



# Secondary Online Programmes Outlines

## 中學網上課程大綱

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# Humanities

## E2PSY001O

Programme Title	Psychology – Classical Conditioning 心理學 – 古典制約(E2PSY001O)
Introduction	The programme aims to: <ul style="list-style-type: none"><li>■ Provide students the general concepts of Classical Conditioning as one of the learning theories in Behaviorism;</li><li>■ Investigate the empirical studies of Classical Conditioning in understanding how human beings learn in the environment;</li><li>■ Explain and analyze human behaviours in daily life by applying the concepts of Classical Conditioning.</li></ul>
Programme Type/level	Introductory Online Learning Programme in Psychology ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none"><li>1. Identify and define major concepts of Classical Conditioning in learning theories;</li><li>2. Apply theories and concepts of Classical Conditioning to daily life issues about learning; and</li><li>3. Critically evaluate the applicability of the concepts of Classical Conditioning in daily life learning and reflect behaviourism in learning theories.</li></ol>
Duration	12 hours
Application	Click <a href="#">here</a> for application.

## E2PSY002O

Programme Title	Psychology II – Operant Conditioning 心理學 II –操作式制約 (E2PSY002O)
Introduction	The programme aims to: <ul style="list-style-type: none"><li>■ Provide students the general concepts of Operant Conditioning as one of the learning theories in Behaviorism;</li><li>■ Investigate the empirical studies of Operant Conditioning in understanding how human beings learn in the environment;</li><li>■ Explain and analyze human behaviours in daily life by applying the concepts of Operant Conditioning.</li></ul>
Programme Type/level	Introductory Online Learning Programme in Psychology ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none"><li>1. Identify and define major concepts of Operant Conditioning in learning theories;</li><li>2. Apply theories and concepts of Operant Conditioning to daily life issues about learning;</li><li>3. Critically evaluate the applicability of the concepts of Operant Conditioning in daily life issues about learning and reflect behaviourism in learning theories.</li></ol>
Duration	12 hours
Application	Click <a href="#">here</a> for application.

## E1HUM003O

Programme Title	Social and Cognitive Learning in Psychology 認知與社會心理學 (E1HUM003O)
Introduction	Consider what happens if you learn to ice skate or any other new skills. Do you remember how you learned it? Perhaps ice skaters don't have their knees bent, their body upright, and their head up reflexively under the influence of stimuli, as in classical conditioning..... Want to know more? Just click into our online programme Social and Cognitive Learning in Psychology to find out more.
Programme Type/level	Introductory Online Learning Programme in Psychology ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: 1. Be familiar with the key concepts of social and cognitive learning; 2. Comprehend how these key concepts help us to understand peoples' daily life issues; 3. Understand how human behaviour is affected by social and cognitive learning.
Duration	24 hours
Application	Click <a href="#">here</a> for application.

## E1PSY001O

Programme Title	Psychology: Mystery in Memory 心理學：記憶的奧秘(E1PSY001O)
Introduction	<p>Previous research showed that around 5% of prisoners in the States were actually innocent. Some of these "offenders" were wrongfully convicted by the eyewitnesses during identification.</p> <p>How does our memory work? Does it actually work?</p> <p>There is no problem for us to remember our names, addresses and our mobile numbers. If our memory works fine, then why can't we remember the name of our first class teacher in the kindergarten? Why can't we remember what happened to us during our 4th birthday? Why can't we remember the content of the first assignment we had to complete?</p> <p>In this programme, you will have a chance to learn more about classic and current studies and theories of human memory as well as the application of memory to our daily life.</p>
Programme Type/level	Introductory Online Learning Programme in Psychology ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: 1. Compare and contrast the classic and current issues of studying human memory; 2. Evaluate the structures and functions of different models of memory; and 3. Critically analyse how memory theories are related to real-life scenarios.
Duration	21 hours
Application	Click <a href="#">here</a> for application.

## E2HUM002O

Programme Title	Communication and New Media: From Now to Then 溝通與新媒體：今昔發展(E2HUM002O)
Introduction	The programme aims to: <ul style="list-style-type: none"><li>■ Demonstrate that human interacts evolves rapidly due to the advancement of communication and computer technology;</li><li>■ Introduce background of media &amp; technology development;</li><li>■ Make student members to understand how media &amp; technology affect our daily lives by using different approaches and theories</li></ul>
Programme Type/level	Introductory Online Learning Programme in Humanities ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none"><li>1. State 3 ways of advanced computing technology that shape our ways of communication;</li><li>2. List the major modern media &amp; technology that shape our ways of communication; and</li><li>3. Demonstrate their understanding on the social implication of the advancement of media and technology.</li></ol>
Duration	21 hours
Application	Click <a href="#">here</a> for application.

# Mathematics

## E2MAT001O

Programme Title	Geometry I 幾何學 I (E2MAT001O)
Introduction	This online course will first discuss the origin of geometry including Babylonian, Egyptian, and Greek Geometry. Then, the most famous work on geometry, Euclid's Elements, will be introduced. An introduction of the axiomatic system and numerous basic geometric constructions will be discussed.
Programme Type/level	Intermediate Online Learning Programme in Mathematics (Level 1) ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none"><li>1. Understand the origin of geometry</li><li>2. Demonstrate the understanding of the axiomatic system introduced in Euclidean geometry</li><li>3. Perform some basic compass-and-straight edge constructions</li></ol>
Duration	12 hours
Application	Click <a href="#">here</a> for application.

