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Curriculum Details

Bachelor of Architecture Program in Architecture (5 Years)

(Revised Curriculum 2024)

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Name of Institution: Silpakorn University

Campus/Faculty/Department: Wang Tha Phra/Faculty of Architecture

Number and Title of the Program

    Number of the Program: 25500081105628

    Title of the Program: Bachelor of Architecture Program in Architecture

Name of Degree and Field of Study

    Full name: Bachelor of Architecture (Architecture)

    Abbreviation of name: B. Arch. (Architecture)

Major

    None

Total Number of Credits

    Bachelor's degree - not less than 160 credits

Character of the Program

    Type of program: 5-year undergraduate professional degree program

    Language medium: Thai and/or English

    Student intake: Thai and foreign students who are able to communicate fluently in Thai

    Collaboration with other institutes: This program is run exclusively by the organizing institute

    Degree conferred: Single degree

Career Opportunities after Graduation

    1. Architect with an architectural firm

    2. Architect with an agency in the public sector

    3. Lecturer, instructor at the level of tertiary education

    4. Other related professions such as building contractor, construction project consultant, construction supervision consultant, project management consultant, site planner, urban and regional planner, architectural conservationist, media content creator about architecture, etc.

Objectives of the Program

1. To produce quality graduates who possess knowledge and ability to work in the architectural or related professions and serve society while keeping the importance of social and environmental factors in mind.

2. To produce graduates who have an appreciation for the value of national and global art and culture.

3. To produce graduates who have creative thinking ability with wide range of interests, eager to gain new knowledge, improve professional skills, and able apply them effectively.

4. To produce graduates who are responsible, punctual, and able to work pleasantly with others.

5. To produce graduates who are moral, ethical, responsible towards self and society, uphold professional integrity, and maintain social credibility.

6. To produce graduates who can apply and develop the use of technology to assist in carrying out architectural tasks effectively.

7. To produce graduates who have an understanding of the principles and concepts involved in running businesses related to architectural practice, planning, design and creativity, as well as in coordinating and working under diverse cultural conditions.

8. To produce graduates who are capable of working in the profession with international level of standard and quality as well as having the ability to integrate knowledge of various related disciplines in the process.

Anticipated Attributes of Graduates

1. Possess knowledge and ability to work in the architectural or related professions and serve society by keeping the importance of social and environmental factors in mind.

2. Possess an appreciation for the value of national and global art and culture.

3. Possess creative thinking ability, have a wide range of interests, constantly acquiring new knowledge and professional skills and are able apply them effectively.

4. Possess responsible and punctual qualities, and able to work pleasantly with others.

5. Possess moral and ethical qualities, responsible towards self and society, uphold professional integrity, and maintain social credibility.

6. Possess ability to apply and develop the use of technology to assist in carrying out architectural tasks effectively.

7. Have an understanding of the principles and concepts involved in running businesses related to architectural practice, planning, design and creativity, as well as in coordinating and working under diverse cultural conditions.

8. Capable of working in the profession with international level of standard and quality as well as have the ability to integrate knowledge of various related disciplines in the process.

Eligibility to Apply

Applicants must have completed secondary education or the equivalent that is endorsed by the Ministry Education, or have received a certificate that is accepted and recognized by the University as being equivalent, and pass all requisites for admission in accordance with Silpakorn University Undergraduate Studies Regulations 2017, Silpakorn University Undergraduate Studies Regulations 2022 (Appendix A) and/or subsequent amendments thereof.

Conditions for Completing the Degree

1. Students must pass and have accumulated a minimum of 160 credits with grade point average of not less than 2.00, based on the grade point average system of 4.00 or the equivalent.

2. Achieved learning outcomes according to standards set for undergraduate studies.

3. Fulfill the requirements stated under Silpakorn University Undergraduate Studies Regulations 2017, Silpakorn University Undergraduate Studies Regulations 2022 (Appendix A) and/or subsequent amendments thereof, and in accordance with the announcement issued by The Commission on Higher Education Standards regarding Standard Specifications for Study Programs at Undergraduate Level 2022 and/or subsequent changes thereof.

Number of Credits   Total of not less than 160 credits

Structure of the Curriculum

General Courses category	minimum of	**24**	**credits**
Compulsory courses	a number of	6	credits
Required electives	minimum of	9	credits
Social and life skills courses	*(minimum of*	*3*	*credits)*
Language and communication skills courses	*(minimum of*	*3*	*credits)*
Innovation and creativity skills courses	*(minimum of*	*3*	*credits)*
General electives	minimum of	9	credits
Specialized Courses category	minimum of	**130**	**credits**
Compulsory courses	a number of	121	credits
Core courses	*(a number of*	*52*	*credits)*
Fundamental courses	*(a number of*	*18*	*credits)*
Technology courses	*(a number of*	*30*	*credits)*

Supplementary courses		*(a number of*	*21*	*credits)*
Specialized Electives		minimum of	9	credits
Open Electives category		**minimum of**	**6**	**credits**

Courses

General Courses category   minimum of 24 credits

1) Compulsory courses (a number of 6 credits)

Language and communication skills

SU201*	Communicative English in the Digital Era	3(2-2-5)
SU202*	English for Global Communication	3(2-2-5)

***Note:** With regards to SU201 Communicative English in the Digital Era, and SU 202 English for Global Communication, students with STEP (Silpakorn Test of English Proficiency) Admission Test result at CEFR (Common European Framework of Reference for Languages) level of B1 or higher, or have passed equivalent result from other English Proficiency Test organizing institutions recognized by Silpakorn University, shall be exempted from enrolling in the course SU201. The same applies to SU202 for those with STEP Admission Test result at CEFR level of B2 or higher, or equivalents from other recognized institutions. In such cases, students shall receive S (Satisfactory) as a result for the respective courses, and credits shall be counted but not used in calculating the grade point average. The validity of STEP Admission Test results or equivalents from other English Proficiency Test organizing institutions recognized by Silpakorn University shall not exceed 2 years from the date of taking the test to the date of submitting evidence of result to the University.*

2) Required electives (minimum of 9 credits)

At least 3 credits are to be selected from each of the following groups of courses:

Social and life skills courses

SU101	Innovation-Driven Entrepreneurship	3(3-0-6)
SU102	Creative Silpakorn	3(3-0-6)
SU103	Human and Thinking	3(3-0-6)
SU104	Eco-Tourism in Thailand	3(3-0-6)
SU105	Food for Health	3(3-0-6)
SU106	Thinking for Living in Today's World	3(3-0-6)

