



# CREATIVE TECHNOLOGY

MUIC General Catalog 2020 -2021



*For Creative Technology students  
with ID.63xxxxx only*

# CREATIVE TECHNOLOGY PROGRAM

## DEGREES OFFERED

Bachelor of Arts and Science (Creative Technology)

B.A.Sc. (Creative Technology)

## THE FIELD

This program is the first transdisciplinary program with a mix of computer science, transmedia design, and communication design offered at Mahidol University. With its combination of arts and sciences, the program prepares its graduates for the emerging career opportunities of the technology-driven, fast-changing future. In addition, this program offers additional curriculum flexibility to customize for individual learning choices with MUIC's distinctive I-Design electives as well as the program's electives in MUIC, Faculty of Information and Communication Technology, and College of Music.

## CAREER OPPORTUNITIES

1. Media creator
  - Animator/modeler
  - Digital media producer
  - Multimedia designer
  - Transmedia data illustrator
  
2. Technological creator
  - Inclusive society technologist
  - Interactive graphics technician(VR/AR/XR)
  - Web designer
  - UI/UX designer
  
3. Social media/online communicator

## CURRICULUM STRUCTURE

| COURSES                   | CREDITS    |
|---------------------------|------------|
| General Education Courses | 38         |
| Core Major Courses        | 68         |
| Major Required Courses    | 14         |
| Major Elective Courses    | 20         |
| I-Design Electives        | 20         |
| Free Elective Courses     | 8          |
| <b>Total</b>              | <b>168</b> |

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## COURSE LIST

### Foundation Courses

|                                  |           |
|----------------------------------|-----------|
| ICMA 100 Foundation Mathematics  | 0 (4-0-0) |
| ICME 100 English Resource Skills | 0 (4-0-0) |

### Non-credit

**Note I:** For B.A.Sc. students, students whose Mathematics placement is below ICCT 101 Mathematics for Creative Technology I are required to take ICMA 100 Foundation Mathematics and pass the course with the grade of "S" before moving to ICCT 101 Mathematics for Creative Technology I.

**Note II:** Based on their achievement on the essay portion of the MUIC entrance exam, students whose English placement is below ICGC 101 Academic Writing and Research I will be placed into the "ERS Track". These students will be required to take ICME 100 English Resource Skills and pass the course with the grade of "S" before moving to ICGC 101 Academic Writing and Research I.

### General Education

### 38 Credits

#### English Communication

#### 12-16 Credits

|  |           |
|--|-----------|
| ICGC 101 Academic Writing and Research I                                   | 4 (4-0-8) |
| ICGC 102 Academic Writing and Research II                                  | 4 (4-0-8) |
| ICGC 103 Public Speaking   | 4 (4-0-8) |
| ICGC 111 Academic Writing and Research I (Advanced)                        | 4 (4-0-8) |
| ICGC 112 Academic Writing and Research II (Advanced)                       | 4 (4-0-8) |
| ICGC 201 Global Realities  | 4 (4-0-8) |
| ICGC 202 Literary Analysis   | 4 (4-0-8) |
| ICGC 203 Creative Writing  | 4 (4-0-8) |
| ICGC 204 Advanced Oral Communication                                       | 4 (4-0-8) |
| ICGC 206 Literature Into Film  | 4 (4-0-8) |
| ICGC 208 Language and Culture  | 4 (4-0-8) |
| ICGC 210 First and Second Language Acquisition                             | 4 (4-0-8) |
| ICGC 211 Topics in Comparative Literature A: Poetry                        | 4 (4-0-8) |
| ICGC 212 Topics in Comparative Literature B: The Short Story and the Novel | 4 (4-0-8) |
| ICGC 213 Topics in Comparative Literature C: Drama                         | 4 (4-0-8) |
| ICGC 214 Literary Non-fiction  | 4 (4-0-8) |
| ICGC 215 Writing for Research  | 4 (4-0-8) |

**Note I:** Based on their achievement on the essay portion of the MUIC entrance exam, students will be placed into 3 following tracks: 'ERS Track', 'GC Track' and 'Advanced GC Track'.

- **'ERS Track'** – Students who are placed into 'ERS Track' will be required to take ICME 100 (a non-credit course) and complete 16 credits in English Communication: ICGC 101, ICGC 102, ICGC 103 in order, and finally, any 200+ level English courses.
- **'GC Track'** – Students who are placed into 'GC Track' will be required to complete 16 credits in English Communication: ICGC 101, ICGC 102, ICGC 103 in order, and finally, any 200+ level English courses.
- **'Advanced GC Track'** – Students who are placed into 'Advanced GC Track' will be required to complete 12 credits in English Communication: ICGC 111, ICGC 112 in order, and finally, any 200+ level English courses.

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**Note II:** Students in 'ERS Track' and 'GC Track' must take ICGC 101, ICGC 102 and ICGC 103 without interruption beginning in their first trimester of enrollment.

| <b>Life Appreciation</b>  | <b>4 Credits</b> |
|---|------------------|
| ICGH 113 Moving Pictures: A History of Film                         | 4 (4-0-8)        |
| ICGH 117 Drawing as Creative Expression                             | 4 (2-4-6)        |
| ICGH 118 Photography Visualizing in the Digital Age                 | 4 (2-4-6)        |
| ICGH 119 Listen! Soundscapes, Well-Being and Musical Soul Searching | 4 (4-0-8)        |
| ICGN 105 Ecology, Ecosystems and Socio-Economics in Southeast Asia  | 4 (3-2-7)        |
| ICGN 108 Essentials of Culinary Science for Food Business           | 4 (3-2-7)        |
| ICGN 109 Food for Health  | 4 (4-0-8)        |
| ICGN 110 Maker Workshop   | 4 (3-2-7)        |
| ICGN 112 Stargazer  | 4 (3-2-7)        |
| ICGN 113 Plants, People and Poisons                                 | 4 (4-0-8)        |
| ICGN 115 Human Evolution, Diversity and Health                      | 4 (4-0-8)        |
| ICGN 120 Chemistry of Cosmetics and Dietary Supplements             | 4 (4-0-8)        |
| ICGN 124 Climate Change and Human Society                           | 4 (3-2-7)        |
| ICGN 125 Games and Learning   | 2 (2-0-4)        |
| ICGP 101 American Flag Football                                     | 1 (0-2-1)        |
| ICGP 102 Badminton  | 1 (0-2-1)        |
| ICGP 103 Basketball   | 1 (0-2-1)        |
| ICGP 104 Body Fitness   | 1 (0-2-1)        |
| ICGP 105 Cycling  | 1 (0-2-1)        |
| ICGP 106 Discover Dance   | 1 (0-2-1)        |
| ICGP 107 Golf   | 1 (0-2-1)        |
| ICGP 108 Mind and Body  | 1 (0-2-1)        |
| ICGP 109 Selected Topics in Sports                                  | 1 (0-2-1)        |
| ICGP 110 Self Defense (Striking)                                    | 1 (0-2-1)        |
| ICGP 111 Self Defense (Grappling)                                   | 1 (0-2-1)        |
| ICGP 112 Soccer   | 1 (0-2-1)        |
| ICGP 113 Social Dance   | 1 (0-2-1)        |
| ICGP 114 Swimming   | 1 (0-2-1)        |
| ICGP 115 Tennis   | 1 (0-2-1)        |
| ICGP 116 Volleyball   | 1 (0-2-1)        |
| ICGP 117 Physical Fitness Plan                                      | 2 (2-0-4)        |
| ICGS 102 Business Sustainability and the Global Climate Change      | 4 (4-0-8)        |
| ICGS 115 Sociology in the Modern World                              | 4 (4-0-8)        |
| ICGS 125 American History, Popular Media and Modern Life            | 4 (4-0-8)        |
| ICGS 126 Introduction to Psychology                                 | 4 (4-0-8)        |
| ICGS 127 Positive Psychology  | 4 (4-0-8)        |
| ICGS 128 Global Gastronomy and Cuisines                             | 4 (4-0-8)        |
| ICGS 129 Tea Studies  | 2 (2-0-4)        |
| ICLL 100 Self Development   | 2 (2-0-4)        |
| <br>  |                  |
| <b>Global Citizenship</b>   | <b>4 credits</b> |
| ICGH 116 World Cinemas  | 4 (4-0-8)        |
| ICGH 120 Thai and ASEAN Cinema                                      | 4 (4-0-8)        |
| ICGH 121 The End of the World? Development and Environment          | 4 (4-0-8)        |
| ICGH 122 Introduction to Asian Philosophy                           | 4 (4-0-8)        |
| ICGH 123 Faiths, Ecological Justice, and the Tropical Rainforests   | 2 (2-0-4)        |
| ICGL 101 Elementary German I  | 4 (4-0-8)        |

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|  |           |
|--|-----------|
| ICGL 102 Elementary German II                      | 4 (4-0-8) |
| ICGL 103 Elementary German III                     | 4 (4-0-8) |
| ICGL 111 Elementary Japanese I                     | 4 (4-0-8) |
| ICGL 112 Elementary Japanese II                    | 4 (4-0-8) |
| ICGL 113 Elementary Japanese III                   | 4 (4-0-8) |
| ICGL 121 Elementary French I                       | 4 (4-0-8) |
| ICGL 122 Elementary French II                      | 4 (4-0-8) |
| ICGL 123 Elementary French III                     | 4 (4-0-8) |
| ICGL 131 Elementary Chinese I                      | 4 (4-0-8) |
| ICGL 132 Elementary Chinese II                     | 4 (4-0-8) |
| ICGL 133 Elementary Chinese III                    | 4 (4-0-8) |
| ICGL 141 Elementary Spanish I                      | 4 (4-0-8) |
| ICGL 142 Elementary Spanish II                     | 4 (4-0-8) |
| ICGL 143 Elementary Spanish III                    | 4 (4-0-8) |
| ICGL 160 Introduction to Thai Language and Culture | 4 (4-0-8) |
| ICGL 161 Elementary Thai I                         | 4 (4-0-8) |
| ICGL 162 Elementary Thai II                        | 4 (4-0-8) |
| ICGL 163 Elementary Thai III                       | 4 (4-0-8) |
| ICGL 170 Diversities in Multilingual Societies     | 2 (2-0-4) |
| ICGL 201 Pre-intermediate German I                 | 4 (4-0-8) |
| ICGL 202 Pre-intermediate German II                | 4 (4-0-8) |
| ICGL 203 Pre-intermediate German III               | 4 (4-0-8) |
| ICGL 211 Pre-intermediate Japanese I               | 4 (4-0-8) |
| ICGL 212 Pre-intermediate Japanese II              | 4 (4-0-8) |
| ICGL 213 Pre-intermediate Japanese III             | 4 (4-0-8) |
| ICGL 221 Pre-intermediate French I                 | 4 (4-0-8) |
| ICGL 222 Pre-intermediate French II                | 4 (4-0-8) |
| ICGL 223 Pre-intermediate French III               | 4 (4-0-8) |
| ICGL 231 Pre-intermediate Chinese I                | 4 (4-0-8) |
| ICGL 232 Pre-intermediate Chinese II               | 4 (4-0-8) |
| ICGL 233 Pre-intermediate Chinese III              | 4 (4-0-8) |
| ICGL 241 Pre-intermediate Spanish I                | 4 (4-0-8) |
| ICGL 242 Pre-intermediate Spanish II               | 4 (4-0-8) |
| ICGL 243 Pre-intermediate Spanish III              | 4 (4-0-8) |
| ICGN 126 Plant Society                             | 2 (2-0-4) |
| ICGS 106 Fashion and Society                       | 4 (4-0-8) |
| ICGS 111 Exploring Religions                       | 4 (4-0-8) |
| ICGS 112 Geography of Human Activities             | 4 (4-0-8) |
| ICGS 123 Tourism Concepts and Practices            | 4 (4-0-8) |
| ICGS 130 Political Science                         | 4 (4-0-8) |
| ICGS 131 Introduction to International Studies     | 4 (4-0-8) |
| ICGS 132 Career Preparation in a Globalized World  | 4 (4-0-8) |
| ICGS 133 Foundation of Mediterranean Cultures      | 4 (4-0-8) |