## E2MAT002O

Programme Title	Geometry II 幾何學 II (E2MAT002O)
Introduction	This online course extends the discussion in "Geometry I" with more geometric problems of antiquity. The focus is on the constructibility of numbers and regular polygons, as well as the three classical problems in Greek mathematics.
Programme Type/level	Intermediate Online Learning Programme in Mathematics (Level 2) ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none"><li>1. Demonstrate their understanding of the concept of constructibility of numbers and polygons;</li><li>2. Recall some classical geometric construction problems such as the three classical problems; and</li><li>3. Apply Gauss' theory to determine the constructibility of regular polygons.</li></ol>
Duration	12 hours
Application	Click <a href="#">here</a> for application.

## E2MAT003O

Programme Title	Complex Number and Geometry I 複數及幾何學 I (E2MAT003O)
Introduction	The course introduces the basic concept of complex numbers and complex plane. It covers the prerequisite knowledge of complex number, include coordinate geometry and trigonometry. It introduces the polar form, De Movire's Theorem and the nth root of unity.
Programme Type/level	Advanced Online Learning Programme in Mathematics ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: 1. Demonstrate their understanding of the basic concept of complex numbers; 2. Apply their knowledge of complex number in complex plane; and 3. Solve problems involving De Movire's Theorem and nth root of unity.
Duration	18 hours
Application	Click <a href="#">here</a> for application.

## E2MAT004O

Programme Title	Complex Number and Geometry II 複數及幾何學 II (E2MAT004O)
Introduction	This course explores advanced topics based upon the background knowledge of complex number. It covers the geometrical applications of complex number, including representation of lines, circles and triangles, centres of triangles and classical theorems.
Programme Type/level	Advanced Online Learning Programme in Mathematics ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: 1. Consolidate student's understanding of complex number; 2. Represent geometric objects in the complex plane using complex number; 3. Apply knowledge in complex number to solve problems about triangles; and 4. Use complex number to prove classical theorems in geometry.
Duration	18 hours
Application	Click <a href="#">here</a> for application.

## E1MAT006O

Programme Title	Coordinate Geometry II 座標幾何 II (E1MAT006O)
Introduction	<p>Geometry and coordinate system, which solve many mathematical problems from different perspectives with different approaches, are major mathematical topics. This online learning programme lets students learn about the properties of Cartesian coordinate system, in order to sharpen their geometrical problem solving skills, improve their spatial thinking ability and enhance their self-directed learning skills.</p> <p>Online components: Module 1 – Equations of straight lines (I) Module 2 – Equations of straight lines (II) Module 3 – Locus Module 4 – Equations of circles (I) Module 5 – Equations of circles (II) Module 6 – Conic sections</p>
Programme Type/level	Introductory Online Learning Programme in Mathematics ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: 1. describe and analyze geometric objects using coordinate system 2. analyze lines and circles by using algebraic tools 3. synthesize and create related concepts using coordinate geometry
Duration	18 hours
Application	Click <a href="#">here</a> for application.

# Sciences

## E2CHE0020

Programme Title	Chem Is Try 「化」觀察為「學」問(E2CHE0020)
Introduction	After learning the steps of doing scientific inquiry in this online learning programme, you will be well prepared for another online learning programme, Introduction to analytical Chemistry and Quantitative Analysis (SCIO3122) The programme aims to: <ul style="list-style-type: none"><li>■ Stimulate student members to think about what science is logically and its limitation;</li><li>■ Deepen the concept of the nature of science in Chemistry-related contexts;</li><li>■ Develop student members' ability to make scientific inquiries, think scientifically, critically and creatively.</li></ul>
Programme Type/level	Advanced Online Learning Programme in Chemistry (Level 3) ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none"><li>1. Be familiar with the steps of discovering new knowledge in Chemistry through Scientific Inquiry (SI): Make careful observation, ask relevant questions, identify problems, formulate hypothesis for investigation, design experiments and draw conclusion from experimental results;</li><li>2. Develop scientific literacy after understanding the true meaning of scientific terms (e.g. observation, inference, hypothesis, theory and law in scientific report); and</li><li>3. Understand the difficulties faced by chemists and challenges come from professional scholars / the society when carrying out SI.</li></ol>
Duration	15 hours
Application	Click <a href="#">here</a> for application.



## E2CHE003O

Programme Title	Introduction to Analytical Chemistry and Quantitative Analysis 化驗與數量化分析(E2CHE003O)
Introduction	This online learning programme is a tailor-made teaching workshop consisting of reading materials, self-exploration interactive exercises and tests related to analytical chemistry. The programme aims to: <ul style="list-style-type: none"><li>■ Develop student members' analytical concepts and skills by introducing basic principles of chemical analysis;</li><li>■ Illustrate classical and instrumental analysis as well as their strengths and limitation(s);</li><li>■ Introduce the basic principles of modern analytical instruments; and</li><li>■ Demonstrate some current analytical tests related to our daily life so as to arouse student members' interest in analytical chemistry.</li></ul>
Programme Type/level	Advanced Online Learning Programme in Chemistry (Level 4) ( <a href="#">Non Token-required</a> )
Target Participants	S1 to S6 HKAGE student members
Medium of Instruction	English
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none"><li>1. Understand the fundamentals of calibration and standardization procedures in analytical chemistry;</li><li>2. Be familiar with the logic behind analytical sampling, sample preparation and experimental design;</li><li>3. Improve their information processing skills by learning the following topics: Quality assurance, data interpretation and method validation; and</li><li>4. Accelerate learning in chemistry by acquiring the knowledge of basic principles of modern analytical instruments</li></ol>
Duration	18 hours
Application	Click <a href="#">here</a> for application.