Language and communication skills courses

SU203	Creative Communication	3(3-0-6)

SU204	Language Achievement	3(3-0-6)

Innovation and creativity skills courses

SU301	Silpakorn Arts	3(3-0-6)
SU302	Creativity and Innovation	3(3-0-6)
SU303	Perception through the Lens of Art	3(3-0-6)
SU304	Creative Project Design	3(3-0-6)
SU306	Thai Ways	3(1-4-4)
SU307	Basic Mathematics and Strength of Materials for Design	3(3-0-6)

3) General electives (minimum of 9 credits)

Social and life skills courses

SU121	Understanding Ancient World Civilization	3(3-0-6)
SU122	Understanding Bangkok through Its Art	3(3-0-6)
SU123	Art in Thai Society and Culture	3(3-0-6)
SU124	Thai Studies	3(3-0-6)
SU125	Dynamics of Thai Society	3(3-0-6)
SU126	Ways of Life in Multicultural Society	3(3-0-6)
SU127	Business and Professional Ethics	3(3-0-6)
SU128	Information Seeking in Digital Age	3(3-0-6)
SU129	Thai Politics, Government and Economy	3(3-0-6)
SU130	Financial Literacy	3(3-0-6)
SU131	Information and Media Literacy Skills	3(3-0-6)
SU132	Gender and Sexuality	3(3-0-6)
SU133	East Asian Music Cultural Anthropology	3(3-0-6)
SU134	Southeast Asian Music Cultural Anthropology	3(3-0-6)
SU135	Thai Music in Life	3(3-0-6)
SU136	Education for Sustainable Development	3(3-0-6)
SU137	Earth and Astronomy in the Third Millennium	3(3-0-6)
SU138	Household Environmental Management	3(3-0-6)
SU139	Computer, Information Technology and Communication Literacy	3(3-0-6)
SU140	Natural Environment and Artwork Conservation	3(3-0-6)
SU141	Microbial World	3(3-0-6)
SU142	White Internet	3(3-0-6)
SU143	Mushroom Farming and Business Extension	3(3-0-6)
SU144	Today's Office Application	3(3-0-6)

SU145	Science Literacy	3(3-0-6)
SU146	Learning How to Learn	3(3-0-6)
SU147	Data Analytics with Excel	3(3-0-6)
SU148	Essential Knowledge of Herbs	3(3-0-6)
SU149	Health Care	3(3-0-6)
SU150	Energy Innovation	3(3-0-6)
SU151	Indigenous Knowledge toward Production Process	3(3-0-6)
SU152	Technology of Appliances in Daily Life	3(3-0-6)
SU153	Materials and Man	3(3-0-6)
SU154	Art of Living	3(3-0-6)
SU155	Electricity and Everyday Life	3(3-0-6)
SU156	Renewable Energy Technology	3(3-0-6)
SU157	Pet Care	3(3-0-6)
SU158	Maritime Zones and Marine and Coastal Resource Management	3(3-0-6)
SU159	Aquatic Resources Conservation and Management	3(3-0-6)
SU160	Miracle of Herbal Plants, Cannabis, Hemp	3(3-0-6)
SU161	Insects as Food and Feed	3(3-0-6)
SU162	Folktales and Folk-Tale Plays	3(3-0-6)
SU163	Home	3(3-0-6)
SU164	Thai Society and Culture	3(3-0-6)
SU165	Royal Initiative Projects	3(3-0-6)
SU166	Food and Beverage	3(3-0-6)
SU167	Phetchaburi Studies	3(3-0-6)
SU168	Designing Your Life	3(3-0-6)
SU169	Risk Management and Insurance in Everyday Life	3(3-0-6)
SU170	Smart City Management	3(3-0-6)
SU171	Digital Citizenship	3(3-0-6)
SU172	Technology and Media Innovation	3(3-0-6)
SU173	Science for Business Sustainability	3(3-0-6)
SU174	Digital Transformation	3(3-0-6)
SU175	Disruptive Technology	3(3-0-6)
SU176	Digital Business	3(3-0-6)
SU177	Board Games for Learning	3(3-0-6)

Language and communication skills courses

SU221	English for Science and Technology	3(3-0-6)

SU222	The Use of Thai Language for Communication and Retrieval	3(3-0-6)
SU223	Languages and Culture in ASEAN	3(3-0-6)
SU224	Literary Reading for Improvement of Quality of Life	3(3-0-6)
SU225	English Reading for Criticism	3(3-0-6)
SU226	Creative Pitching and Presentation in English	3(3-0-6)
SU227	French for Cultural Communication	3(3-0-6)
SU228	Communication for Personality Improvement	3(3-0-6)
SU229	English for Workplace Communication	3(2-2-5)
SU230	English for Social Media Life	3(2-2-5)
SU231	English in the New Normal Era	3(2-2-5)
SU232	News in Everyday Life	3(3-0-6)

Innovation and creativity skills courses

SU321	Architecture and Art in South East Asia	3(3-0-6)
SU322	Cultural Heritage Conservation and Management	3(3-0-6)
SU323	Records and Archives Management	3(3-0-6)
SU324	Internet of Things (IoT) for Lives and Living	3(3-0-6)
SU325	Nature Appreciation	3(3-0-6)
SU326	Bird Conservation	3(3-0-6)
SU327	E-Sport Technology, Techniques and Industry	3(3-0-6)
SU328	Digital Media Creator for Social Media	3(3-0-6)
SU329	World of Innovation	3(3-0-6)
SU330	Materials and Environmental Impact	3(3-0-6)
SU331	Sustainable Technology	3(3-0-6)
SU332	Amazing Biotechnology Products	3(3-0-6)
SU333	New Normal Farming	3(3-0-6)
SU334	Ornamental Insects	3(3-0-6)
SU335	Metaverse	3(3-0-6)
SU336	World of Animation	3(3-0-6)
SU337	Digital Imaging and Sound	3(3-0-6)

Specialized Courses category   **minimum of 130 credits**

   Compulsory courses (a number of 121 credits)

      Core courses   **a number of 52 credits**

261 102	Architectural Design I	4(2-6-4)
261 103	Architectural Design II	4(2-6-4)