### **Critical Thinking**

**4 credits**

|  |           |
|--|-----------|
| ICGH 101 Biotechnology: from Science to Business                       | 4 (4-0-8) |
| ICGH 102 Famous Arguments and Thought Experiments in Philosophy        | 4 (4-0-8) |
| ICGH 103 Logic, Analysis and Critical Thinking: Good and Bad Arguments | 4 (4-0-8) |
| ICGH 105 Technology, Philosophy and Human Kind: Where Are We Now?!     | 4 (4-0-8) |
| ICGH 106 The Greeks: Crucible of Civilization                          | 4 (4-0-8) |

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|   |           |
|---|-----------|
| ICGH 107 Contemporary Art and Visual Culture                        | 4 (4-0-8) |
| ICGH 109 Creative Thinking Through Art and Design                   | 4 (2-4-6) |
| ICGH 110 Drawing as Visual Analysis                                 | 4 (2-4-6) |
| ICGH 115 Cinematic Languages and Its Application                    | 4 (4-0-8) |
| ICGH 124 Life Drawing and Anatomy                                   | 4 (2-4-6) |
| ICGH 125 How Can We Know What Is Good? Moral Reasoning and Behavior | 4 (4-0-8) |
| ICGH 126 Behavioral Ethics: Why Good People Do Bad Things           | 4 (4-0-8) |
| ICGN 107 The Chemistry of Everyday Life                             | 4 (4-0-8) |
| ICGN 111 Physics for CEO  | 4 (4-0-8) |
| ICGN 123 The Earth's Dynamic Structure                              | 4 (4-0-8) |
| ICGN 127 Practical Mathematics                                      | 4 (4-0-8) |
| ICGS 103 Economics in Modern Business                               | 4 (4-0-8) |
| ICGS 113 Perspectives on the Thai Past                              | 4 (4-0-8) |
| ICGS 134 Is Democracy Good?   | 4 (4-0-8) |
| ICGS 135 Entrepreneurial Accounting                                 | 4 (4-0-8) |

### Leadership

**4 credits**

|   |           |
|---|-----------|
| ICGN 114 The Scientific Approach and Society                          | 4 (4-0-8) |
| ICGN 128 Climate Emergency, Biodiversity Crisis, and Humanity at Risk | 2 (1-2-3) |
| ICGS 104 Essentials of Entrepreneurship                               | 4 (4-0-8) |
| ICGS 118 Skills in Dealing with People Across Cultures                | 4 (4-0-8) |
| ICGS 121 Abnormal Colleagues: How Do I Make This Work?                | 4 (4-0-8) |
| ICGS 136 Social and Health Issues in Thailand                         | 4 (3-2-7) |
| ICGS 137 Witchcraft and Gender Representation                         | 4 (4-0-8) |
| ICGS 138 Business Event Essentials                                    | 4 (4-0-8) |
| ICGS 139 Leadership and Change for a Global Society                   | 4 (4-0-8) |
| ICGS 154 Introduction to Crisis Management in Service Businesses      | 4 (4-0-8) |
| ICGS 155 Pathway to Purpose: Life Design and Self-Exploration         | 4 (4-0-8) |
| ICLL 101 Professional Development                                     | 2 (2-0-4) |

### Digital Literacy

**4 credits**

|   |           |
|---|-----------|
| ICGH 111 Media Literacy: Skills for 21 <sup>st</sup> Century Learning | 4 (4-0-8) |
| ICGH 128 Internet Celebrity, Culture and the Media                    | 4 (4-0-8) |
| ICGN 116 Understanding and Visualizing Data                           | 4 (3-2-7) |
| ICGN 118 Everyday Connectivity  | 4 (4-0-8) |
| ICGN 119 Computer Essentials  | 4 (4-0-8) |
| ICGN 129 Programming for Problem Solving                              | 4 (4-0-8) |
| ICGN 130 Cryptography: The Science of Making and Breaking Codes       | 2 (2-0-4) |
| ICGN 131 Digital Search Literacy                                      | 2 (2-0-4) |
| ICGN 132 Digital Security and Privacy                                 | 2 (2-0-4) |
| ICGN 133 E-Business: Technology and Digital Strategies                | 4 (4-0-8) |
| ICGN 134 Introduction to Artificial Intelligence                      | 2 (2-0-4) |
| ICGS 140 Fake News, Censorship and the Politics of Truth              | 4 (4-0-8) |
| ICGS 153 Social Media Management for Service Sector                   | 2 (2-0-4) |
| ICLL 102 Skills for a Digital World                                   | 2 (2-0-4) |

### General Education Elective Courses

**2-6 Credits**

Students need to take any GE courses to fulfill their 38 credits requirement of General Education: **2 credits** for students whose English Communication track are placed into 'ERS track' or 'GC Track' and **6 credits** for students whose English Communication track are placed into 'Advanced GC Track'. Partial credits of GE course that exceed the GE requirements **cannot** be counted towards Free Electives.

**Major Courses****102 Credits****Core courses****68 Credits**

|  |           |
|--|-----------|
| ICCD 119 2D Design Principles  | 4 (2-4-6) |
| ICCD 150 Art History   | 4 (4-0-8) |
| ICCD 236 Online Culture Communication and Application                                    | 4 (2-4-6) |
| ICCD 321 Infographics  | 4 (2-4-6) |
| ICCD 322 Integrated Branding   | 4 (2-4-6) |
| ICCD 342 New Media Design  | 4 (2-4-6) |
| ICCT 101 Mathematics for Creative Technology I   | 4 (4-0-8) |
| ICCT 102 Mathematics for Creative Technology II  | 4 (4-0-8) |
| ITCT 101 Computing Technologies  | 4 (4-0-8) |
| ITCT 111 Programming for Creative Technology   | 4 (4-0-8) |
| ITCT 201 Multimedia Systems Lab  | 2 (0-4-2) |
| ITCT 241 Computational Problem Solving   | 4 (4-0-8) |
| ITCT 301 Digital Storytelling and Machinima  | 4 (4-0-8) |
| ITCT 311 Computer Animation  | 4 (4-0-8) |
| ITCT 321 Computer Graphics   | 4 (4-0-8) |
| MSCT 101 Music Appreciation  | 2 (2-0-4) |
| MSCT 111 Music Fundamentals and Keyboard Skills I  | 1 (0-2-1) |
| MSCT 112 Music Fundamentals and Keyboard Skills II                                       | 1 (0-2-1) |
| MSCT 211 Electronic Music Production I   | 1 (0-2-1) |
| MSCT 212 Electronic Music Production II  | 1 (0-2-1) |
| RSDE 215 Learning Management and Classroom Management<br>for Students with Special Needs | 4 (3-2-7) |

**Major Required courses****14 Credits**

|   |            |
|---|------------|
| ICCT 441 Capstone Project for Creative Technology | 6 (0-12-6) |
| ICCT 442 Term Internship                          | 6 (0-36-6) |
| ICCT 443 Summer Internship                        | 2 (0-12-2) |

**Major Elective courses****20 Credits**

Students are required to complete at least **12 credits** from the same track.

- **Media Track**

|   |           |
|---|-----------|
| ITCT 322 Virtual Reality                        | 4 (4-0-8) |
| ITCT 323 Augmented Reality                      | 4 (4-0-8) |
| ITCT 331 Game Design and Development            | 4 (4-0-8) |
| ITCT 332 Data Visualisation                     | 4 (4-0-8) |
| ITCT 391 Special Topics in Multimedia Systems   | 4 (4-0-8) |
| RSGE 210 Introduction to the Thai Sign Language | 4 (2-4-6) |

- **Technology Track**

|   |           |
|---|-----------|
| ITCT 318 Internet of Things and Its Application | 4 (4-0-8) |
| ITCT 341 Agile Software Development             | 4 (4-0-8) |
| ITCT 342 Database Management Systems            | 4 (4-0-8) |
| ITCT 343 Introduction to E-Business Systems     | 4 (4-0-8) |
| ITCT 344 Human-Computer Interaction             | 4 (4-0-8) |

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|   |           |
|---|-----------|
| ITCT 361 Advanced Artificial Intelligence         | 4 (4-0-8) |
| ITCT 362 Data Science Essentials and Applications | 4 (4-0-8) |

**I-Design Elective Courses****20 credits**

The purpose of the I-Design Electives is to promote multidisciplinary learning. Students are encouraged to explore courses offered by diverse disciplines across MUIC, Mahidol University, and partner institutions. The I-Design Electives can be satisfied upon the completion of the following course categories:

1. Minor courses offered by any program in MUIC
2. Certificate courses offered by any program in MUIC
3. Any major courses offered by any program in MUIC
4. Any major courses offered in Mahidol University (including undergraduate and graduate level courses). Courses must be approved by the student's advisor and the Curriculum Administrative Committee.
5. Any major courses offered at partner institutions (who have MOU with Mahidol University and/or MUIC). Courses must be approved by the student's advisor and the Curriculum Administrative Committee.

**Free Elective Courses****8 credits**

Students can take any courses offered by MUIC and/or Mahidol University as free elective courses with the approval from the advisor. A course within the student's major that is too closely related or redundant to core/required/elective courses is discouraged and may be disapproved by an academic advisor.

