



## MA21102 Foundation Mathematics 2

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<b>Teacher</b>	Mrs. Suphak Keereepart
<b>Contact</b>	EP Teacher Room, 2 <sup>nd</sup> Floor Colombet Bldg. skeereepart@gmail.com
<b>Class Time</b>	EP-M1/1: TBD EP-M1/2: TBD EP-M1/3: TBD
<b>Credits</b>	1.5

### Course Description

This foundation mathematics course focuses on the topics of decimals, fractions, ordered pairs and graphs. 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, disciplines, responsibilities, caution, self-confidence, and positive attitude toward mathematics.

### Textbook

*Mastering Mathematics 1A & 1B, Aksorn Charoen Taet 2020*  
ISBN- 8858649136657 & ISBN- 8858649136664

*New Mathematics Counts, 2<sup>nd</sup> Edition, Singapore 2007*  
ISBN- 978-981-01-6418-8

### Course Outline & Objectives

#### Decimals and Fractions

- ✓ Decimal and comparing decimals
- ✓ Fractions and comparing fractions
- ✓ Add, subtract, multiply and divide decimals and fractions
- ✓ Problem solving decimals and fractions
- ✓ Connecting the relationship between decimals and fractions

#### Ratios and percentages

- ✓ Add, subtract, multiply and divide ratios
- ✓ Equivalent ratio
- ✓ Proportions
- ✓ Percentages
- ✓ Word problems on percentages

<b>End of Midterm Exam Content – Start of Final Exam Content</b>
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#### Ordered pairs and graphs

- ✓ Ordered pairs and graph the ordered pair
- ✓ Using Cartesian Coordinates System to plot ordered pairs
- ✓ Graphing of Linear Relationships



- ✓ Graphing of Linear Equations in two variables
- ✓ Real-Life Application of equations in two variables

### **Linear equations with one variable**

- ✓ Patterns and relationships
- ✓ Answer to linear equation with one variable
- ✓ Solve linear equations with one variable
- ✓ Word problems on linear equations with one variable

### **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**

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:

$Final\ Score \geq 80\%$	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:

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.
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.



## MA20202 Universal Mathematics 2

**Teacher** Mr. Chris Won  
**Contact** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.  
**Class Time** EP-M.1/1: Mon, period 1; Fri, period 6  
 EP-M.1/2: Mon, period 3; Wed, period 6  
 EP-M.1/3: Tues, period 3; Thurs, period 3  
**Credits** 1.0

### Course Description

This mathematics course focuses on the topics of basic algebra, algebraic equations, properties of triangles, properties of quadrilaterals, and basic geometric constructions. 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
<b>1. Basic Algebra</b> <ol style="list-style-type: none"> <li>1. Algebraic expressions</li> <li>2. Evaluation of algebraic expressions</li> <li>3. Addition and Subtraction of algebraic expressions</li> <li>4. Rules for simplification of algebraic expressions</li> </ol>	<b>Chapter 1. Exponents</b> <b>Chapter 2. Algebra: Expansion</b>
<b>2. Algebraic Equations</b> <ol style="list-style-type: none"> <li>1. Solving simple equation</li> <li>2. Equations involving fractional and decimal coefficients</li> <li>3. Problem solving with algebra</li> </ol>	<b>Chapter 5. Algebra: Linear Equations</b>
<b>3. Properties of Triangles</b> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Interior and exterior of a triangle</li> <li>3. Types of triangles</li> <li>4. Properties of a triangle</li> </ol>	<b>Chapter 7. Angles and Polygons</b>
<b>4. Properties of Quadrilaterals</b> <ol style="list-style-type: none"> <li>1. Quadrilaterals</li> <li>2. Interior and exterior of a quadrilaterals</li> <li>3. Types and properties of quadrilaterals</li> </ol>	<b>Chapter 7. Angles and Polygons</b>
<b>5. Basic Geometric Constructions</b> <ol style="list-style-type: none"> <li>1. Construction of line segments</li> <li>2. Construction of angles</li> <li>3. Construction of perpendicular and parallel line</li> <li>4. Construction of a circle</li> </ol>	<i>Not covered in the textbook</i> <i>Use teacher's notes</i>



## 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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## 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
- 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.



### 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:

$Final\ Score \geq 80\%$	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:

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.