261 104	Architectural Design III	4(2-6-4)
261 106	Architectural Design IV	5(2-9-4)
261 107	Architectural Design V	5(2-9-4)
261 201	Architectural Theories and Concepts	3(3-0-6)
261 202	Architectural Design VI	5(2-9-4)
261 203	Architectural Design VII	5(2-9-4)
261 206	Architectural Design VIII	5(2-9-4)
261 208	Thesis Preparation	3(0-6-3)
261 209	Thesis	9(0-18-9)

Fundamental courses   a **number of 18 credits**

261 101	Basic Design	3(1-6-2)
262 102	Basic Delineations	3(1-4-4)
262 104	Architectural Presentation I	3(1-4-4)
262 107	History of Thai Architecture I	3(3-0-6)
262 202	History of Architecture from Egypt to Baroque	3(3-0-6)
262 214	History of Architecture from Neoclassicism to Modernism	3(3-0-6)

Technology courses   a **number of 30 credits**

263 101	Construction Technology I	3(2-2-5)
263 102	Construction Technology II	3(2-3-4)
263 103	Structural Systems in Architecture I	3(3-0-6)
263 104	Construction Technology III	3(2-3-4)
263 105	Structural Systems in Architecture II	3(3-0-6)
263 106	Construction Technology IV	3(2-2-5)
263 107	Structural Systems in Architecture III	3(3-0-6)
263 108	Construction Technology V	3(2-3-4)
263 109	Construction Technology VI	3(2-3-4)
263 110	Mechanical Equipment	3(3-0-6)

Supplementary courses   a **number of 21 credits**

261 105	Architecture and Environment	3(2-2-5)
261 204	Pre-design Studies	3(3-0-6)
261 205	Architectural Practical Training	0 (minimum of 210 hours or equivalent)
261 207	Architectural Professional Practice	3(3-0-6)
264 201	Evolution of Human Settlements	3(3-0-6)
264 202	Introduction to Urban Planning	3(3-0-6)
266 101	Sustainable Site Planning and Design	3(3-0-6)

| 266 102 | Landscape Architecture | 3(3-0-6) |

Specialized Electives (minimum of 9 credits)

Choose a minimum of 9 credits from any of the following courses:

Core courses

261 210	Seminar in Contemporary Architecture	3(2-2-5)
261 213	Building Design Analysis	3(3-0-6)
261 214	Individual Study in Architecture	3(1-4-4)
262 213	Building Surveys and Documentation	3(2-2-5)

Fundamental courses

261 108	Architectural Presentation II	3(1-4-4)
261 110	Model Making	3(2-2-5)
262 108	Thai Ornaments in Architecture	3(1-4-4)
262 110	History of Thai Architecture II	3(3-0-6)
262 115	Foundation in Thai Architecture	3(1-4-4)
262 116	Thai Traditional Arts and Crafts	3(2-2-5)
262 117	Delineations in Thai Architecture	3(1-4-4)
262 118	Architecture and Culture Contexts in Asia	3(3-0-6)
262 119	Vernacular Architecture and Cultural Ecology	3(3-0-6)
262 120	Thai Architectural Design	3(2-3-4)
262 211	Individual Study in Thai Architecture	3(1-4-4)
262 212	Building Re-Use and Rehabilitation	3(2-2-5)
262 215	Contemporary Asian Architecture	3(3-0-6)
262 216	Architecture and Modern Thai Society	3(3-0-6)
262 217	Conservation and Adaptation of Architectural Heritage: Philosophy, Theory and Practice	3(3-0-6)

Technology courses

261 211	Light and Colour in Architecture	3(2-2-5)
261 212	Selected Topic	3(1-4-4)
261 215	International Architectural Design Workshop	3(2-2-5)
261 216	International Architecture Field Study	1(0-2-1)
261 219	Architecture in Thailand	1(1-0-2)
263 111	2D Drafting	1(0-2-1)
263 112	3D Modeling	1(0-2-1)
263 113	Concrete Technology in Architecture	3(2-3-4)

263 114	Real-Time Rendering	1(0-2-1)
263 115	Digital Tools for Design Presentation	1(0-2-1)
263 116	3D Freeform Modeling	1(0-2-1)
263 117	VDO Presentation	1(0-2-1)
263 118	Spreadsheet Software	1(0-2-1)
263 119	Python	1(0-2-1)
263 120	Laser Cutting and 3D Printing	1(0-2-1)
263 121	3D Point Cloud and Photogrammetry	1(0-2-1)
263 122	Principle of Marketing in Construction Industry	3(3-0-6)
263 201	Industrialized Building Construction	3(2-2-5)
263 202	Architectural Detailing	2(1-2-3)
263 203	Advanced Timber Construction	3(3-0-6)
263 204	Individual Study in Building Technology	3(2-2-5)
263 210	Building Inspection	3(3-0-6)
263 211	Energy Conservation Building Assessment	3(3-0-6)
263 212	Architectural Design for Disasters	3(3-0-6)
263 213	Architectural Acoustics	3(3-0-6)
263 214	Sustainable Building Standards	3(3-0-6)
263 215	Health and Well-being Building Standards	3(3-0-6)
263 216	Real Estate Development	3(3-0-6)
263 217	Building Renovation	3(3-0-6)
263 218	Construction Materials in the Past	3(3-0-6)
263 219	Structural Application for Special Buildings	3(3-0-6)

Supplementary courses

261 109	Interior Architecture	3(2-2-5)
261 111	Community Architecture	3(2-2-5)
261 112	Perception in Architecture	3(2-2-5)
261 217	Theory and Design Methodology in Japanese Architecture	3(3-0-6)
261 218	Architectural Photography	3(3-0-6)
263 205	Cost Estimation	3(2-2-5)
263 206	Construction Management	3(3-0-6)
263 207	Building Information Modeling	3(2-2-5)
263 208	Parametric Design	3(2-2-5)
263 209	Individual Study in Computer Applications in Architecture	3(2-2-5)
264 203	Human Behavior and Environment	3(3-0-6)

264 204	Sustainable Community Development	3(1-4-4)
264 205	Urban Design	3(1-4-4)
264 206	Field Study in Urban Design	3(1-4-4)
266 201	Individual Study in Landscape Architecture	3(1-4-4)
266 202	Design for Sustainable Environment	3(3-0-6)
266 203	Field Study in Landscape Architecture	3(1-4-4)
266 204	Aesthetics in Design and Environment	3(3-0-6)
266 205	Urban Landscape	3(3-0-6)
266 206	Plants and Design	3(2-2-5)

Note: Apart from the above specialized electives, students may also choose to enroll in any other courses at the undergraduate or graduate level offered by the Faculty of Architecture with the approval of the Program Coordinating Committee.