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**CREATIVE**  
TECHNOLOGY

**COURSE**

**DESCRIPTIONS**

**ICCD 119 2D Design Principles** **4 (2-4-6)****Prerequisite:** -

Foundations and principles of the pictorial design; a focus on the concepts of the picture plane, figure/ground relationships, scale and proportional transformation, composition, and value; the development of a range of design vocabulary and repertoire of practical techniques; an introduction to formal design strategies

**ICCD 150 Art History** **4 (4-0-8)****Prerequisite:** -

An introduction to basic elements of the visual literacy through the exploration of art history in a variety of cultural traditions, geographic locations, and the chronological periods; principles of design, form, and iconography; exploring the art of different societies and cultures

**ICCD 236 Online Culture Communication and Application** **4 (2-4-6)****Prerequisite:** ICCD 119 2D Design Principles

The digital communication process and practice including the principle of the digital media, the communication content and the structure development, user interface (UI) and user experience (UX); introduction of various applications, techniques, and platforms with current technology along with design principles

**ICCD 321 Infographics** **4 (2-4-6)****Prerequisite:** ICCD 119 2D Design Principles

Data visualization; data collection and analyzation; isotype; hierarchy; idea generation; design layouts; type, color and image; the technology software for design

**ICCD 322 Integrated Branding** **4 (2-4-6)****Prerequisite:** ICCD 119 2D Design Principles

The advanced design systems for the corporate identity design and the identity design manual including all integrated brand materials and communication components; techniques, processes, design principles, and practices

**ICCD 342 New Media Design** **4 (2-4-6)****Prerequisite:** ICCD 236 Online Culture Communication and Application

The new media design process and practice with an understanding of design principles and design foundations for the new media with current technologies of various applications, techniques, and platforms for the motion graphic creation and production

**ICCT 101 Mathematics for Creative Technology I** **4 (4-0-8)****Prerequisites:** Placement Test **or** ICMA 100 Foundation Mathematics

Algebra review, logarithmic and exponential functions, matrix algebra, differential calculus, integral calculus, computational tools

**ICCT 102 Mathematics for Creative Technology II** **4 (4-0-8)****Prerequisites:** ICCT 101 Mathematics for Creative Technology I

Discrete structures, including sets, trees, and graphs; basic analytical geometry and trigonometry; statistical ideas and concepts; probability and conditional probability; distribution functions; expected value; applications and integrated programming exercises

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**ICCT 441 Capstone Project for Creative Technology** 6 (0-12-6)

**Prerequisites:** Must complete 120 credits before register for this course

A small research project in creative technology under the supervision of an advisor; proposal and final presentations as a requirement to complete this course

**ICCT 442 Term Internship** 6 (0-36-6)

**Prerequisites:** Completed at least 120 credits

Working as an actual employee in an organization that is approved by the program under the guidance of course coordinator and supervisors for at least 12 continuous weeks

**ICCT 443 Summer Internship** 2 (0-12-2)

**Prerequisites:** Students must complete at least 120 credits

An internship in the area of creative design and technology approved by the program under a supervision during the summer

**ICGC 101 Academic Writing and Research I** 4 (4-0-8)

**Prerequisites:** Placement Writing Test or ICME 100 English Resource Skills

An introduction to the academic writing process through the development of the writer's voice through sentencing, structure, and rhetorical devices; focus on strategies for using and integrating researched sources; methods to compose well-structured essays based on themes relevant to the world today

**ICGC 102 Academic Writing and Research II** 4 (4-0-8)

**Prerequisites:** ICGC 101 Academic Writing and Research I

The integration of skills in academic research and writing to analyze and create persuasive compositions; techniques to identify strengths and weaknesses in argument; development of students' knowledge and preconceptions of global issues through a progressive series of essays and journal assignments

**ICGC 103 Public Speaking** 4 (4-0-8)

**Prerequisites:** ICGC 102 Academic Writing and Research II

Fundamentals of key skills for confident and effective public speaking through a series of prepared and unprepared speeches; introduction and application of techniques to inform/persuade audiences; utilization of Academic Writing and Research I and II to create and deliver speeches to a professional standard

**ICGC 111 Academic Writing and Research I (Advanced)** 4 (4-0-8)

**Prerequisites:** Placement Writing Test

Theories and practical methods to enhance students' creative and descriptive abilities; emphasis on the development of a writer's voice through sentencing, structure, and rhetorical devices; strategies for using and integrating researched sources are introduced by way of explaining theories; concepts and writing conventions

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**ICGC 112 Academic Writing and Research II (Advanced) 4 (4-0-8)**

**Prerequisites:** ICGC 111 Academic Writing and Research I (Advanced)

A focus on high levels of academic literacy and presentation skills in reading, writing, and public speaking for experts or near-expert users of English; utilization of advanced strategies to exploit secondary research and argumentation; application of advanced skills in critical thinking and rhetorical knowledge through class discussions and written and oral assignments

**ICGC 201 Global Realities 4 (4-0-8)**

**Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

An exploration and a critical analysis of key texts on poetry, literature, and legislative documents in order to understand the complexity and challenges of the world we live in; themes encouraging students to consider values, human rights and government; class discussions, journal writing, and presentation activities to demonstrate how students can contribute to the betterment of society

**ICGC 202 Literary Analysis 4 (4-0-8)**

**Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

A review of literary works from selected literary genres; an exploration of how literature informs our perceptions of the world by way of analytical and critical thinking; an analysis of short stories, poetry and drama; scaffolding of strategies for students to understand the function of a variety of literary forms

**ICGC 203 Creative Writing 4 (4-0-8)**

**Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

An examination of fictions, poetry, drama, and the media production through readings, speeches and films; comparisons of writing in different genres; a creation of the work of publishable quality by means of the consideration of audience and genre

**ICGC 204 Advanced Oral Communication 4 (4-0-8)**

**Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

Theories of persuasion, non-verbal techniques, and voice control for advanced presenters; strategies to develop high levels of voice control and expressions; activities including debates, presentations, and occasional speeches; the development of students' abilities to express themselves confidently in a variety of academic and professional environments through impromptu and prepared speeches

**ICGC 206 Literature into Film 4 (4-0-8)**

**Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

An introduction to the technical aspects of translating literature into films; an exploration of the interplay between literature and films through an analysis of short stories, novels, and plays and their film versions; an exploration of the challenges merging both mediums

**ICGC 208 Language and Culture 4 (4-0-8)**

**Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

An examination of the interplay between language and culture; having texts and class discussions to focus on the importance of understanding the link between culture and languages; a completion of a research paper on the topic

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**ICGC 210 First and Second Language Acquisition 4 (4-0-8)****Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

An introduction to how children develop their first language; comparing and contrasting of the second language development; theories of language development from behaviorism to more recent cognitive and functional approaches; the implications of theories

**ICGC 211 Topics in Comparative Literature A: Poetry 4 (4-0-8)****Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

An in-depth study of poetry, including: metrics, forms, themes, ethnic voices, throughout history; an evaluation of poetry from different genres through a series of discussions, workshops and a term research paper

**ICGC 212 Topics in Comparative Literature B: The Short Story and the Novel 4 (4-0-8)****Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

A study of elements of fictions in short stories and novels through class workshops on characters, dialogue, plot and atmosphere; class discussions to analyze the effect of historical and social developments on selected themes

**ICGC 213 Topics in Comparative Literature C: Drama 4 (4-0-8)****Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

An exploration of ways to understand and appreciate drama by reading, watching, and analyzing theatrical performances; staging and enactment of a theatrical production; readings, essays, and theater workshop activities to prepare students for a final stage performance

**ICGC 214 Literary Non-fiction 4 (4-0-8)****Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

Exploration of creative nonfiction, a flourishing genre of writing a step away from academic work; reading of compelling, informative, and insightful but also entertaining, imaginative, and risky nonfiction work; overview of various techniques utilized within this field of writing and media; analysis and response to a variety of texts

**ICGC 215 Writing for Research 4 (4-0-8)****Prerequisites:** ICGC 103 Public Speaking or ICGC 112 Academic Writing and Research II (Advanced)

A student-centric approach to developing research writing skills; an overview of the conventions of the world of research with an emphasis on academic honesty and academic style; use of sample papers to provide students with models to prepare effective abstracts, literature reviews, research paper outlines and short academic articles

**ICGH 101 Biotechnology: from Science to Business 4 (4-0-8)****Prerequisites:** -

Biotechnology, bioethics, and the law, biotechnology and the regulatory framework, genetic testing, patenting life, biobanks and modern genomics research, genetically modified organisms, human and animal testing; bioterrorism, biological weapons laws, bio-prospecting, pharmaceutical pricing, the future of the human beings and post-humanism

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**ICGH 102 Famous Arguments and Thought Experiments in Philosophy 4 (4-0-8)****Prerequisites:** -

An examination of the most striking argumentative moves in Philosophy from Plato's Allegory of the Cave to Searle's Chinese Room and beyond; a transfer and an application of paradigmatic philosophical thinking to current open questions in politics and science

**ICGH 103 Logic, Analysis and Critical Thinking: Good and Bad Arguments 4 (4-0-8)****Prerequisites:** -

Basic formal tools from sentential and predicate logic; logical structures of arguments used in the everyday contexts of life; an analysis of their strengths and weaknesses; common fallacies in reasoning, including reasoning involving determining probabilities; a construction of good arguments using the principles of informal reasoning

**ICGH 105 Technology, Philosophy and Human Kind: Where Are We Now?! 4 (4-0-8)****Prerequisites:** -

An examination of major technological and scientific innovations across the globe and their effects on human life and thought; a focus on agriculture, steel, the printing press, the mechanical clock, magnifying lenses, antibiotics, electricity, steam and combustion engines, and transistor

**ICGH 106 The Greeks: Crucible of Civilization 4 (4-0-8)****Prerequisites:** -

An introduction to an overview of the philosophy and thought of Ancient Greece and its influence on contemporary civilization; theories about knowledge, propaganda, truth, art, psychology, happiness, justice and democracy

**ICGH 107 Contemporary Art and Visual Culture 4 (4-0-8)****Prerequisites:** -

Focusing on current issues in society as reflected in the new media utilized in art today; an analysis of images and group discussions regarding social and historical contexts of contemporary art; creative thinking skills; effects of globalization on the visual world; connections between global and local issues; an investigation of broader social and cultural matters such as ideology, gender, race, and ethnicity

**ICGH 109 Creative Thinking Through Art and Design 4 (2-4-6)****Prerequisites:** -

Combining hands-on studio experiences with demonstrations, lectures and discussions; developing creativity and gaining confidence in communicating one's own unique vision; exploring a variety of art and design mediums; understanding the elements of the visual language; implementing the creative process and creative thinking to develop individual solutions to open-ended problems

**ICGH 110 Drawing as Visual Analysis 4 (2-4-6)****Prerequisites:** -

Developing creativity and cognitive learning skills; utilizing visual communication, design and art principles; mark making; observation, analysis, record, representational plant and still life forms; practice, application, techniques for conventional pencil drawing tools: shape, form, perspective, lines, shading, value, negative space, texture, composition; observation; scientific illustration, realistic representational observation

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**ICGH 111 Media Literacy: Skills for 21st Century Learning 4 (4-0-8)****Prerequisites:** -

An integration of the media literacy, the media production, and the media ethics; accessing, analyzing, evaluating, questioning, and producing media texts; social, cultural, and political implications of the media; representations in the media; the media as political economy; the media aesthetics; the media and influence; audiences negotiating meaning z