## EN20214 M1 Supplemental English

**Teacher:** Mr Jonas Godson  
**Contact:** EP Teacher Room, 2<sup>nd</sup> floor Colombet Building  
jonas.go@assumption.ac.th

**Class Time:** EP – M1/1-3 Three periods per week each class  
**Credits:** 1.5

### Course Description

This class will focus on improving the fundamental skills in English, in particular - reading, writing, listening and speaking. The students will embark on a journey beyond the traditional boundaries between exam preparation and real-world language with the Open World Key textbook. Each unit in the Student's Book explores a different topic, allowing students to build up their confidence as they acquire the language and skills needed for everyday English situations as well as exams. A unique exam journey maximizes students' performance, providing a systematic route to exam success. The Workbook consolidates and extends the language and exam skills covered in the Open World Student's Book and includes downloadable audio for the listening activities.

### Textbook

Open World A2 Key Cambridge Course book

### Course Outline & Objectives

#### **Week 1 & 2 – Open World Unit 6: Time for food**

- Vocabulary – Countable and uncountable food nouns
- Grammar – Quantifiers: a little, a few, a lot of, how many, how much
- Writing – Writing a recipe

#### **Week 3 & 4 – Open World Unit 7: Live life!**

- Reading and discussion – Travel and hobbies
- Vocabulary – Free time interests and hobbies
- Grammar – Using the Present Perfect tense to talk about experiences

#### **Week 5 & 6 - Open World Unit 8: Feels Like Home**

- Vocabulary – Where people live, rooms in the house, types of furniture
- Grammar – Present perfect with for, since, already, yet, vs. past simple
- Writing – Writing an email about changes made in life

#### **Week 7 & 8 – Revision of skills and content / Catch up on missed work**

#### **Week 9 & 10 – Midterm exam period**

#### **Week 11 & 12 – Open World Unit 9: Getting Along**

- Reading – Leaving home for the first time
- Vocabulary – Feelings and emotions
- Grammar – Verbs / Adjectives + to + infinitive, verbs + ing
- Writing – Giving advice



**Week 13 & 14 – Open World Unit 10: Out and About**

- Vocabulary – Places in a town, giving directions
- Grammar – Will/May/Might and Shall for offers & promises
- Writing – A thank you email

**Week 15 & 16 - Open World Unit 11: Saving and Spending**

- Vocabulary – words and phrases associated with shopping, spending & saving.
- Grammar – Present continuous for fixed plans, schedules and timetables using the present simple, Going-to for intentions.
- Writing – Review of a department store

**Week 17 & 18 - Revision of skills and content / Catch up on missed assignments**

**Week 19 & 20 – Final Exam period**

**Resources**

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Required 1 notebook (1 white notebook)

- Folder for English only (to keep hand-outs, etc.)
- Textbook + 2 novels
- 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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**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 (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**

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

### **Homework & Classwork**

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Homework and classwork will be assigned often and must be submitted on or before the due date. 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**

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This course follows to the Assumption College grading scale:

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

### **Evaluation and Assessment**

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

Formative 1	25%
Formative 2	25%
Behavior	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

### **Recommendations for Success**

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

1. 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.



## Foundation English EN21101

**Teacher** Mr. Nathan Hunter  
**Contact** EP Teacher Room, 3<sup>rd</sup> Floor Colombet Bldg.  
[Nathanhunterm1m2english@yahoo.com](mailto:Nathanhunterm1m2english@yahoo.com)

**Credits** 1.5

### Course Description

The Foundation English Course focuses on the skills of Reading, Writing, Critical Thinking, and Vocabulary. In term one, M1 students will be using a two books for developing English Skills and three books for reading. The first two books will be a student book and a workbook designed to improve skills in grammar primarily, along with reading, writing, speaking, and listening skills. The second book will be a novel for them to read and improve their reading skills. By the end of the year the students should be able to write sentences and paragraphs with the correct grammar skills specified in each chapter. Students will be given assignments for each type of skill during the semester and in class assessments will include group work, using technology, and creative thinking to explore the unit's topics. Quizzes will be give throughout the year. This book will require students to do individual assignments in their pink notebooks and keep notes in their white notebooks.

This year our M1 students will be given the opportunity to use their ipads in the classroom along with the Smart Board. Students will share their work and upload assignments to Google Classroom for grading.