Open Electives category   **minimum of 6 credits**

Choose an additional minimum of 6 credits from the General Courses category or any other Undergraduate Courses offered at Silpakorn University.

Credit transfer for courses enrolled at other universities

Transfer of credits shall be in accordance with Silpakorn University Undergraduate Studies Regulations 2017, Silpakorn University Undergraduate Studies Regulations 2022 (Appendix A) and/or subsequent changes.

Study Plans

Year 1, Semester 1

Course No.	Course Title	Credits (L-P-E)	Prerequisites
SU201	Communicative English in the Digital Era	3(2-2-5)	
SUXXX	Required elective from General Courses category	3	
SUXXX	General elective from General Courses category	3	
261 101	Basic Design	3(1-6-2)	
262 102	Basic Delineations	3(1-4-4)	
263 101	Construction Technology I	3(2-2-5)	
	Total	**18**	

Year 1, Semester 2

Course No.	Course Title	Credits (L-P-E)	Prerequisites
SU202	English for Global Communication	3(2-2-5)	
SUXXX	Required elective from General Courses category	3	
261 102	Architectural Design I	4(2-6-4)	261 101
262 104	Architectural Presentation I	3(1-4-4)	
263 102	Construction Technology II	3(2-3-4)	263 101*
263 103	Structural Systems in Architecture I	3(3-0-6)	
	Total	**19**	

* Refers to prerequisite course in which a student has studied but not necessarily passed.

Year 2, Semester 1

Course No.	Course Title	Credits (L-P-E)	Prerequisites
SUXXX	Required elective from General Courses category	3	
SUXXX	General elective from General Courses category	3	
261 103	Architectural Design II	4(2-6-4)	261 102
262 107	History of Thai Architecture I	3(3-0-6)	
262 202	History of Architecture from Egypt to Baroque	3(3-0-6)	
263 104	Construction Technology III	3(2-3-4)	263 102
	Total	**19**	

Year 2, Semester 2

Course No.	Course Title	Credits (L-P-E)	Prerequisites
SUXXX	General elective from General Courses category	3	
261 104	Architectural Design III	4(2-6-4)	261 103
262 214	History of Architecture from Neoclassicism to Modernism	3(3-0-6)	
263 105	Structural Systems in Architecture II	3(3-0-6)	263 103*
263 106	Construction Technology IV	3(2-2-5)	263 104*
XXX XXX	Open Elective	3	
	Total	**19**	

* Refers to prerequisite course in which a student has studied but not necessarily passed.

Year 3, Semester 1

Course No.	Course Title	Credits (L-P-E)	Prerequisites
261 106	Architectural Design IV	5(2-9-4)	261 104
263 107	Structural Systems in Architecture III	3(3-0-6)	263 105
263 108	Construction Technology V	3(2-3-4)	263 106
266 101	Sustainable Site Planning and Design	3(3-0-6)	
XXX XXX	Specialized Elective	3	
	Total	17	

Year 3, Semester 2

Course No.	Course Title	Credits (L-P-E)	Prerequisites
261 105	Architecture and Environment	3(2-2-5)	
261 107	Architectural Design V	5(2-9-4)	261 106
263 109	Construction Technology VI	3(2-3-4)	263 108*
263 110	Mechanical Equipment	3(3-0-6)	
266 102	Landscape Architecture	3(3-0-6)	
	Total	17	

* Refers to prerequisite course in which a student has studied but not necessarily passed.

Year 4, Semester 1

Course No.	Course Title	Credits (L-P-E)	Prerequisites
261 201	Architectural Theories and Concepts	3(3-0-6)	
261 202	Architectural Design VI	5(2-9-4)	261 107
264 201	Evolution of Human Settlements	3(3-0-6)	
XXX XXX	Specialized Elective	3	
	Total	**14**	

Year 4, Semester 2

Course No.	Course Title	Credits (L-P-E)	Prerequisites
261 203	Architectural Design VII	5(2-9-4)	261 202
261 204	Pre-design Studies	3(3-0-6)	
264 202	Introduction to Urban Planning	3(3-0-6)	
XXX XXX	Specialized Elective	3	
XXX XXX	Open Elective	3	
	Total	**17**	

Year 4, Summer Session

Course No.	Course Title	Credits (L-P-E)	Prerequisites
261 205	Architectural Practical Training	0 (minimum of 210 hrs.)	Obtained a minimum of 109 credits
	Total	**0**	

Year 5, Semester 1

Course No.	Course Title	Credits (L-P-E)	Prerequisites
261 206	Architectural Design VIII	5(2-9-4)	261 203
261 207	Architectural Professional Practice	3(3-0-6)	
261 208	Thesis Preparation	3(0-6-3)	261 203 261 204 261 205
	Total	11	

Year 5, Semester 2

Course No.	Course Title	Credits (L-P-E)	Prerequisites
261 209	Thesis	9(0-18-9)	261 201* 261 206 261 208
	Total	9	

* Refers to prerequisite course in which a student has studied but not necessarily passed.

Course Descriptions

General Courses category

SU101 Innovation-Driven Entrepreneurship 3(3-0-6)

Essential skills for entrepreneurs: financial, business, management, creative thinking, analytical skills, and interpersonal skills relevant to running a new venture; origin of innovation; innovation in entrepreneurship.

SU102 Creative Silpakorn 3(3-0-6)

Integrated project-based learning focusing on creative activities under the advisors' supervision; development of creative communication, learning, and teamwork skills; sustainable development concept in business, social and environmental development.

SU103 Human and Thinking 3(3-0-6)

Importance of thinking; rational thinking; critical thinking; analytical and synthetical thinking; scientific thinking; systematic thinking; conceptual thinking; creative thinking; innovative thinking.

SU104 Eco-Tourism in Thailand 3(3-0-6)

Concepts, definition, patterns, and scope of eco-tourism; classification of eco-tourism destinations in Thailand; ecotourism business; sustainable ecotourism planning.