**ICGH 113 Moving Pictures: A History of Film 4 (4-0-8)****Prerequisites:** -

An investigation of European, American and Asian film as art, philosophy, social commentary, propaganda, self-expression, well-being and social harmony; a focus not only on techniques, style and technological advances but on interpretation, comparison and criticism

**ICGH 115 Cinematic Languages and Its Application 4 (4-0-8)****Prerequisites:** -

An introduction, practice and an application of languages to critical thinking and analysis; examining key film languages and textual examples, including narrative theories; genre, film theories; an analysis of key film texts; the development of skills in research, writing and analytical thinking; applied knowledge to creative works; the presentation of original ideas and reflection on the craft approach

**ICGH 116 World Cinemas 4 (4-0-8)****Prerequisites:** -

An introduction, practice and an application of languages to critical thinking and analysis of key world cinema texts; principal critical methods and theoretical debates of film theory; theoretical perspectives including structuralism, semiology, Marxism, feminism, psychoanalysis, post-structuralism, and cultural studies; questions of narrative and narration, realism, formalism, modernism, postmodernism, postcolonialism, gender, sexuality, and ideology

**ICGH 117 Drawing as Creative Expression 4 (2-4-6)****Prerequisites:** -

Develop creativity and cognitive learning; utilize visual communication, design and art principles; experience multiple tools, techniques, medium, experimental mark making; research, analysis, observation, gesture, principles and elements of design and composition; examine, analyze, observe and reinterpret the human figure, plant and still life forms; research, interpret, evaluate, analyse contemporary artists; personal evaluation; personal expression

**ICGH 118 Photography Visualizing in the Digital Age 4 (2-4-6)****Prerequisites:** -

Basic skills and aesthetic principles of photography, how the camera works, types of cameras and digital image capture, techniques in taking pictures, in camera editing, specialized forms of photography, simple editing adjustments, the aesthetics of picture taking

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**ICGH 119 Listen! Soundscapes, Well-Being and Musical Soul Searching 4 (4-0-8)****Prerequisites: -**

An examination of sound and music as sources of pleasure, aesthetic experience, well-being as well as stress; discussion of music's expressivity and the emotions it induces; cases studies linking music experience to aspects of perceptual training, personal development, public health and the appreciation of nature

**ICGH 120 Thai and ASEAN Cinema 4 (4-0-8)****Prerequisites: -**

An introduction, practice and an application of languages to critical thinking and analysis of Thai and ASEAN film texts; examine key film languages and textual examples, including narrative theories; genre, film theories; an analysis of key film texts; the development of skills in research, writing and analytical thinking

**ICGH 121 The End of the World? Development and Environment 4 (4-0-8)****Prerequisites: -**

An integrated and system oriented view on applied ethics with an eye on development, the environment and technology; emphasis on the intersection between the central notions of justice, nature and technology, particularly under consideration of sustainability; critical analysis of current states of affairs in terms of diverse political traditions, the history of colonialism and the dialectic between globalization and segregation; examples and cases studies include issues of public health, education, food technology, global institutionalization, energy management, the international monetary system, trade, labor migration, and violations of human rights

**ICGH 122 Introduction to Asian Philosophy 4 (4-0-8)****Prerequisites: -**

A differentiation between the main schools of Asian philosophy, including Buddhism, Hinduism, Confucianism, Taoism, Jainism, among others; summaries of foundational concepts and themes; the influences of these philosophies on the beliefs and cultures as well as the politics, economics and legal frameworks around the world

**ICGH 123 Faiths, Ecological Justice, and the Tropical Rainforests 2 (2-0-4)****Prerequisites: -**

Biological diversity; ecological justice; environmentally ethical actions; environmental justice; faiths; indigenous peoples; impacts; interconnection; interdependence; religions; religious diversity; social equity; social justice; threats; tropical rainforests

**ICGH 124 Life Drawing and Anatomy 4 (2-4-6)****Prerequisites: -**

An introduction, practice and application of observation drawing to record the human form; including key principles of composition, gesture and observation drawing techniques and design skills for static, gesture and motion poses; understanding record and identifying the anatomical make-up of the human form in muscles and skeletons; technical proficiency with suitable media for observation drawing; studio practice; hand-drawing from observations

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**ICGH 125 How Can We Know What Is Good? Moral Reasoning and Behavior 4 (4-0-8)****Prerequisites:** -

A survey of philosophical, psychological and scientific contributions to the understanding of moral values and agency; hands-on construction, scrutiny and analysis of ethical argument regarding burning issues in applied ethics

**ICGH 126 Behavioral Ethics: Why Good People Do Bad Things 2 (2-0-4)****Prerequisites:** -

Foundations of behavioral ethics, assumptions of ethical decision making, process of ethical decision making, cognitive errors in ethical decision making: incrementalism, self-serving bias, tangible and abstract, loss aversion, framing, and overconfidence, social and organizational pressures in ethical decision making, situational factors in ethical decision making

**ICGH 128 Internet Celebrity, Culture and the Media 4 (4-0-8)****Prerequisites:** -

An examination of the Internet Celebrity phenomenon and the emerging online culture; focusing on the circulation of social media texts and images associated with the Internet Celebrity; i.e. bloggers, influencers, content creators, the construction of their practices, self-branding techniques, emphasizing on the discourse of labour, the impacts, the influences of cultural trends, and the ethical issues; encouraging students to draw on an online creative work in contemporary media culture

**ICGL 101 Elementary German I 4 (4-0-8)****Prerequisites:** Placement test

Greetings, introducing oneself or others, German alphabet and phonemes, personal information, numbers from 1 – 100 and price quotations, expressing wishes, telling the time and making appointments, quality of items, measurements; verb forms, pronouns, sentence structure, gender of nouns, accusative case and plural forms, negation

**ICGL 102 Elementary German II 4 (4-0-8)****Prerequisites:** Placement test or ICGL 101 Elementary German I

Ordering and paying for meals in a restaurant, preferences of food and drinks, giving and asking for directions, reading a map, preferences of work conditions, job advertisements; essay writing, yes/no questions, imperative forms, compound verbs, preposition with dative case, modal verbs I, German sentence bracket

**ICGL 103 Elementary German III 4 (4-0-8)****Prerequisites:** Placement test or ICGL 102 Elementary German II

Health advice and problems, healthy and unhealthy lifestyles, events and accidents, travel reports, curriculum vitae (CV); possessive articles in nominative, accusative and dative case, perfect tense, connectors, modal verbs II

**ICGL 111 Elementary Japanese I 4 (4-0-8)****Prerequisites:** Placement test

Hiragana and Katakana characters; fundamentals of basic Japanese grammar (noun-ending sentences, particles, demonstratives, verb-ending sentences, non-past and past tenses); scaffolding of basic vocabulary; basic communication about personal topics (self and others); description of Japan; designing written products in the target language; expressing existence, preferences, and agreement; comparing cultures

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**ICGL 112 Elementary Japanese II** **4 (4-0-8)****Prerequisites:** Placement test or ICGL 111 Elementary Japanese I

Kanji characters (approximately 50); fundamentals of basic Japanese grammar concepts (particles, verbs of giving and receiving, na-adjective-ending sentences, i-adjectives-ending sentences, non-past and past tenses, and classifiers); scaffolding of basic vocabulary; basic communication about daily life topics; designing written products in the target language; expressing simply points of view, describing people and daily life activities; comparing cultures

**ICGL 113 Elementary Japanese III** **4 (4-0-8)****Prerequisites:** Placement test or ICGL 112 Elementary Japanese II

Kanji characters (approximately 50); fundamentals of basic Japanese grammar concepts (verb conjugation (masu-form, te-form, nai-form, and dictionary form), and related sentence patterns; polite style of speech, and plain style of speech, particles); scaffolding of basic vocabulary; basic communication about various topics; designing written products in the target language; expressing points of view, describing people and various activities; comparing cultures

**ICGL 121 Elementary French I** **4 (4-0-8)****Prerequisites:** Placement test

Fundamentals of basic French grammar (pronouns, present tense conjugation, gender/number, adjectives, prepositions); scaffolding of basic vocabulary; basic communication about personal topics (self and others); identifying and describing French speaking countries; designing written products in the target language; expressing existence, preferences and agreement; comparing cultures

**ICGL 122 Elementary French II** **4 (4-0-8)****Prerequisites:** Placement test or ICGL 121 Elementary French I

Fundamentals of basic French grammar (present and future tense, adjective gender, place & agreement, more complex prepositions, more complex questions); scaffolding of simple vocabulary; simple communication about daily life topics (in France and in their country); designing written products in the target language; expressing simply point of view, describing people and daily life activities; comparing cultures

**ICGL 123 Elementary French III** **4 (4-0-8)****Prerequisites:** Placement test or ICGL 122 Elementary French II

Fundamentals of more complex French grammar (present and future tense, adjective gender, place & agreement, more complex prepositions, questions and past tense notions); scaffolding of more complex vocabulary; longer communication about daily life topics (in France and in their country); designing written products in the target language; expressing point of view, describing people and daily life activities; comparing cultures

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**ICGL 131 Elementary Chinese I** **4 (4-0-8)****Prerequisites:** Placement test

The Chinese phonetic system (Pinyin); the Chinese basic writing system (Stroke order); Chinese characters (approximately 100); fundamentals of basic Chinese grammar (interrogative pronouns, the 的 particle, yes/no questions with 吗, demonstrative pronouns, classifiers, adverbs 也, 都); scaffolding of basic vocabulary; basic communication about personal topics (self and others); describing China; designing written products in the target language; expressing existence, preferences and agreement; comparing cultures

**ICGL 132 Elementary Chinese II** **4 (4-0-8)****Prerequisites:** Placement test or ICGL 131 Elementary Chinese I

The Chinese phonetic system (Pinyin); the Chinese writing system; Chinese characters (approximately 100); fundamental Chinese grammar concepts (interrogative pronouns, classifiers, the “的” particle, “的” phrases, adverbials, continuous action sentence structures and reduplication of verbs); scaffolding of basic vocabulary; basic communication about daily life topics; designing written products in the target language; expressing simply points of view, describing people and daily life activities; comparing cultures

**ICGL 133 Elementary Chinese III** **4 (4-0-8)****Prerequisites:** Placement test or ICGL 132 Elementary Chinese II

The Chinese phonetics (Pinyin); Chinese characters (approximately 150) ; Fundamentals of basic Chinese grammar concepts (interrogative pronouns, modal verbs, complex sentences, the modal particle “le” (了), complements of state, complements of result, complements of duration); scaffolding of basic vocabulary; basic communication about various topics; designing written products in the target language; expressing points of view; telling directions; describing oneself and other people’s abilities; comparing cultures

**ICGL 141 Elementary Spanish I** **4 (4-0-8)****Prerequisites:** Placement test

Fundamentals of basic Spanish grammar (pronouns, present tense conjugation, gender/number, adjectives, prepositions); scaffolding of basic vocabulary; basic communication about personal topics (self and others); identifying and describing Spanish speaking countries; designing written products in the target language; expressing existence, preferences and agreement; comparing cultures