### TEXT BOOK:

“*Th!nk’ Better Learning 2* Cambridge Student Book  
(ISBN- 978- 1 -009 – 15194 – 8 )

“*Th!nk Better Learning, 2*” Level 2 Cambridge, Workbook  
(ISBN- 978- 1 -008 – 78597 – 6)

“Knights of the Round Table” Stephen Colbourn  
(ISBN 978-0-230-03444-0)

“The Bicycle Spy,” Yona Zeldis McDonough  
(ISBN 9780545850957)

### Resources

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|-----------|---|
| Required  | <ul style="list-style-type: none"><li>• 2 notebooks.(Pink and White)</li><li>• Access to the internet for quizlet, edmodo, and Google Classroom for grades</li><li>• English Ahead Student book and Workook 1</li><li>• Strategic Reading Book 1 (Orange Color)</li><li>• Charlie and the Chocolate Factory</li></ul> |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pens/markers/highlighters</li></ul>  |



### **Academic Integrity Policy**

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### **Behavioral Expectations**

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

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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.

### **Grading**

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Down below is a table that will show you how the grades are combined for your son's score. Homework will be given in the form of writing assignments, reading assignments, classwork, and quizzes. Work will be assigned often and must be submitted on or before the due date for a score of 40 % of the final grade. 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.



The chapters and content on the syllabi are what we will seek to cover. It is possible that some of the content may change given time and how fast we cover the material.

## **STEM**

10% of the Students grade will be their grade in STEM. They will be expected to work in groups and participate in the activities. It is important for students to listen carefully to instructions and work together in their STEM class for them to get the work finished on time and produce a good final project. Their homeroom will be assigned a STEM teacher to help them with the project.

## **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**

Grades will be kept up to date on the website called ‘Google Classroom.’ All students will sign up and be able to log in to see their grade and what work they have not turned in. This will also provide them with the latest score for their students work. Parents are able to also log in with their own account to see their student’s grade. Go to Google Classroom.com and sign up as a parent.

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

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



Please use the following suggestions:

1. Read, read, read and read. The best way to learn English is to read literature. It helps with nearly every aspect of English. The best students are always the ones who *enjoy* reading. Find a book you like and keep at it. A little everyday is a good way to start.
2. Watching American movies or TV shows with the English subtitles is a good way to improve your speaking and listening skills; it also helps with vocabulary too. When you come across a new word, just pause the movie and write it down in your vocabulary book.
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. 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.
7. If you don't understand, ask! Communication is vital for success in English.

	Content	Skill	Reading:	Assignments:	
1-2	Google Classroom  Relative Clauses/Relative Pronouns  The Bicycle Spy  Knights of the Round Table	Technology  Writing  Reading.  Reading	No Reading  N/A  Notes in Class  "The Bicycle Spy" Chapter 5-6  Chapter 1-4	Upload Picture to Google Classroom  Google Classroom Quiz  Writing a Summary  Questions for Understanding. P. 81 Chapter 1-4, p. 89 (1-20)	Google Classroom Quiz
3-4	Grammar  Think 2 (SB) Think 2 (SB)/(WB)  Novel: The Bicycle Spy: Chapter 7-8	Comparatives and Contrasts.  Present Perfect/Past Simple	Bicycle Spy: P. 69-89	Quiz on Google Classroom  Chapter Summaries.	Google Classroom Quiz



	Reading	Knights of the Round Table	Chapters 5-8	Questions for Understanding. P. 81. P. 89 21-30	
5-6	Grammar  Reading  Novel: The Bicycle Spy Chapter	2 <sup>nd</sup> Conditional  Knights of the Round Table  Reading	Notes/Worksheet  Chapters 9-13  Bicycle Spy: Chapters 9-10; P. 90-119	Writing Sentences  Points for Understanding  Google Classroom Quiz:	
Weeks:		Skills focused	Reading:	Assignments:	Quizzes:
7-8	Grammar: Verb Tenses  Novel: The Bicycle Spy: Chapter 11-12	Past Simple/Past Continuous  Reading	Bicycle Spy: Chapters 11-12; p. 120-139	Think: (SB) p. 76 (WB) p. 74	Google Classroom Quiz
9-10	Review Week: Week 9 Exam Week: Week 10	Reading/Writing, Speaking	Review of Notes.	No Assignments	
11-12	Grammar  The Bicycle Spy:  Chapter 13-14	Using Apostrophe's  Reading	Notes  The Bicycle Spy: 13-14; p. 140-166.	Assignments	Google Classroom Quiz  Google Classroom Quiz