SU105 Food for Health 3(3-0-6)

Fundamental knowledge of the body's dietary needs; food composition; food hygiene and health; imbalanced nutrition and diseases; eating habits and health; nutritional problems; diseases related to nutrition, contamination of food additives/preservatives and packaging materials; business concept of healthy food service; food safety and consumer protection.

SU106   **Thinking for Living in Today's World**   **3(3-0-6)**

     Investigation and review of the case studies on present-day social, technological, and environmental issues; group activities for fostering creative ideas to design and present business solutions, utilizing basic thinking tools; self-improvement planning and achievement evaluation.

SU121   **Understanding Ancient World Civilization**   **3(3-0-6)**

     Meaning of civilization; history and origin of major ancient civilizations; similarities and differences among these ancient civilizations with an ongoing impact on today's society.

SU122   **Understanding Bangkok through Its Art**   **3(3-0-6)**

     Comprehension of the people and society of Bangkok through the artistic works created in Bangkok from the past to the present day.

SU123   **Art in Thai Society and Culture**   **3(3-0-6)**

     Comprehension of Thai society and culture through the artistic works created by Thai artisans or artists in each period.

SU124   **Thai Studies**   **3(3-0-6)**

     Main characteristics of Thai society and culture; issues in contemporary Thai society.

     Fieldwork required.

SU125   **Dynamics of Thai Society**   **3(3-0-6)**

     Development of and changes in Thai society; historical background, cultural heritage, wisdom and values related to languages, literatures, arts, religious and beliefs, politics, economy and society.

SU126   **Ways of Life in Multicultural Society**   **3(3-0-6)**

     Comprehension and adoption of cultures and tradition through relevant activities; ways of life, occupations, and life living of people in multicultural society for peaceful co-existence.

SU127   **Business and Professional Ethics**   **3(3-0-6)**

        Basic theories of ethics; ethical issues arising in the business world; careers and daily life; business and professional responsibilities as employees and employers; moral dilemmas in business and profession life.

SU128   **Information Seeking in Digital Age**   **3(3-0-6)**

        Information seeking concepts; techniques and strategies for information searching; information evaluation; information use and presentation; information law and ethics.

SU129   **Thai Politics, Government and Economy**   **3(3-0-6)**

        Political structure, system, and process; government and economics; development of government and civil societies' roles; analysis of relations between political and economic mechanisms influencing national development; effect of globalization on Thai politics, government and economy.

SU130   **Financial Literacy**   **3(3-0-6)**

        Comprehension and ability to use financial skills; protection from financial scams; personal business planning.

SU131   **Information and Media Literacy Skills**   **3(3-0-6)**

        Importance of information literacy; types of information; tools in searching for information; selecting information sources and citation formats; analysis of the information production process; freedom of information; relationship between information and issues relating to politics, economy, society and culture in a borderless society.

SU132   **Gender and Sexuality**   **3(3-0-6)**

Concepts of sex, gender, sexuality; socio-political and cultural contexts defining, constructing and assigning the roles of femininity, masculinity and alternative gender; concepts of bodily rights and other related social movements campaigning for the rights; current situations of gender and sexuality.

SU133   **East Asian Music Cultural Anthropology**   **3(3-0-6)**

Anthropology of music culture, meaning, characteristics and types of culture, functions of music, musical aesthetic values, history of Chinese, Korean and Japanese music, musical instruments, court music, types of music, religious music, interrelationship among Chinese, Korean, and Japanese music.

SU134   **Southeast Asian Music Cultural Anthropology**   **3(3-0-6)**

Anthropology of music culture; diversity of musical culture; meaning, characteristics, and types of culture, musical instruments, musical band types; roles and functions of music; aesthetic values of music.

SU135   **Thai Music in Life**   **3(3-0-6)**

Diversity of music culture in Thai society; definitions, characteristics and types of culture, functions of music; music culture in the central region, the northern region, the northeastern region, and the southern region; modern music, aesthetic value of music.

SU136   **Education for Sustainable Development**   **3(3-0-6)**

Concepts, policies and case studies on sustainable development; roles of education in the development of economy, society, environment, and community.

SU137 **Earth and Astronomy in the Third Millennium** **3(3-0-6)**

Natural phenomena of the earth; atmosphere of the earth; meteorological forecasting; climate change and its impact; astronomical phenomena; astronomical observations; the solar system and stars; application of this knowledge in everyday life; phenomena and events in the third millennium.

SU138 **Household Environmental Management** **3(3-0-6)**

Natural lighting for household energy conservation; water conservation garden; indoor water conservation; passive air ventilation; solid waste separation; solid waste composting; household hazardous waste management.

SU139 **Computer, Information Technology and Communication** **3(3-0-6)**
Literacy

Roles and significance of computers, information technology, and communication in modern days; future trends; fundamental knowledge; creative applications; security maintenance; relevant laws and ethics.

SU140 **Natural Environment and Artwork Conservation** **3(3-0-6)**

Basic knowledge of environmental and natural resources; environmental problems; impact of physical, chemical and biological threats on artworks; ecosystem services and eco-tourism; basic principle of natural and cultural conservation; application of scientific knowledge to conservation of natural environment and artworks; world heritage.

SU141 **Microbial World** **3(3-0-6)**

Benefits and importance of microorganisms in the food, industrial, agricultural and medical sectors in human daily life; responsible use of microorganisms for the safety of consumers and environment.

SU142   **White Internet**   **3(3-0-6)**

Internet services and electronic transactions; threats from internet and social network usage; threat preventions; privacy issues of Internet services; impacts of threats; laws related to information technology and communication; online etiquette; tools for improving security.

SU143   **Mushroom Farming and Business Extension**   **3(3-0-6)**

Mushroom cultivation technology; mushroom farming and eco-tourism; development of food and nutraceutical products from mushrooms; principles of regulation and standard in agriculture tourism and food production.

SU144   **Today's Office Application**   **3(3-0-6)**

Use of office application: word processing, spreadsheet, presentation and collaborative tools.

SU145   **Science Literacy**   **3(3-0-6)**

Definition and components of scientific literacy and competency; nature of science; personal development for enhancing scientific literacy.

SU146   **Learning How to Learn**   **3(3-0-6)**

Principles of effective learning in accordance with human nature; brain functions related to learning, memory, training and procrastination; metacognition; techniques for successful learning.