**ICGL 142 Elementary Spanish II** **4 (4-0-8)****Prerequisites:** Placement test or ICGL 141 Elementary Spanish I

Fundamentals of basic Spanish grammar (pronouns, present tense conjugation, reflexive verbs, gender/number, adjectives, prepositions); scaffolding of basic vocabulary; basic communication about personal topics (self and others); identifying and describing Spanish speaking countries; designing written products in the target language; expressing existence, preferences and agreement; talking about daily habits

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**ICGL 143 Elementary Spanish III 4 (4-0-8)****Prerequisites:** Placement test or ICGL 142 Elementary Spanish II

Towns, quarters and cities; directions; past experiences; present perfect tense, past tense indefinido; verbs ser, estar and hay; vocabulary of places; time markers for past tense; verbs empezar a+ infinitive; verbs ir / irse

**ICGL 160 Introduction to Thai Language and Culture 4 (4-0-8)****Prerequisites:** -

Fundamental vocabularies and structures for various communicative situations in everyday use and introduce basic aspects of Thai culture

**ICGL 161 Elementary Thai I 4 (4-0-8)****Prerequisites:** Placement test

Listening and speaking skills on the following topics: introducing oneself one's friend and family, basic food and drink ordering, places, directions, transportation, buying tickets, clothing items, colours, and sizes, bargaining, counting and using classifiers, reading and writing Thai consonants, vowels placed after, before, above, and below the consonants, Thai numbers, live and dead syllables

**ICGL 162 Elementary Thai II 4 (4-0-8)****Prerequisites:** Placement test or ICGL 161 Elementary Thai I

Listening and speaking skills on the following topics: one's schedule, making appointments, favourite leisure activities, ordering food, drinks and desserts with special requests, presentation of one's plan for activities during school break, continuation of Elementary Thai I in reading and writing skills, consonant clusters, tone marks, words with special spelling rules, reading short paragraphs

**ICGL 163 Elementary Thai III 4 (4-0-8)****Prerequisites:** Placement test or ICGL 162 Elementary Thai II

Listening and speaking skills on the following topics: going to see the doctor, looking for a house for rent, seasons, travel and festivals

**ICGL 170 Diversities in Multilingual Societies 2 (2-0-4)****Prerequisites:** -

Multilingual societies; cultural diversities; cross-cultural communication; Chinese-, German-, French-, Japanese, and Spanish-speaking cultures; Chinese-, German-, French-, Japanese, and Spanish languages; cultural conflicts; cultural gaps; cultural shocks; cultural discoveries; cultural awareness; cultural harmonies; foreign visitors to Thailand; working with Thai people

**ICGL 201 Pre-intermediate German 4 (4-0-8)****Prerequisites:** ICGL 103 Elementary German III or Placement Test

Clothing and accessory, appearance, shopping for clothes and accessory family members, present and past families, statistics, festivities and culture, dates, presents; comparative forms of adjectives, modal verbs past tense, dependent clauses (cause and condition), personal pronouns, accusative and dative cases

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**ICGL 202 Pre-intermediate German II 4 (4-0-8)****Prerequisites:** ICGL 201 Pre-Intermediate German I or Placement Test

Media usage and Internet-shopping, advertisement, expressing surprise, meeting someone for the first time, country and city life, cultural capitals in Europe; direct and indirect questions, adjective without article, relative clause and pronoun, modal verb in simple past, sub-clause with als

**ICGL 203 Pre-intermediate German III 4 (4-0-8)****Prerequisites:** ICGL 202 Pre-Intermediate German II or Placement Test

Professional biographies, job announcements, festivities and customs, emotions, movie synopsis, products and inventions; reasons with weil and denn, nominalization, preposition with dative, sub-clause with wenn and um zu, passive voice

**ICGL 211 Pre-intermediate Japanese I 4 (4-0-8)****Prerequisites:** ICGL 113 Elementary Japanese III or Placement Test

Kanji characters (approximately 50); fundamentals of basic Japanese grammar concepts (verb conjugation (masu-form, te-form, nai-form, and dictionary form), and related sentence patterns; polite style of speech, and plain style of speech, particles); scaffolding of basic vocabulary; basic communication about various topics; design of written products in the target language; expressing points of view, describing people and various activities; comparing cultures

**ICGL 212 Pre-intermediate Japanese II 4 (4-0-8)****Prerequisites:** ICGL 211 Pre-Intermediate Japanese I or Placement Test

50 Kanji characters; explaining the state of things; describing necessary things to do in advance as preparations for the future; expressing own intentions, plans, and schedule; expressing own guess and inference; asking someone to take a message or conveying a message; stating standards or norms, when one explains the manner of doing a certain action or work; explaining a condition in which a certain action is performed; stating everyday habitual actions

**ICGL 213 Pre-intermediate Japanese III 4 (4-0-8)****Prerequisites:** ICGL 212 Pre-Intermediate Japanese II or Placement Test

50 Kanji characters; expressing judgments under certain conditions; stating a purpose or an aim; describing changes in human ability and conditions; describing an action performed by a third person, or an action when one feels annoyed or troubled, using passive verbs; expressing something with the most important information emphasized; describing natural phenomena, happenings, and events, together with their causes; clearly telling what speakers consider as questions, by using a question with an interrogative as a component of a sentence; using appropriate expressions for giving and receiving of things and actions, depending on the relationship between the giver and the receiver, in terms of social status; telling usage, evaluation, necessary time, expense, etc

**ICGL 221 Pre-intermediate French I 4 (4-0-8)****Prerequisites:** ICGL 123 Elementary French III or Placement Test

Developing further knowledge of French grammar at the pre-intermediate level (present, past and future, more complex interrogative sentence, negative sentence, comparative and pronouns); scaffolding of more complex vocabulary; more complex and longer communication about personal needs, solving simple problems; interacting in predictable context topics in French; designing written products in the target language; expressing points of view, giving simple advices and interacting in daily life activities; comparing cultures

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**ICGL 222 Pre-intermediate French II 4 (4-0-8)****Prerequisites:** ICGL 221 Pre-Intermediate French I or Placement Test

Extending further knowledge of French grammar at the pre-intermediate level (hypotheses and conditions, future, conditional, pronouns, direct and indirect speech, imperative and gerundive); scaffolding of more complex vocabulary; longer communication about solving problems and expressing feelings; commenting on attitudes and justifying actions in predictable context topics in French; comparing cultures

**ICGL 223 Pre-intermediate French III 4 (4-0-8)****Prerequisites:** ICGL 222 Pre-Intermediate French II or Placement Test

Developing further knowledge of French grammar at the pre-intermediate level (comparative, complex interrogative sentence, gerundive, subjunctive present in regular and irregular forms, passive voice); scaffolding of more complex vocabulary; longer communication about personal feelings, wishes and hopes; complaining and talking about difficulties, suggesting solutions; comparing cultures

**ICGL 231 Pre-intermediate Chinese I 4 (4-0-8)****Prerequisites:** ICGL 133 Elementary Chinese III or Placement Test

Chinese characters (approximately 300); identifying pre-intermediate level Chinese grammar concepts (complements of duration, expressing approximate numbers, comparative sentences, complements of quantity, exclamatory sentences); developing listening, speaking, reading and writing skills through an integrated approach; communication about various topics; comparing two cities in various aspects; comparing the seasons in China and Thailand; activities and festivals in each season; organizing a trip

**ICGL 232 Pre-intermediate Chinese II 4 (4-0-8)****Prerequisites:** ICGL 231 Pre-intermediate Chinese I or Placement Test

Chinese characters (approximately 300); identifying pre-intermediate level Chinese grammar concepts (past experiences, complements of frequency, the structure of 是.....的, reduplication of adjectives, S-P phrases, complements of result II, simple passive sentences); developing listening, speaking, reading and writing skills through an integrated approach communication about various topics; sports or entertainment; expressing unlucky stories; describing appearance and clothes; Chinese style weddings (1)

**ICGL 233 Pre-intermediate Chinese III 4 (4-0-8)****Prerequisites:** ICGL 232 Pre-intermediate Chinese II or Placement Test

Chinese characters (approximately 300); identifying pre-intermediate level Chinese grammar concepts (continuous actions or states, Chinese style weddings, Chinese construction quadrangles, existence emergence sentences, “把”sentence I, “把”sentence II, “被”sentence, adverb “又”) ; developing listening, speaking, reading and writing skills through an integrated approach; communication about various topics; travelling by airplane; Beijing Opera performances; outdoor activities; reunions with old friends

**ICGL 241 Pre-intermediate Spanish I 4 (4-0-8)****Prerequisites:** ICGL 143 Elementary Spanish III or Placement Test

Habits; pronominal verbs; porque/para; furniture and parts of the house; appearance; family, irregular verbs in present tense; present progressive

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**ICGL 242 Pre-intermediate Spanish II** **4 (4-0-8)****Prerequisites:** ICGL 241 Pre-Intermediate Spanish I **or** Placement Test

Leisure activities; intentions and projects; pain, discomfort and symptoms; parts of the body; vocabulary of food; ir a+ infinitive; present perfect; differences between ser and estar; personal pronouns for objects; verb gustar

**ICGL 243 Pre-intermediate Spanish III** **4 (4-0-8)****Prerequisites:** ICGL 242 Pre-Intermediate Spanish II **or** Placement Test

Past habits, customs and circumstances; past and present actions; advice, instructions (imperative); future situations and actions, conditions, hypotheses; past experience; imperfect verb tense; indefinido verb tense; present perfect verb tense; contrast of past tenses

**ICGN 105 Ecology, Ecosystems and Socio-Economics in Southeast Asia** **4 (3-2-7)****Prerequisites:** -

Human impacts on Southeast Asian ecology; human impacts on Southeast Asian's biodiversity and natural resources; fundamental ecological and resource management principles; current sustainable development issues; sustainable development practices for Southeast Asia

**ICGN 107 The Chemistry of Everyday Life** **4 (4-0-8)****Prerequisites:** -

Portable electronics; the air we breathe; radiation from the sun; climate change; energy from combustion; energy from alternative sources; water; polymers and plastics; nutrition; health and medicine; genes and life

**ICGN 108 Essentials of Culinary Science for Food Business** **4 (3-2-7)****Prerequisites:** -

Changes during preparation, heating, and storage of raw materials and of finished products, foodservice and commercial packaged food industries; chemical, sensory, and nutritional natures of food, food safety concepts, changing trends and interests, legal requirements of food establishment

**ICGN 109 Food for Health** **4 (4-0-8)****Prerequisites:** -

Knowledge of general human nutritional requirements; the health benefits of various foods; quality and safety of the various types of food including processing; health and nutritional value

**ICGN 110 Maker Workshop** **4 (3-2-7)****Prerequisites:** -

Mechanical design consideration, 3D drawing, safety in design; motion in 1 and 2 Dimension; sound and oscillation motion, mechanical properties of materials; basic electronics, circuit analysis, soldering; microcontroller, basic programming