13-14	<p>Commas and Periods</p> <p>Adverbs of Time</p> <p>The Bicycle Spy Chapter 15-16</p>	<p>Notes in class</p> <p>Writing</p> <p>Writing</p>	<p>Worksheets in class.</p> <p>Th!nk Book (SB)</p> <p>Th!nk Book (WB)</p> <p>Notes in class.</p> <p>The Bicycle Spy: Chapter: 15-16; p. 167-176</p>	<p>Worksheet Assignment.</p> <p>Worksheet</p> <p>Summary of Chapters 15-16</p>	<p>Google Classroom Quiz</p>
15-16	<p>Past Perfect Tenses:</p> <p>Listening Activity</p>	<p>Writing</p> <p>Listening</p> <p>Reading</p> <p>Reading</p>	<p>Notes in class</p>	<p>Writing Assignment</p>	
17-18	<p>Review for the Final Exam.</p>		<p>Students will review for the exam and take the final exam for the year.</p>		



## ST21102 Foundation Science 2

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

**Credits:** 1.5

**Classes:** EP-M1/1: Wednesday Period 6, Thursday Period 1, Friday Period 5  
EP-M1/2: Monday Period 1, Tuesday Period 5, Wednesday Period 1  
EP-M1/3: Monday Period 5, Tuesday Period 7, Friday Period 3

### Course Description

This introductory science course focuses on Earth's water and atmosphere. Introducing water's importance, the courses will identify what the water cycle is. We'll then journey into Earth's atmosphere where we'll examine energy transfer and wind movement. Finally, we'll learn about weather and climate and focus on what influences weather, how to predict weather, how weather differs from climate, and how humans can reduce climate change. As with many courses within EP, critical thinking skills are emphasized over those of rote learning. The course will closely follow the order and content of the latest version of the American high school textbook *Earth's Water and Atmosphere*, by Holt McDougal. The course is a prerequisite to ST21103 Foundation Science.

### Textbook

*Earth's Water and Atmosphere*, Science Fusion Module F, Holt McDougal  
ISBN: 978-0-547-58935-0

### Course Outline & Objectives

#### Unit 1: Earth's Water

##### Lesson 1: Water and Its Properties [Indicator 14]

- Explain water's importance to Earth's surface and weather, and to living organisms, including humans.
- Describe the structure and properties of water and describe the three states of water on Earth.

##### Lesson 2: The Water Cycle [Indicator 15]

- Define the water cycle.
- List the states of matter and describe how changes of state occur.
- Define and describe three ways that water reaches the atmosphere.
- Describe what happens to water after it falls to Earth.
- List and provide examples of two things that the water cycle transports.

#### Unit 3: Earth's Atmosphere

##### Lesson 1: The Atmosphere [Indicator 7]

- Define atmosphere and identify its main components.
- Define air pressure and describe how it changes with altitude.
- Explain why temperature changes as altitude increases.
- List the four main layers of the atmosphere and identify their properties.
- Describe how the atmosphere protects life and how it insulates the planet.





Lesson 2: Energy Transfer [Indicators 1-6]

- Describe what happens when objects at different temperatures come into contact.
- Identify the main source of energy on Earth's surface.
- Summarize the process of radiation, convection, and conduction and identify examples on Earth.

Lesson 3: Wind in the Atmosphere

- Explain why air moves and identify the source of energy that causes air movement.
- Illustrate how convection cells in Earth's atmosphere cause high- and low-pressure belts at the Earth's surface.
- List two factors that produce global winds.
- Define jet stream.
- Explain how difference in the way land and water absorb and release energy cause local winds, such as sea, land, and mountain breezes.

Unit 4: Weather and Climate

Lesson 1: Elements of Weather [Indicators 8, 16]

- Define weather and explain how temperature, humidity, precipitation, air pressure, wind direction and speed, and visibility relate to weather.
- Describe how temperature, humidity, precipitation, air pressure, wind direction and speed, and visibility are measured.
- Describe technology that is used in weather data collection.

End of Midterm Exam Content – Start of Final Exam Content
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Unit 4: Weather and Climate

Lesson 2: Clouds and Cloud Formation

- Explain what clouds are and why they are important to weather and climate.
- Describe dew point, how water droplets form, cooling processes, and solar energy's role in cloud formation.
- List two classifications of clouds and how they're formed.
- State what fog is and how it forms.

Lesson 3: What Influences Weather?