SU147   **Data Analytics with Excel**   **3(3-0-6)**

Introduction to data analytics; data analytics process; data collection; graphical presentation of data; Excel for real data analysis; case studies.

SU148   **Essential Knowledge of Herbs**   **3(3-0-6)**

Plants and other natural products used in daily life as medicines for common illnesses, food and cosmetics; knowledge of poisonous plants.

SU149   Health Care   3(3-0-6)

   Guidelines on self-care for common diseases and illnesses; basic principles of medication use; harmful effects of medications and narcotic drugs; dietary supplements and skincare products.

SU150   Energy Innovation   3(3-0-6)

   Evolution of energy; energy and technology; global warming; alternative energy innovations; energy innovations for environment; current energy business.

SU151   Indigenous Knowledge toward Production Process   3(3-0-6)

   Evolution of production process from the past to the present; coconut sugar production in the household to granulated sugar manufacturing; fermentation of sweet rice to industrial fermentation process; household production of cow milk to milk production process; fabric weaving to textile manufacturing process; mulberry paper making to paper manufacturing process; Thai dessert making to dessert production process; traditional rice production process to modern rice production and drying process.

SU152   Technology of Appliances in Daily Life   3(3-0-6)

   Definition and evolution of technology; application of technology in the creation of appliances; mechanical systems and functions of everyday appliances.

SU153   Materials and Man   3(3-0-6)

   Natural materials; man-made materials; materials applications by man; the development of materials for human existence; adding material value.

SU154   Art of Living   3(3-0-6)

   Life management; personality development and social etiquette; roles and responsibilities to family and society; analytical thinking; communication and expression; creation of happiness in life; inspiration for career success; ethics for working and living.

SU155 **Electricity and Everyday Life** **3(3-0-6)**

Electricity generation from sources such as hydro, solar, wind, oil, and natural gas; electricity transmission and distribution; electricity bill calculation; selection of electrical appliances; electrical safety assessment; saving electricity usage at homes, offices, and factories; sustainable electricity production and consumption.

SU156 **Renewable Energy Technology** **3(3-0-6)**

Definition of renewable energy; renewable energy conversion into thermal and electrical energy; solar energy; wind energy; hydropower; biomass energy; case studies of renewable energy sources; selection and management of renewable energy.

SU157 **Pet Care** **3(3-0-6)**

General aspects of pet care for pet lovers; effective care and responsible pet ownership in society; zoonosis and disease prevention.

SU158 **Maritime Zones and Marine and Coastal Resource** **3(3-0-6)**
Management

Maritime zones and coasts; geology and geomorphology of Thai seas; marine and coastal deposition and sedimentation; Thai coastal landscapes; living and non-living marine and coastal resources; settlement of people in coastal zones; public health system of coastal community; stability, prosperity, sustainability and economic benefits of Thai seas; coastal management of Thai seas.

SU159 **Aquatic Resources Conservation and Management** **3(3-0-6)**

Degradation of aquatic resources and environment; status of aquatic resources; marine and coastal pollutions; endangered aquatic animals; conservation and management of freshwater and coastal resources; environmental impact assessment, institutions and organizations for the conservation of resources and environment; laws and regulations related to aquatic resources.

SU160   Miracle of Herbal Plants, Cannabis, Hemp   3(3-0-6)

Herbal plants, cannabis, hemp; benefits and harms; strains; cultivation and management; harvesting; application guidelines, law and business.

SU161   Insects as Food and Feed   3(3-0-6)

General insect morphology; species and diversity of edible insects for humans and animal feed, nutritional value of insects; insect farming; pattern of insect consuming; insects as animal feed; business of edible insects.

SU162   Folktales and Folk-Tale Plays   3(3-0-6)

Types, characteristics, and methods of studying folk tales; folk-tale plays and performances; riddles; proverbs, and local beliefs; analysis of relationships between folk tales and folk-tale plays and society and culture.

SU163   Home   3(3-0-6)

Concepts, economic, political, social and cultural characteristics of the word "home"; space; technology and home design; gender and home; home in the context of tourism; globalization; nationality; the homeless; deportation; presentation of nationality.

SU164   Thai Society and Culture   3(3-0-6)

Fundamental characteristics of Thai economic, social and political structures considered from socio-cultural development, change and adaptation processes of Thai society, and conditions and problems that affect current population's way of life; multiculturalism; trends and directions of change in Thai society in the future.

SU165 Royal Initiative Projects 3(3-0-6)

Philosophy, meaning and importance of the King's philosophy; history of the Royal Initiative Projects of His Majesty King Bhumibol Adulyadej; royal initiative projects on soil, water, forests, occupation and engineering; philosophy of sufficiency economy; the "New Theory"; application guidelines for the development of self, community, society, and nation.

Field trips required.

SU166 Food and Beverage 3(3-0-6)

Culture and identity of national food and beverages; ingredients, seasoning, equipment, taste aesthetics; knowledge of food menu, highly popular beverage, table manners and consumption habits of various countries in Europe, America and Asia.

SU167 Phetchaburi Studies 3(3-0-6)

Holistic knowledge and main information about Phetchaburi Province; history, geography and climate; culture and art, unique local traditions and festivals; communities, ethnicity and beliefs; ancient remains, temples and royal palaces of the three reigns; Phetchaburi craftsmen school; museums; sources of food ingredients and economic plants; geographically and culturally indicated products; Phetchaburi food and desserts; tourism potentials of the Province and its three coastal cities; beach forests and native plants; biodiversity and mangrove swamps; Kaeng Krachan Natural Park as a Natural World Heritage Site, Phetchaburi River, Royal Initiative Projects, contemporary and city management.

SU168 Designing Your Life 3(3-0-6)

Philosophy and meaning of life; skills for a happy life; goals and life planning; time management; relationship management; socializing; teamwork skills; financial planning; family relationship management; roles of family; safety in life; seminars on life; power of positive thinking.

SU169   Risk Management and Insurance in Everyday Life   3(3-0-6)

　　　　Basic principles of risk management and control; basic principles of insurance; characteristics of insurance, including various types of life and health insurance policies and their applications in everyday life both at the individual and corporate levels.

SU170   Smart City Management   3(3-0-6)

　　　　Smart city concept; smart mobility; smart economy; smart environment; smart health; smart living; smart government; infrastructure for smart cities; technology development for smart cities.