**ICGN 111 Physics for CEO** **4 (4-0-8)****Prerequisites:** -

Basic concepts of physics impacting individuals and society on a daily basis: physical quantities, Newtonian mechanics and dynamics, energy and heat, electricity and magnetism, light and sound, and the electromagnetic spectrum

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**ICGN 112 Stargazer** **4 (3-2-7)****Prerequisites:** -

Basic ideas of astronomy, astrophysics and cosmology; the progress of human understanding of the universe; the impact of scientific method on astronomical observation; the Earth & Moon; the Solar System; the lifecycle of stars; Black Holes; galaxies; and the current understandings about the origins and future of the universe

**ICGN 113 Plants, People and Poisons** **4 (4-0-8)****Prerequisites:** -

The plant world; the way plants grow and reproduce; modern technologies used for improving agricultural methods; the basics of plant biology; the distinctions among major groups of plants; the social implications of plant use and abuse

**ICGN 114 The Scientific Approach and Society** **4 (4-0-8)****Prerequisites:** -

Scientific literacy; the process of science discovery; verification, its limitation, and the influence in various disciplines; human and animal research ethics; the critical analysis of current scientific articles; the life cycle of scientific knowledge; modeling in science

**ICGN 115 Human Evolution, Diversity and Health** **4 (4-0-8)****Prerequisites:** -

Changing modern society; human ability; human body; human distinctiveness; human diversity; human evolution; human health; human origins; primate diversity; scientific advancements

**ICGN 116 Understanding and Visualizing Data** **4 (3-2-7)****Prerequisites:** -

An introduction to data analytics; roles and examples of the data-driven decision making; technology landscape; data kinds and types; data sources and collection techniques; data storage and standard formats; data processing workflow; summary from data; different types of visualization; data visualization tools

**ICGN 118 Everyday Connectivity** **4 (4-0-8)****Prerequisites:** -

The Internet, computer networks, and the World Wide Web (W3) in the daily life and organizations; troubleshooting small network problems; identifying threats and avoiding dangers online; finding credible information on the Web; online communication tools, such as the social media and email, for professional branding; the basic e-business concepts and tools

**ICGN 119 Computer Essentials** **4 (4-0-8)****Prerequisites:** -

Developing the digital literacy relating to the computer literacy and the information literacy; the computer hardware and its general functions; the operating systems; software packages and their daily use; computer security; the ethical use of the intellectual property

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**ICGN 120 Chemistry of Cosmetics and Dietary Supplements 4 (4-0-8)****Prerequisites:** -

Chemistry of cosmetic products; basic sciences behind common aesthetic medical procedures; basic biochemistry of human skins; basic functioning of vitamins, minerals, and specialty supplements

**ICGN 123 The Earth's Dynamic Structure 4 (3-2-7)****Prerequisites:** -

Introducing fundamental concepts and applying general geology at the beginning level; basic concepts of physical geology, emphasizing on surficial and deep earth processes, including minerals; rocks and their formations, crustal deformation, plate tectonics; weathering and erosion, formation of landscapes, geological resources and environmental geology

**ICGN 124 Climate Change and Human Society 4 (3-2-7)****Prerequisites:** -

Human activities and the global climate; consequences for human society; consequences for the essential life support systems; perspectives on human health and diseases; adapting to global climate change; mitigating support systems; perspectives on human health and diseases; adapting to global climate change; mitigating global climate change; an optional field visit included

**ICGN 125 Games and Learning 2 (2-0-4)****Prerequisites:** -

History of games, combinatorial games, games of chance, game theory

**ICGN 126 Plant Society 2 (2-0-4)****Prerequisites:** -

People interacting with the plant and fungal worlds; differences among cultures and the indigenous uses of medicinal, textile and food plants; the benefits, problems and social implications of their use; hands-on experiences with techniques and methods used by field scientists

**ICGN 127 Practical Mathematics 2 (2-0-4)****Prerequisites:** -

Fibonacci numbers and the golden ratio, voting and election, data interpretation, probability, cryptography, financial mathematics

**ICGN 128 Climate Emergency, Biodiversity Crisis, and Humanity at Risk 2 (1-2-3)****Prerequisites:** -

Anthropogenic activities; biodiversity crisis; biodiversity loss; biological diversity; climate change; climate crisis; climate emergency; ecosystem functions; harmful and unsustainable practices; humanity at risk; mitigation and adaptation; threats, impacts and consequences

**ICGN 129 Programming for Problem Solving 4 (4-0-8)****Prerequisites:** -

Influence and impact of computer science on everyday life and society; the problem solving process in programming: abstraction, problem decomposition, algorithms; programming basic; privacy, ethical, and legal issues related to the software development

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**ICGN 130 Cryptography: The Science of Making and Breaking Codes** **2 (2-0-4)****Prerequisites:** -

Classical cryptography; cryptosystems; the shift cipher, the substitution cipher, the Hill cipher, the permutation cipher, the stream ciphers; the RSA encryption; cryptanalysis

**ICGN 131 Digital Search Literacy** **2 (2-0-4)****Prerequisites:** -

The Information literacy relating to search term, the evaluation of the internet site and the quality of data; use of information; the ethical use of the intellectual property; the use of computer platforms; software, online services

**ICGN 132 Digital Security and Privacy** **2 (2-0-4)****Prerequisites:** -

Privacy rights of data and safeguarding personal information by the protection organizations, anonymizing of data, computer security relating to computer platforms, network, internet and smart devices; password managements and shortcomings, authentication factors and technology

**ICGN 133 E-Business: Technology and Digital Strategies** **4 (4-0-8)****Prerequisites:** -

The Landscape of technologies in the digital enterprise and e-business; internet-based staples such as web hosting, domain-name acquisition, the social media, the payment systems; electronic business models and digital strategies; emerging trends in technology; legal and ethical issues

**ICGN 134 Introduction to Artificial Intelligence** **2 (2-0-4)****Prerequisites:** -

The artificial intelligence terminology; machine learning types and techniques; guidelines for building the machine learning model; neural networks; an evaluation in the AI system; the real-world artificial intelligence; the future trends of the artificial intelligence; dangers and threats of the artificial intelligence

**ICGP 101 American Flag Football** **1 (0-2-1)****Prerequisites:** -

A ball based sport course emphasizing techniques, non-contact game play, including dodging, throwing, and catching and development of teamwork management, communication, and terminology

**ICGP 102 Badminton** **1 (0-2-1)****Prerequisites:** -

A racket based sport course stressing technique, strategies, grip, serving, positioning and movement, game play in both singles and doubles

**ICGP 103 Basketball** **1 (0-2-1)****Prerequisites:** -

A ball based sport course emphasizing attentiveness, dribbling, passing, shooting, rebounding, ball control, game play, and development of game strategies

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**ICGP 104 Body Fitness** **1 (0-2-1)****Prerequisites:** -

A comprehensive course in one or more exercise techniques: strength/resistance, cardio, plyometric, stretching, high-intensity interval training, and calisthenics; to maintain health and wellness

**ICGP 105 Cycling** **1 (0-2-1)****Prerequisites:** -

A course designed on cycling instruction for safety, fitness, riding techniques, posture, communication, knowledge of equipment and hazards, for recreational and commuter cycling

**ICGP 106 Discover Dance** **1 (0-2-1)****Prerequisites:** -

A dance based course of current forms and techniques in one or more categories: African/Jazz, Worldwide Dances/Latin Dances, Professional Performance Dance, Modern Dance, Hip-hop/Funk

**ICGP 107 Golf** **1 (0-2-1)****Prerequisites:** -

A club based game course designed on developing correct grip, stance, posture, swing, and knowledge of equipment, rules, regulations, and etiquette

**ICGP 108 Mind and Body** **1 (0-2-1)****Prerequisites:** -

A course stressing meditation postures, techniques, movement, and breathing to achieve positive mental state

**ICGP 109 Selected Topics in Sports** **1 (0-2-1)****Prerequisites:** -

Learning concepts, rules and strategies through planned and structured movements by way of sport or activity to enhance a healthy lifestyle

**ICGP 110 Self Defense (Striking)** **1 (0-2-1)****Prerequisites:** -

External martial arts (striking) course emphasizing hard physical impact and exertion, muscular strength and tension, maximizing speed and power, through body coordination

**ICGP 111 Self Defense (Grappling)** **1 (0-2-1)****Prerequisites:** -

Internal martial arts (grappling) course stressing timing, awareness, precision, and techniques, using body leverage for throws, take downs, pins, and submissions

**ICGP 112 Soccer** **1 (0-2-1)****Prerequisites:** -

A ball based sport course stressing alertness, ball control, including dribbling, passing, trapping, shooting, ball movement, game play, and development of strategies through drills and competitive play

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|  |                  |
|--|------------------|
| <b>ICGP 113 Social Dance</b>   | <b>1 (0-2-1)</b> |
| <b>Prerequisites:</b> -  |                  |
| A dance based social sport or activity course of choreographed movements, styles and regulations from International Ballroom (Standard) and International Latin dances   |                  |
| <b>ICGP 114 Swimming</b>   | <b>1 (0-2-1)</b> |
| <b>Prerequisites:</b> -  |                  |
| A water based sport course stressing swimming techniques, breathing, and knowledge of buoyancy, propulsion, and water safety   |                  |
| <b>ICGP 115 Tennis</b>   | <b>1 (0-2-1)</b> |
| <b>Prerequisites:</b> -  |                  |
| A racket based sport course of techniques, strategy, grip, serve, game play, ball tracking, timing, shot control, through drills, live ball hitting sessions, and competition  |                  |
| <b>ICGP 116 Volleyball</b>   | <b>1 (0-2-1)</b> |
| <b>Prerequisites:</b> -  |                  |
| A ball sport course emphasizing passing, setting, serving, developing strategies, positions, game play, teamwork management, and communication   |                  |
| <b>ICGP 117 Physical Fitness Plan</b>  | <b>2 (2-0-4)</b> |
| <b>Prerequisites:</b>  |                  |
| Concepts and practices of Physical Fitness design for a lifelong healthy lifestyles; basic exercise principles and elements of a workout; improvement of cardiorespiratory system and muscular endurance through strength and flexibility training; nutrition for physical activities; practical way to successfully achieve a physical fitness plan with the help of technology   |                  |
| <b>ICGS 102 Business Sustainability and the Global Climate Change</b>  | <b>4 (4-0-8)</b> |
| <b>Prerequisites:</b> -  |                  |
| Study on the role of business in the society; the basic concept of sustainability; global governance; sustainable development; social inequalities and social inclusion; environment sustainability; climate change; climate change mitigation; climate change adaptation; green marketing; business sustainability  |                  |
| <b>ICGS 103 Economics in Modern Business</b>   | <b>4 (4-0-8)</b> |
| <b>Prerequisites:</b> -  |                  |
| Forces of demand and supply, elasticity, opportunity cost; market structures, pricing strategy, business enterprise, consumers behavior; Thai economy, world economy, globalization and technology, profit maximizing, firm and organization, government policies; business analysis and managerial decision-making, competitive advantage, dynamic business environment   |                  |
| <b>ICGS 104 Essentials of Entrepreneurship</b>   | <b>4 (4-0-8)</b> |
| <b>Prerequisites:</b> -  |                  |
| Creating new businesses, capturing new markets, enhancing organizational effectiveness; entrepreneurship theories and frameworks, practices of promoting and managing start-ups; the life-cycle of an entrepreneurial venture, concept implementation; entrepreneurial pathway, customer analysis, integrated marketing, funding, securing and managing capital, human capital management under the disruptive environment |                  |