- Explain ways in which the water cycle influences weather.
- Define air mass and front and how they affect weather.
- Describe a cold front, warm front, and high-pressure/low-pressure systems.
- Define jet stream and explain how the polar jet stream influences weather.

Lesson 4: Severe Weather and Weather Safety [Indicators 9, 17-18]

- Define thunderstorm, hurricane, and tornado and describe how each is formed; describe the dangers and damaging effects of each.
- Explain how to prepare and protect against hazardous weather and overexposure to the sun's heat.

Lesson 5: Weather Maps and Weather Predictions [Indicators 10, 19]

- Distinguish meteorology from other sciences and describe weather forecasting.
- Explain how different forms of weather data are obtained.



- Describe data from satellites.
  - List types of weather maps, explain station models, and upper air charts.
- Lesson 6: Climate [Indicators 12, 20-21]
- Distinguish between climate and weather.
  - Identify two main factors that determine climate.
  - Explain how solar energy effects precipitation and winds.
  - Define environmental factors that affect climate.
  - Explain how climate zones relate to temperature.
- Lesson 7: Climate Change [Indicators 11, 13, 22]
- Describe climate change that is due to natural sources.
  - Explain how human activity has affected climate change.
  - Identify ways humans can reduce climate change.

### **Resources**

- Required
- Workbook: *Earth's Water and Atmosphere*, by Holt McDougal

### **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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Foundation Earth Stars & Universe 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**

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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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All students are encouraged to try the following:

1. Read, read, read the textbook at home. 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 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.



## **ST20202 Universal Science 2**

**Teacher:** Darlene Howe

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

**Class Time:** EP-M1/1 Monday period 2 and Wednesday period 3

EP-M1/2 Tuesday period 1 and Friday period 6

EP-M1/3 Wednesday period 7 and Thursday period 5

**Credits:** 2.0

### **Course Description**

This course focuses on the fundamental knowledge of science, including cell biology, evolution and the Theory of Natural Selection, taxonomy, microscopic organisms (e.g., bacteria, archaeans, protists), and an introduction to animal behavior. The course offers a conceptual foundation and real-world examples will be used in the classroom and lab to reinforce the learned concepts.

All concepts will be explored through the step-by-step process known as “The Scientific Method”: observation, hypothesis, prediction, testing, results analysis, and hypothesis modification. Concepts will be universally linked by modern humanity’s interactions with the environment. Lectures will cover environmental problems such as pollution, climate change, habitat destruction, overcrowding, and ozone depletion. Impacts on human health will also be explored. Case studies will be chosen from around the world, with special reference to Thailand and other parts of Asia.

Goals of instruction include: 1) learning how nature works; 2) understanding how humans interact with the environment; 3) finding ways to solve environmental problems; and 4) developing students’ critical thinking skills.

Main contents and teaching methodology will be lectures (70%), in-class discussion and workbook/worksheets (20%), and labs (10%).

### **Textbook and Reference Materials**

1. Science Fusion – The Diversity of Living Things. Holt McDougal. 2012.
2. Living in the Environment, 20<sup>th</sup> edition. Miller GT & Spoolman SE (authors). Brooks Cole (Publisher). 2019.

Supplementary:

- Selected published (open access) research articles.

### **Course Outline & Objectives**

#### **Unit 1 - Life over Time**

Lesson 1: Introduction to Living Things

- 5 Characteristics of Living Things
  - Growth
  - Cellularity
  - Metabolism
  - Reproduction
  - Responsiveness



- What do living things need to survive?

Lesson 2: Evolution and the Theory of Natural Selection

- Darwin's Voyage
- Influences on Darwin
- The Parts of Natural Selection
- Evolution – Change Over Time

Lesson 5: Classification of Living Things (Taxonomy)

- Reasons for classification
- How we classify (Phylogenetics and Binomial Nomenclature)
- 3 Domains (Bacteria, Archaea, Eukarya)

END OF MIDTERM EXAM CONTENT AND START OF FINAL EXAM

**Unit 2 – Earth's Organisms**

Lesson 1: Archaea, Bacteria, and Viruses

- Prokaryotes – reproduction and exchange of DNA
- Are viruses really living organisms?
- Viral replication

Lesson 2: Protists and Fungi

- Protists
  - Characteristics
  - Reproduction
  - Different types of protists
- Fungi
  - Characteristics
  - Reproduction
  - Types