SU171   Digital Citizenship   3(3-0-6)

　　　　Knowledge and skills for citizens on the use of digital media and technology; maintaining personal digital identity; screen time management; cyberbullying management; cybersecurity; personal information protection; digital footprint management; critical thinking and ethical use of digital technology.

SU172   Technology and Media Innovation   3(3-0-6)

　　　　Development of communication technology and communication platforms; structure of media ownership; media regulation and its impact on digital society.

SU173   Science for Business Sustainability   3(3-0-6)

　　　　The world's resources; geography; ecosystems; the four necessities of life; local wisdom; sufficiency economy philosophy; basic science, technology and innovation for sufficiency; sufficiency in everyday life in global trends; applying for business sustainability.

SU174   Digital Transformation   3(3-0-6)

Digital marketing; connected products; omni-channel; pay-per-use; customer insight; digital collaboration and innovation; digital skills and virtual workforce; dynamic partner ecosystems; predictive usage; customer-centric and standard platforms; agile approaches to work anytime, anywhere, on any device.

SU175   Disruptive Technology   3(3-0-6)

An overview of the dynamic process of technological innovation; importance of value-driven technology and economic growth; data science; Artificial Intelligence; Cloud Computing; Internet of Things; Fintech and Block Chain; other related technologies.

SU176   Digital Business   3(3-0-6)

Principles of e-business; different types of secure and successful e-business transactions; business-to-business (B2B); business-to-consumer (B2C); business-to-government (B2G); e-business management system; digital marketing; social media; digitalization.

SU177   Board Games for Learning   3(3-0-6)

Basic principles and theories about board games; types of board games; psychology of board games; principles of applying board games to promote learning in various fields; basic principles of board game design for enhancing skills and learning.

SU201   Communicative English in the Digital Era   3(2-2-5)

Students with STEP Admission Test result of B1 or higher, or have passed equivalent result from other English Proficiency Test organizing institutions recognized by Silpakorn University, shall be exempted from enrolling in this course.

Developing English listening, speaking, reading, and writing skills for everyday communication; using English as a tool for self-directed learning in the digital era.

SU202   **English for Global Communication**   **3(2-2-5)**

Prerequisite: SU201 Communicative English in the Digital Era

Students with STEP Admission Test result of B2 or higher, or have passed equivalent result from other English Proficiency Test organizing institutions recognized by Silpakorn University, shall be exempted from enrolling in this course.

Improving English listening, speaking, reading, and writing skills for effective communication in global contexts; using English as a tool for intercultural and global communication.

SU203   **Creative Communication**   **3(3-0-6)**

Principles and process of communication; creative communication in various situations in everyday life; cross-cultural communication; social media communication; selection of technology to accomplish communication objectives.

SU204   **Language Achievement**   **3(3-0-6)**

Advancing Thai communication skills through nonverbal communication, spoken language, and written language; analyzing and selecting appropriate language for different communicative purposes and situations.

SU221   **English for Science and Technology**   **3(3-0-6)**

Developing essential English language skills in science and technology; understanding current issues in science and technology; expanding technical terminology; enhancing presentation and writing skills in a scientific and technological context.

SU222   **The Use of Thai Language for Communication and Retrieval 3(3-0-6)**

Thai language skills for communication; research resources; methods for retrieving information from various online media and databases; assessing the credibility of data sources.

SU223   **Languages and Culture in ASEAN**   **3(3-0-6)**

General characteristics of ASEAN languages; basic vocabulary sentence patterns and conversations; brief history and cultures of ASEAN countries.

SU224   **Literary Reading for Improvement of Quality of Life**   **3(3-0-6)**

Methods of reading and analyzing literary works; literary genres; themes in literature; literary values; benefits of literature to improve the quality of life.

SU225   **English Reading for Criticism**   **3(3-0-6)**

Developing reading comprehension and interpretation skills; discussing meaning and value of selected fictional texts originally written in English and those translated into English; basic criticism.

SU226   **Creative Pitching and Presentation in English**   **3(3-0-6)**

Developing English speaking skills through analytical thinking process for creative pitching and presentation; speaking skills, verbal and non-verbal communication and presentation techniques; English presentation skills for creative pitching in public; practice of using English as a tool for communication and presentation in diverse professional contexts.

SU227   **French for Cultural Communication**   **3(3-0-6)**

Basic French communication skills on art and culture; practice of using proper and correct vocabulary and sentence structures.

SU228   **Communication for Personality Improvement**   **3(3-0-6)**

Principles of verbal and non-verbal communication, key concepts of personality, relationship between communication and personality; personality improvement through communication skills.

SU229   **English for Workplace Communication**   **3(2-2-5)**

Use of English vocabulary, expressions and structures related to field of work; development of English listening, speaking, reading and writing skills for workplace communication; giving presentation; expressing opinion in meetings; workplace etiquette.

SU230   **English for Social Media Life**   **3(2-2-5)**

English learning through digital media, listening and reading English in digital media, speaking and writing English on social media platforms.

SU231   **English in the New Normal Era**   **3(2-2-5)**

Learning English from real-world events in the new normal era; improvement of communicative English language skills through reading and listening to the latest news from around the world; speaking and writing on a variety of topics related to the latest global affairs; utilization of digital technology to communicate in English with people around the world.

SU232   **News in Everyday Life**   **3(3-0-6)**

News and current events with an impact on people's daily life, critical analysis of current situations affecting politics, economy, and society; information classification, interpretation and connection skills and presentation of results of the event analysis.

SU301   **Silpakorn Arts**   **3(3-0-6)**

Knowledge and understanding of value of art and creativity; visual arts, performing arts, music, and design in Thailand and foreign countries; application of art in everyday life and linking art with related sciences.

SU302   **Creativity and Innovation**   **3(3-0-6)**

Fundamental concepts and principles of creativity and innovation; case studies, experimentation and application of design thinking for innovation design.

SU303 **Perception through the Lens of Art** 3(3-0-6)

Surrounding environments, nature, objects from daily life, objects reflecting beliefs, rituals, cultures, and tradition; observation and analysis through personal subjective perception; contemporary social contexts; application of concept and basic art creation process to make artworks, projects or innovations.

SU304 **Creative Project Design** 3(3-0-6)

Meaning and value of art, beauty, and creation; case studies and activities to demonstrate creative solutions to challenges in business, society, technology, and the environment; gathering of facts to identify problems; design of innovative concepts; systematic creative planning; project implementation and achievement evaluation.