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**ICGS 106 Fashion and Society****4 (4-0-8)****Prerequisites: -**

Design elements of fashion, fashion terminology, fashion reflecting its temporal and spatial context, fashion and the development of art, fashion is a cultural expression, fashion is creativity, fashion needs customers' approval and endorsements, fashion and consumer behaviour, fashion and consumerism, and ethical issues of fashion

**ICGS 111 Exploring Religions****4 (4-0-8)****Prerequisites: -**

Major religions in the world: Hinduism, Buddhism, Sikhism, Chinese religions, Shinto, Judaism, Christianity, and Islam; origins of the three religious groups, religions arising in India, religions of China and Japan, and the religions of the family of Abraham; similarities and differences; contemporary new religious developments and related issues; religious diversities present in the world

**ICGS 112 Geography of Human Activities****4 (4-0-8)****Prerequisites: -**

Global Learning Initiative class; a systematic study of patterns and processes of geography; understanding human perceptions of surroundings and alterations of the earth's surface; diversity of cultures, beliefs, and ways of life; establishing global unity and harmony; recognition of equality and respect between persons in diverse regional geographical settings; raising awareness of one's own humanity and human responsibilities; the interrelationship between humans and the spaces they create; human activity as interdisciplinary by nature; the physical and socially created environment people live in; human interactions shaping the human understanding of the environment; the utility of resources; phenomena on the earth's surface relating to human actions; concepts and geographical methodologies; examination of social organizations and environmental consequences; a broad dynamic domain reflecting such developments and issues as social bias, discrimination, and stereotyping in the contemporary world; associating a critical geographical perspective on the past, present and future achievement of the social world

**ICGS 113 Perspectives on the Thai Past****4 (4-0-8)****Prerequisites: -**

The origins of the Thai people in pre-historic times to the late twentieth century; an alternative view incorporating the different regions and various ethnic groups making up present-day Thailand; key issues in Thai history; an analysis of the classics of Thai historiography; an evaluation and interpretation of a range of primary sources dealing with the Thai past; an understanding of how history is written

**ICGS 115 Sociology in the Modern World****4 (4-0-8)****Prerequisites: -**

Sociology as a principle for understanding the modern world, life appreciation; a field of study explaining social, political, and economic phenomena; social interactions and social organizations; sociological perspectives; methodologies and sociological insights; topics relevant to the modern world including culture, socialization process, family, social inequality, gender relations, racism, ageism, modern media, and social change; global social problems; evaluation of societies; influencing and improving life's quality

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**ICGS 118 Skills in Dealing with People Across Cultures** **4 (4-0-8)****Prerequisites:** -

The development of skills in dealing with people across cultures, covering topics such as: identity formation and conflict; ethics and moral behavior; values and communication across cultures; culture and tourism; culture and work motivation; culture in educational institutions

**ICGS 121 Abnormal Colleagues: How Do I Make This Work?** **4 (4-0-8)****Prerequisites:** -

The stigma of psychological issues; the fear of the workplace gossips and job security; an avoidance of getting treatment and counseling; a recognition of various disorders and devising strategies to effectively communicate and work with people; improving the workplace productivity and relationships

**ICGS 123 Tourism Concepts and Practices** **4 (4-0-8)****Prerequisites:** -

Exploring tourism as a geographical system approach and looking at the characteristics of tourism and the demand side first by examining driving forces shaping the strong growth of global tourism and Thailand tourism; the reasons for travelling and selecting a travel destination; examining the roles of tourism organisations both in the public and private sectors especially national tourism organisations, travel suppliers, and travel intermediaries; introducing the concept of community art event and creative tourism for promoting cultural diversity and social inclusion; and special interest tourism in Thailand

**ICGS 125 American History, Popular Media and Modern Life** **4 (4-0-8)****Prerequisites:** -

Exploring modern American history through the lense of popular media and the state's power projection through hard and soft power; introducing the concept of life in the roaring twenties and the Great Depression, investigating available media sources during the war time from World War I, World War II, and the Cold war; understanding historical events impacting the American life including feminist and LGBT movement, the Vietnam War, African-American civil rights movement; discussing the importance modern digital media platforms and social media

**ICGS 126 Introduction to Psychology** **4 (4-0-8)****Prerequisites:** -

Human behaviour and mental functioning; the nervous system; consciousness; sensation and perception; psychogenetics, life-span development; thinking, memory, language, conditioning and learning, motivation, personality, and stress

**ICGS 127 Positive Psychology** **4 (4-0-8)****Prerequisites:** -

Concepts of success; societies emphasis on financial wealth and the accumulation of material things versus the importance of having a loving family, developing rewarding relationships with friends and colleagues; career achievement and the respect of others; regularly feeling positive emotions, developing morally and spiritually, engaging in worthwhile activities; staying physically fit; success as a multi-faceted and intensely personal concept; the exploration of well-being from the field of positive psychology; developing understanding of what comprises a successful life with an emphasis on greater self-expression and overall well-being

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**ICGS 128 Global Gastronomy and Cuisines****4 (4-0-8)****Prerequisites:** -

Understanding the interconnection between gastronomy, culture, society, and local and global food systems; highlighting the global food production and consumption trends; examining diverse cultures through the food and food preparation; emphasis on multicultural context in cooking practices; understanding the current trend in various healthy diets and cuisines

**ICGS 129 Tea Studies****2 (2-0-4)****Prerequisites:** -

What is tea, main tea varieties, main tea types, climatic conditions for sustainable growth of tea, important tea growing countries and regions, tea processing, tea and health, tea tasting and evaluation, tea utensils and preparation, tea and food pairing

**ICGS 130 Political Science****4 (4-0-8)****Prerequisites:** -

The understanding of politics and political systems of the current world; interactions and connections of different ideas; systems of thought and conflict in contemporary society; analysis of political phenomenon; collecting information, organizing information, organizing in groups, analyzing information, presenting clearly and concisely on political phenomenon, state typology, political taxonomy, ideological persuasion, voting systems and outcomes

**ICGS 131 Introduction to International Studies****4 (4-0-8)****Prerequisites:** -

The field of international studies; interdisciplinary approaches; economic globalization; the Bretton Woods system and neoliberalism; political globalization; the United Nations system, the International Court of Justice, and Human Rights; cultural globalization; migration diaspora and transnationalism; the internet and global media; development; modernization and dependency; Global North and Global South; traditional and human security; food; health; energy; environment

**ICGS 132 Career Preparation in a Globalized World****4 (4-0-8)****Prerequisites:** -

Trends in national, regional and international job markets; self-assessment on career options; career plan creation; principles in business communication; job search process and tools; resume, cover letters; interview preparation and simulation; dimensions of culture

**ICGS 133 Foundation of Mediterranean Cultures****4****(4-0-8) Prerequisites:** -

The Mediterranean as a source of Western culture; Egypt and the Fertile Crescent; Mohammed and the Muslim World; the Promised Land: Moses' Israel; Jesus and the birth of Christianity; Greek history and civilisation; Ancient Italy; arts in Florence and Venice; Modern Italy history; Italian food; the World of Fashion in modern Italy; Italian film; Italian music

**ICGS 134 Is Democracy Good?****4 (4-0-8)****Prerequisites:** -

Democracy as a political system and a 'normal' form of governance throughout the world, especially since the transitional Third Wave of democratization ending in the 1990's; democracy as a highly contested term; forms of governance; contestations in Thailand; arguments of Thai Style Democracy; defining democracy; different forms of democracy; local perception of democracy; critical debate on the merits of democracy; functionality; theoretical and in pragmatic situations; qualitative and quantitative analysis; democratic performance

**ICGS 135 Entrepreneurial Accounting 4 (4-0-8)****Prerequisites: -**

Fundamental accounting concepts; financial statements for small enterprises; financial statement analysis; cost-volume-profit analysis; management decision making; business taxation

**ICGS 136 Social and Health Issues in Thailand 4 (3-2-7)****Prerequisites: -**

Social and health issues in Thailand; experiential learning approach; site visits to various government and non-governmental organizations; small groups work; identification of issues and characterize the factors affecting the issues; prioritization of the urgency of the issues and determination of the possible solutions; proposing action plans addressing the issues

**ICGS 137 Witchcraft and Gender Representation 4 (4-0-8)****Prerequisites: -**

The term "witch" used to suppress women: accusations of witchcraft to eliminate strong, assertive women; accusations of demonic or magic sources demeaning to women; European, American and African use of witch accusations to stifle women; other forms of oppression of women: the Chinese foot binding, the Indian Suttee, the African genital mutilation; the meaning of gender; gender vs sex; marginalization of women in patriarchal societies; women's rights in the contemporary world; differing concepts of women's rights; global and national enforcement of women's rights; organizations concerned with gender and women's issues: UN, ILO, etc; an application of gender rights to other genders like LGBTQ

**ICGS 138 Business Event Essentials 4 (4-0-8)****Prerequisites: -**

An introduction to business event industry, meetings, incentive travels, conventions, exhibitions; decision making criteria, special events, business event organization management, venue management, logistics for business event industry, stakeholders in business event industry and local community engagement, standards in business event industry, ethics for business event professionals

**ICGS 139 Leadership and Change for a Global Society 4 (4-0-8)****Prerequisites: -**

Concepts and practices for leadership development; developing leadership skills and challenges of change in a global society; the need, vision, initiation for change, teamwork and collaboration for the efficient management

**ICGS 140 Fake News, Censorship and the Politics of Truth 4 (4-0-8)****Prerequisites: -**

Internet and hyper news flows; patterns of information consumption; knowledge of information authenticity; socio-political effects of 'fake news'; impacts and methods of data collection; censorship and contested 'digital space', fact-checking, source evaluation and trust-building online; social power of algorithms, quantification and profiling; citizens journalism and the traditional media

**ICGS 153 Social Media Management for Service Sector 2 (2-0-4)****Prerequisite: -**

Introduction to digital business transformation in service sector, social consumers and social communities, social media landscape and ecosystem; social media strategy for service sector; digital tools for social media management; social commerce; social media analytical tools and measurement



**ICGS 154 Introduction to Crisis Management in Service Businesses 4 (4-0-8)****Prerequisite:** -

Basics of crisis management, crisis preparedness and risk management, methods of analysis and prognosis, strategic measures of crisis management applied in service businesses, crisis planning and organizational measures applied in service businesses, crisis containment, crisis recovery, crisis communication