S.T.E.M.: Evaluating Technological Systems

- Greenhouse Systems
- Case Study: Urban Gardens and Food Production

Lesson 5: Introduction to Animals

- Animals
  - Unity and Diversity of Characteristics
  - Different kinds of vertebrates

Lesson 6: Animal Behavior

- What is behavior and how does it develop?
- Survival Skills
  - Finding food
  - Defending resources
  - Avoiding danger
- Successful Reproduction
  - Courtship
  - Parenting
- Social Behavior
  - Living in groups
  - Communication

**Resources**

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Required: Workbook and some form of note taking apparatus (e.g., iPad, laptop, pen and paper)

### **Academic Integrity Policy**

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### **Behavioral Expectations**

For the sake of all 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 (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.

### **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**

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Applied Health Science follows to the Assumption College grading scale:

<i>Final Score</i> $\geq$ 80%	4.0
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$75\% \leq \textit{Final Score} < 80\%$	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
$\textit{Final Score} < 50\%$	0.0

### Evaluation and Assessment

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

Classwork	20%
Labs	20%
Assignments	10%
Behavior	10% (program mandated)
Midterm Exam	20% (program mandated)
Final Exam	20% (program mandated)

### Recommendations for Success

All students are encouraged to try the following:

1. Be punctual and present.
2. Pay attention.
3. Read the materials given. Oftentimes, reading them 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.
4. 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.
5. If the materials are available in Thai, it may be advantageous to obtain/use them.
6. Do **not** copy your classmate's work; struggle through and do the work on your own. This is how you learn.
7. Come see the teacher outside of class time for assistance.
8. Do more than just the bare minimum. "Do nothing, get nothing. Do something, get something."
9. Study the notes and vocabulary at least a few minutes every day.

## ST20222 Supplemental Science 2

**Teacher** Mr. Derrick Thompson (Mr. Derrick)  
**Contact** EP Science Lab Office, 2<sup>nd</sup> Floor Colombet Bldg.  
 thomponderrick30@gmail.com  
**Credits** 1.5





## **Course Description**

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This is a mostly hands-on course with a focus on problem solving and active learning. Students are presented with information and then given problems to solve. Experimentation using the scientific method is the main focus. Instead of telling the students what experiments to do, the teacher supports students as they design their own science experiments. Critical thinking skills are emphasized and students are encouraged to see the ‘Big Picture’ and apply the information that they learn to solve problems that face humanity.

## **Course Outline & Objectives**

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### **1. Scientific Experimentation**

- 1.1 Practices and Guidelines for Science Experiments
- 1.2 General Science Lab Equipment
- 1.3 Use of Equipment for Weighing and Measuring
- 1.4 Basic Lab Techniques
- 1.5 Use of Microscopes
- 1.6 Data Recording and Lab Reports

### **2. S.T.E.A.M. Project Prototype Completion and Group Presentation**

- 2.1 Prototype Building
- 2.2 Prototype Testing
- 2.3 Prototype Improvement
- 2.4 Group Presentations

End of Midterm Exam Content – Start of Final Exam Content
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### **3. Student-designed Experiments with Real-World Implications/Connections**

- 2.1 Student-directed Chemistry Experiments
- 2.2 Student-directed Biology Experiments
- 2.3 Student-directed Physics Experiments

## **Resources**

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|-----------|---|
| Required  | <ul style="list-style-type: none"><li>• At least 1 notebook (white or pink)</li><li>• Folder for Science only (to keep handouts, etc.)</li><li>• Ruler</li><li>• Glue stick and stapler</li></ul> |
| Suggested | <ul style="list-style-type: none"><li>• Many different colored pencils/highlighters</li><li>• A Matthayom-level science practice book in Thai</li></ul>   |

## **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 (2 notebooks, textbook, 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 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. 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 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:

Labwork	20%
Notebooks	20%
Behavior/Participation (Affective Domain)	10%
Quizzes	10%
Midterm Project/Exam	20%
Final Project/Exam	20%



### **Recommendations for Success**

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

1. Read the textbook and websites that the teacher recommends.
2. When studying, learning in the classroom and doing homework, always try to think about how the topic we are learning fits into the ‘Big Picture.’
3. Ask questions when you don’t understand. If you don’t understand something, there are likely other students who don’t understand as well. If you ask, then you will be helping those students as well. If you feel more confident asking a question in private, then you may do so.
4. **Do not copy** any work from anyone. This will damage your potential for thinking and being creative. It will also get you a zero. Don’t let other students copy your work either, as it will encourage your friends to be lazy and will harm them in the future.

