis of Scientific Data

- Students will design and perform research in class to produce data then process it

Lesson 3-5: Presentation & Analysis of Scientific Data

- Students will learn how to present & question research; we will look at topics such as bias, replicability and correlation vs causation

End of Midterm Exam Content – Start of Final Exam Content
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Unit 3: Nutrition & Addictive Substances

Lesson 1: Basics of Nutrition

- Students will learn about the main nutrient groups and their roles within the body
- Students will explore healthy and unhealthy habits and why they are denoted as such

Lesson 2: Addictive Substances

- Students will study the mechanism of addiction both psychologically and physically
- We will explore specific case studies and their method of addiction

Lesson 3-5: Assignment

- Students will complete an assignment based upon what they have learnt in class regarding addictive substances, their mechanisms and the dangers they can pose

Unit 4: Comparative Biology & biotechnology

Lesson 1-2: Comparative Biology

- Students will compare human body systems to animals in order to understand the concept of evolution and adaptation
- Students will use real life case studies to gain an understanding of how our bodies differ or equate to other animals

Lesson 3: Introduction to Biotechnology

- Students will be introduced to the concept of biotechnology, its core principles and chosen examples of its usage

Lesson 4-6: Applied Biotechnology

- Further examples of biotechnology will be explored in-depth
- Students will complete an assignment based on their case studies to strengthen and broaden their understanding of the topic.

### **Resources**

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