**ICGS 155 Pathway to Purpose: Life Design and Self-Exploration 4 (4-0-8)****Prerequisite:** -

Assessment of personal strengths, weaknesses, and areas for improvement; individual values, beliefs, and life goals; goal setting; self-awareness and emotional intelligence; life design

**ICLL 100 Self Development 2 (2-0-4)****Prerequisites:** -

Life skills for 21st century workplace through learning or training activities in various topics including creativity, growth mindset, leadership, and emotional intelligence or other selected personal development activities approved by the academic advisor and Curriculum Administrative Committee

**ICLL 101 Professional Development 2 (2-0-4)****Prerequisites:** -

Professional skills for 21st century workplace through learning or training activities in various topics including innovation management, start-up business, agile workplace or other selected professional development activities approved by the academic advisor and Curriculum Administrative Committee

**ICLL 102 Skills for a Digital World 2 (2-0-4)****Prerequisites:** -

Twenty-first century skills for digital economy through learning or training activities in various topics including e-Commerce, Blockchain technology, and data science, or other selected activities approved by the academic advisor and Curriculum Administrative Committee

**ICMA 100 Foundation Mathematics 0 (4-0-0)****Prerequisites:** Placement test

Expressions and equations; linear functions; polynomials and nonlinear functions; radical and rational functions; the data analysis

**ICME 100 English Resource Skills 0 (4-0-0)****Prerequisites:** Placement test

A remedial course preparing students to read and write academic English at a level suitable for entering the Intermediate English Communication I

**ITCT 101 Computing Technologies 4 (4-0-8)****Prerequisites:** -

Current trends and applications of computing technologies in various areas of computer systems; networking and security; artificial intelligence; data engineering and science; interactive and multimedia computing; information systems development

**ITCT 111 Programming for Creative Technology 4 (4-0-8)**

**Prerequisites:** ITCT 101 Computing Technologies

Procedural program constructs and idioms such as sequencing, conditional selection, iteration, and functional abstraction; computational representation and manipulation of forms such as point, line, shape, and color; constructs and patterns for working with static, dynamic, and interactive forms

**ITCT 201 Multimedia Systems Lab 2 (0-4-2)**

**Prerequisites:** ITCT 101 Computing Technologies

Practices on applying a variety of techniques for developing multimedia systems; development of web interfaces; 2D image creation; putting special effects on 2D images; adaptation and scaling for web graphics; published media and video; image processing software; audio and video encoding; writing software for creating animation; adoption of new technology in the multimedia system and the interest of faculties and students

**ITCT 241 Computational Problem Solving 4 (4-0-8)**

**Prerequisites:** ITCT 111 Programming for Creative Technology, ICCT 101 Mathematics for Creative Technology I

Basic problem solving skills and techniques; problem identification and inductive reasoning; Plan-Do-Check-Act (PDCA) in problem solving; abstractions and representations; algorithm design and verbal reasoning; quantifying speed and size; sorting and searching; data structuring layouts, including lists, trees, and tables

**ITCT 301 Digital Storytelling and Machinima 4 (4-0-8)**

**Prerequisites:** ITCT 111 Programming for Creative Technology, ITCT 201 Multimedia Systems Lab

Principles and technologies of storytelling; Influences and impact of stories; storyboard and scripting; camera setup; film making; tools for digital storytelling; visual novels; introduction to Machinima; Machinima production tools; scripting motion and animation

**ITCT 311 Computer Animation 4 (4-0-8)**

**Prerequisites:** ITCT 111 Programming for Creative Technology, ITCT 201 Multimedia Systems Lab

Concepts and theories in computer animation; concepts and theories in lighting and processing; key-frame animation; camera animation; scripting systems; motion capture; procedural animation; deformation; guidelines for presenting through storyboards; applications of 3D program; the object model formation; object crafting in different granularities; character animation; material and surface setting; surface covering or touching on models; rendering; simple scene formations and composites

**ITCT 318 Internet of Things and Its Application 4 (4-0-8)**

**Prerequisites:** ITCT 241 Computational Problem Solving

Principles of the Internet of Things; the Internet of Things communication and protocol; the Internet of Things and the cloud infrastructure; case studies of IoT applications using embedded and autonomous systems; sensors and actuators

**ITCT 321 Computer Graphics 4 (4-0-8)**

**Prerequisites:** ITCT 111 Programming for Creative Technology, ICCT 101 Mathematics for Creative Technology I

Computer graphics applications; graphics hardware technology; color models; 2D scan conversion; geometric models; transformations; 3D viewing; lighting and shading; texture mapping; visible surface determination; global illumination; particle systems; curves and surfaces; graphics programming

**ITCT 322 Virtual Reality** **4 (4-0-8)**

**Prerequisites:** ITCT 111 Programming for Creative Technology, ICCT 101 Mathematics for Creative Technology I

Sense of presence; virtual reality applications; 3D interaction techniques; input and output technology; human perception; VR toolkits; designing and developing a VR system; human factors

**ITCT 323 Augmented Reality** **4 (4-0-8)**

**Prerequisites:** ITCT 111 Programming for Creative Technology, ICCT 101 Mathematics for Creative Technology I

Augmented reality applications; hardware; software; tracking, calibration, and registration; computer vision for augmented reality; interaction; designing and developing AR systems

**ITCT 331 Game Design and Development** **4 (4-0-8)**

**Prerequisites:** ITCT 111 Programming for Creative Technology, ICCT 101 Mathematics for Creative Technology I

Game development cycle; game design; game engine; graphics, animation, sound, music, and the user input; game testing; morals and ethics of game design and development; game marketing; game analytics

**ITCT 332 Data Visualisation** **4 (4-0-8)**

**Prerequisites:** ITCT 111 Programming for Creative Technology, ICCT 101 Mathematics for Creative Technology I

Examples of visualization; visualization hardware; tools; a process of data visualization; working with data; color theory; human perception; visualization techniques; visual analytics; immersive visualization

**ITCT 341 Agile Software Development** **4 (4-0-8)**

**Prerequisites:** ITCT 241 Computational Problem Solving

Agile values, principles and practices; managing an agile team, roles and responsibilities; agile product discovery; agile planning for software products; the agile development process; testing with agile; agile metrics; practicing the agile development to the real-world software development project

**ITCT 342 Database Management Systems** **4 (4-0-8)**

**Prerequisites:** ITCT 241 Computational Problem Solving

The basic database management; data models; database design cycles; the relational database design; data normalization; data organization in normalized forms; data description languages; data query; data consistency; data recovery and synchronization control; data security; data integrity and reliability

**ITCT 343 of Technology Entrepreneurship** **4 (4-0-8)**

**Prerequisites:** ITCT 241 Computational Problem Solving

Electronic commerce fundamentals; e-business models; value chain analysis; technology architectures for the electronic business; the supply chain management; consumer behavior within the electronic environment; legal and ethical issues; privacy and security of the electronic information

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**ITCT 344 Human-Computer Interaction 4 (4-0-8)****Prerequisites:** ITCT 241 Computational Problem Solving

Principles of graphical user interfaces; graphical user interfaces toolkits; interaction styles and techniques including the screen design, layout, color, fonts, labeling and visual programming; HCI tools; multimedia and the web communication; the human-centered development and evaluation; human performance models: perception, movement, cognition, culture, communication, and organizations; accommodating the human diversity; principles of good design and good designers; engineering tradeoffs; an introduction to usability tests

**ITCT 361 Advanced Artificial Intelligence 4 (4-0-8)****Prerequisites:** ITCT 241 Computational Problem Solving, ICCT 102 Mathematics for Creative Technology II

History and evolution of artificial intelligence; fundamental concepts, principles and techniques of artificial intelligence; searching methods; solving problems by solution searching; symbolic computation; expert systems; uncertainty handling in expert systems; intelligent systems; computational intelligence techniques; fuzzy logic; neural networks; genetic algorithms; case studies of artificial intelligence applications

**ITCT 362 Data Science Essentials and Applications 4 (4-0-8)****Prerequisites:** ITCT 241 Computational Problem Solving, ICCT 102 Mathematics for Creative Technology II

An introduction to the data science and its related technology; handling data including the data representation, data understanding, data cleansing, data transformation, dimension reduction, high dimensional data, and data visualization; applications of machine learning models such as regression, classification, and clustering methods; evaluation methodologies; case studies of data analytics from problem understanding to deployment

**ITCT 391 Special Topics in Multimedia Systems 4 (4-0-8)****Prerequisites:** ITCT 111 Programming for Creative Technology, ICCT 101 Mathematics for Creative Technology I

Recent advanced techniques in multimedia data management and multimedia technologies; interesting topics of the multimedia applications, such as e-learning and the information visualization; other related topics that can be varied depending on the interests of faculties and students

**MSCT 101 Music Appreciation 2 (2-0-4)****Prerequisites:** -

Exploring the world of music; how the music and sonic elements function, the development of form and styles, brief history of western music, surveys of significant works by significant composers

**MSCT 111 Music Fundamentals and Keyboard Skills I 1 (0-2-1)****Prerequisites:** -

Music fundamentals at the initial level; music theories and ear training studies through keyboard playing; music reading, scales, chords, harmonization; transposition—in a combination of hands-on and lecture class settings

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**MSCT 112 Music Fundamentals and Keyboard Skills II** **1 (0-2-1)****Prerequisites:** MSCT 111 Music Fundamentals and Keyboard Skills I

Music fundamentals at a higher level; music theories and ear training studies through keyboard playing; music reading, scales, chords, harmonization; transposition—in a combination of hands-on and lecture class settings

**MSCT 211 Electronic Music Production I** **1 (0-2-1)****Prerequisites:** MSCT 112 Music Fundamentals and Keyboard Skills II

Basic music production process on the workflow of creating MIDI and audio recording, editing, arranging, mixing and mastering

**MSCT 212 Electronic Music Production II** **1 (0-2-1)****Prerequisites:** MSCT 211 Electronic Music Production I

Advanced music production techniques; working with synthesis, sampling and modern mixing techniques; including learning to perform live music with the Ableton Live software

**RSDE 215 Learning Management and Classroom Management for Students with Special Needs** **4 (3-2-7)****Prerequisites:** -

Learning theories; designing and creating the learning experience; an integration of learning for the inclusive education, the learning management promoting critical and creative thinking for learning solutions; principles and concepts of developing, implementing, and evaluating the lesson plan; principles of the classroom management, creating the appropriate environment in educational settings; interactions between teachers and students, establishing rules in the classroom, behavioral management for students, developing the learning center in educational institutions; acquiring and selecting information in order to keep pace with changes

**RSGE 210 Introduction to the Thai Sign Language** **4 (2-4-6)****Prerequisites:** -

Definition, origin, types, and characteristics of the Thai sign language; finger spelling; practical skill of the Thai sign language for the deaf's daily life activities

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