### **HP21103 Foundation Health Studies 2**

**Teacher:** Mr. Grant Shorten

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

**Class Time:** EP-M1/1-3

**Credits:** 0.5



### **Course Description**

The M1 Foundation Health Studies course introduces students to fundamental health topics, focusing on nutrition, first aid, addictive substances, and the importance of exercise for overall well-being. This course provides essential knowledge and practical skills aimed at promoting a healthy lifestyle and preventing health issues. Students will gain a foundational understanding of how daily choices impact physical and mental health, setting the stage for further health studies.

### **Textbook**

Think Big Plus

External Resources

### **Course Outline & Objectives**

#### **1. Nutrition That Affects Health:**

- Learn about the essential nutrients required for the body's optimal functioning.
- Explore the relationship between diet and health, focusing on how poor nutrition can lead to diseases such as diabetes, heart disease, and obesity.
- Study how to create balanced meals and understand the role of food in energy, growth, and repair.

#### **2. First Aid and Moving a Patient:**

- Acquire the basic skills of first aid, including responding to common injuries and medical emergencies.
- Learn the techniques for safely moving a patient in different emergency situations.
- Understand how to assess situations and apply appropriate first-aid measures to stabilize individuals before professional help arrives.

#### **3. Addictive Substances:**

- Study the impact of addictive substances such as tobacco, alcohol, and drugs on physical and mental health.
- Understand the mechanisms of addiction and its social, psychological, and health-related consequences.
- Discuss strategies for preventing substance abuse and supporting those affected by addiction.

#### **4. Exercise for Health**

- Learn the role of physical activity in promoting health and preventing disease.
- Understand the benefits of different types of exercise, including cardiovascular fitness, strength training, and flexibility exercises.
- Develop personalized exercise plans to enhance fitness and well-being, taking into consideration age, health status, and personal goals.

### **Learning Outcomes:**

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

- Identify the role of nutrition in maintaining health and preventing disease.
- Apply basic first aid techniques and understand how to safely move patients in emergency situations.
- Understand the effects of addictive substances and strategies for prevention.



- Recognize the importance of regular physical exercise and develop tailored fitness plans for a healthy lifestyle.

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**

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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)

**ST21103 Technology and Computer Science 1**

**Teacher** Mr. Dave Thomas  
**Contact** EP Teacher Room, 6th Floor ,Colombet Bldg.

**Credits** 0.5



## **Course Description**

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To study and describe the meaning of technology, as well as demonstrate an understanding of Computer Hardware and Software.

To demonstrate an understanding of programming with robotics and identify basic programming and design concepts in the EV3 and Scratch Environment to produce movement and interaction with environment.

To create the project or improve the system with Engineering design process. Use materials, instruments and tools to solve problems properly and safely by using knowledge process, understanding, and problem-based learning which be able to apply, design, create, solve problems and use technology. Integrated in learning the desired characteristics: dedication in work, eagerness to learn, and responsibility.

## **Course Outline & Objectives**

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

### **Unit 1**

#### **Introduction to Robotics and the Mindstorms environment** [Indicators 1, 2]

- Communicating for problem details and problem solving
- Problem-Solving Process
- Pseudo Code and framework writing
- Basic mobility of Robots (EV3)
- Sensors for environmental interaction in Robotics (EV3)

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

#### Use of Scratch

- Introduction to Scratch
- Looping on Scratch
- Selection / Decision
- Loops and Conditions

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

#### **Hardware/Software**

- basic hardware of a computer system
- Software and its uses.
- Open source and alternative software models

### **Unit 4** [Indicators 4]

#### Make Information Technology Safe

- Threats of Information Technology
- The Use of Information Technology

## **Resources**

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- Required • EP Computer Lab

**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. 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





$70\% \leq \text{Final Score} < 75\%$	3.0
$65\% \leq \text{Final Score} < 70\%$	2.5
$60\% \leq \text{Final Score} < 65\%$	2.0
$55\% \leq \text{Final Score} < 60\%$	1.5
$50\% \leq \text{Final Score} < 55\%$	1.0
$\text{Final Score} < 50\%$	0.0

### **Evaluation and Assessment**

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

STEM	10%
Homework/Classwork	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.

## **ST20251 & ST20252 Computer for Education 1 & 2**

**Teacher** Mr. Matt Harris  
**Contact** Location: 5th Floor Computer Lab



**Class Time** EP-M 1/1: Tuesday 13:00 – 14:50  
EP-M 1/2: Wednesday 09:20 – 11:10  
**Credits** 1.0

**Course Description**

Study about evolution/roles of the internet, principles on searching for information on the internet, practice of searching for information, producing printing media such as postcards, report cover, portfolio cover, PR documents, and CD cover. Use in learning the practicing skills and analytical skills in order to acquire knowledge, understanding, ability to communicate, and ability to use technology. Integrated in learning the desired characteristics: honesty, public mindedness, determination in learning, and eagerness to learn.

**Course Outline & Objectives**

Topics include: [Indicator 1,2]

**Computer for Education 1 & 2** [Indicator 1, 2]

<b>Information Technology</b>
Week 1: Operating systems
Week 2: Microsoft Office
Week 3: Presentations
Week 4-5: Databases and data driven experiments
Week 6-7: Client/Server architecture
<b>Midterm Exam (Week 8 and 9; Dec 15-23)</b>
Week 10-12: Automation & Web Technologies
Week 13: Computer Crimes & Internet Security
Week 14-15: Hardware and Software
<b>Final Exam (Week 16; Feb 8–12)</b>

**Resources**

Required	<ul style="list-style-type: none"> <li>• EP Computer Lab</li> </ul>
Suggested	<ul style="list-style-type: none"> <li>• Headphones</li> </ul>

**Academic Integrity Policy**

Students are expected to adhere to the Assumption College student handbook. There is to be no plagiarism, no copying, and no cheating of any kind. These and any other acts of academic 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. 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:

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.



**MA20222 Supplemental Mathematics 2**

**Teacher** Dr. Keerthi Prabhakar  
**Contact** EP Teacher Room, 2<sup>nd</sup> Floor Colombet Bldg.  
 epackeerthi@gmail.com  
**Class Time** EP-M1/1: Tue, period 3  
 EP-M1/2: Mon, period 4  
 EP-M1/3: Tue, period 4

**Credits** 0.5

**Course Description**

This algebra course focuses on building fluency in algebraic notation, empowering students to express and solve mathematical relationships accurately. Beginning with an understanding of algebraic notation and the language of math, students learn to interpret and write expressions and equations that represent real-world and theoretical situations.

Through generalizing mathematics, students recognize patterns and formulate generalized expressions, which serves as a foundation for more advanced problem-solving. Collecting like terms simplifies expressions, making them easier to work with, while understanding the product and quotient of algebraic terms is key to manipulating equations efficiently.

The course emphasizes practical application by teaching students to solve word problems using algebra. Students apply linear equations to real-life scenarios, learning to translate situations into mathematical terms. Additionally, various methods for solving linear equations are explored, including substitution, elimination, and graphical solutions, enabling students to approach problems flexibly and confidently. Together, these topics give students a robust foundation in algebraic thinking, preparing them for higher-level mathematics and analytical tasks in science, engineering, economics, and beyond.

**Textbook / Worksheets**

*Mathematics for the International Student: Mathematics SL, 3<sup>rd</sup> Edition*  
 Teacher will also provide handouts

**Course Outline & Objectives**

Numbers of Units/Titles of Units	Time (Hours)	Competencies/Skills/Process/Teaching Methods	Media	Assessment
<b>1. Algebraic Notation</b>	<b>8</b>	1. Lecture	1. Handouts	1. Using the characteristics observation form
1. The Algebraic Notation	2	2. Questions and answers	2. Worksheets	
2 The language of Math	2	3. Group work process	3. Website	2. Checking exercises
3 Generalising Mathematics	4			3. Marking the tests



4. Collecting like terms	<b>12</b>	1. Lecture	1. Handouts	1. Using the characteristics observation form
5. Product and Quotient with Algebra	2	2. Questions and answers	2. Worksheets	2. Checking exercises
6. Solving Word problems using algebra (linear).	4	3. Group work process	3. Website	3. Marking the tests
7. Different methods to solve linear equations.	4			

### Resources

#### Required

- 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**

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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. 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**

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Homework and classwork will be assigned often and must be submitted on or before the due date. If the work is not done 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**

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This course follows to the Assumption College grading scale:

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

### **Evaluation and Assessment**

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

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

### **Recommendations for Success**

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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.
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.