SU306 **Thai Ways** 3(1-4-4)

Identities of Thai culture in both physical appearance and spirit through ways of life; creativities of Thai fine arts, namely, painting, sculpture, craftsmanship, literature, music, and architecture in particular.

SU307 **Basic Mathematics and Strength of Materials for Design** 3(3-0-6)

Basic knowledge of mathematics and strength of materials for structural design and their application in design.

SU321 **Architecture and Art in South East Asia** 3(3-0-6)

Development of settlements in relation to geography and ecology; development of history, belief, religion, and culture; vernacular architecture; development of architecture and its related arts and architectural heritage; contemporary architecture unique to South East Asia.

SU322   **Cultural Heritage Conservation and Management**   **3(3-0-6)**

         Meaning, concept and theory of conservation and cultural management; cultural diversity; tangible and intangible cultural heritages; architectural heritages; vernacular architectures and communities; archeological and historic site; museums and galleries; guidelines for cultural heritage management in the contemporary context; cultural tourism and signification.

SU323   **Records and Archives Management**   **3(3-0-6)**

         Definition, meaning, and significance of records in relation to working efficiency; good governance database and credibility of organizations; system, standard, and tools for systematic record keeping; concepts, theories, and principles of archival selection, acquisition, and appraisal for permanent storage in archives; processes of managing, providing access, and preserving archives as informational sources, knowledge base, and historical evidence.

SU324   **Internet of Things (IoT) for Lives and Living**   **3(3-0-6)**

         Principles of electrical controllers or embedded board; basic block programing; data sensing and storage; real-time monitoring system through the Cloud platform; voice command through portable telephone network; value of IoT for lives and living; application in everyday life.

SU325   **Nature Appreciation**   **3(3-0-6)**

         Biodiversity; importance and roles of living organisms; value and beauty of nature; awareness raising of conservation and social responsibility.

SU326   **Bird Conservation**   **3(3-0-6)**

         Birdwatching; classification; habitats; singing behavior; foraging and reproduction; nesting behavior; migration and conservation.

SU327   E-Sport Technology, Techniques and Industry   3(3-0-6)

   Definition and types of e-sports; incorporating game elements into activities and educational benefits; acceptance in major sporting events; multiplayer online battle arena (MOBA); first-person shooter (FPS); accepted civility and practice; communication technology in e-sports; game broadcasting technology; team strategy and micro-management; playing styles; communication and collaboration between players; essential e-sports skills, game and e-sports industry; business models; income of players and gamecasters; game practice and competition; case studies from interesting competitions.

SU328   Digital Media Creator for Social Media   3(3-0-6)

   An overview of digital multimedia technology and its applications; using multimedia creation tools; creation of mixed media; photography; video and audio production; animation and interactive media for social media.

SU329   World of Innovation   3(3-0-6)

   Philosophy, concepts, and creation of innovations at present and in the future; development, application, and management; roles and effects of technological and innovative development on life, economy and society.

SU330   Materials and Environmental Impact   3(3-0-6)

   Relationship between materials and art; general material classifications; basic properties of materials; materials in everyday products; creative waste management; material recycling methods.

SU331   Sustainable Technology   3(3-0-6)

   Definition and importance of sustainable technology; effects of technology on economy, society, and environment; examples of sustainable technology; creative and sustainable product design.

SU332   **Amazing Biotechnology Products**   **3(3-0-6)**

Definition and history of biotechnology; interesting biotechnology products in industries of food, beverage, energy, household products, agriculture, wastewater treatment, and medicine; researching and presenting selected biotechnology products; preliminary experiments for creating biotechnology products.

SU333   **New Normal Farming**   **3(3-0-6)**

Importance and concept of farming methods in the "new normal"; materials and methods of various types of cultivation; vertical gardening; design and management of new normal farming; urban ecosystem.

SU334   **Ornamental Insects**   **3(3-0-6)**

General insect morphology; species and diversity of insects; conservation of rare and endangered insects; creativity and utilization of ornamental insects.

SU335   **Metaverse**   **3(3-0-6)**

History, theories, and principles related to the metaverse; elements of the metaverse, importance and types of the metaverse in industry with case studies; immersive technology and technology related to the metaverse; metaverse-related investments and business; art and the metaverse.

SU336   **World of Animation**   **3(3-0-6)**

History and evolution of animation; animation around the world; aesthetics in animation; genres of animation; art and animation; elements and narrative techniques of animation; animation content analysis.

SU337   **Digital Imaging and Sound**   **3(3-0-6)**

Structure, basic principles, various forms of pictures and sound in digital format; creating valuable work by using properly-blended pictures and sound.

Specialized Courses category

| 261 101 | **Basic Design** | **3(1-6-2)** |

Primary elements, basic design principles, behaviours and uses related to human scale and aesthetic, for two and three dimensional design.

| 261 102 | **Architectural Design I** | **4(2-6-4)** |

Prerequisite: 261 101 Basic Design

Design of small residential architecture; relationships between space and human proportion, space and usable area, spatial boundary and enclosure; design tools, functional and spatial relationship analyses, site analysis, and schematic design.

| 261 103 | **Architectural Design II** | **4(2-6-4)** |

Prerequisite: 261 102 Architectural Design I

Design of small-scale projects for residential and commercial uses; design of a cluster of residential units with communal facilities; relationships among buildings, project site, surroundings, and environment; related building codes and standards; integration of architectural design with structural and mechanical systems.

| 261 104 | **Architectural Design III** | **4(2-6-4)** |

Prerequisite: 261 103 Architectural Design II

Design of large-scale residential projects; relationships among buildings, project site, surroundings, and environment; related building codes and standards; integration of building design with structural and mechanical systems.

| 261 105 | **Architecture and Environment** | **3(2-2-5)** |

Heat transfer, lighting, and ventilation in architectural and environmental design; sustainable development in architectural and environmental design; passive design; energy-efficient building design; related building codes, standards, and assessments.

261 106   Architectural Design IV   **5(2-9-4)**

Prerequisite: 261 104 Architectural Design III

Architectural design of large-scale public buildings; conceptual design, architectural characteristics, relationship with contexts; relationship among functions, conditions of uses, circulation system, building codes, structural system, building utility systems.

Field trips required.

261 107   Architectural Design V   **5(2-9-4)**

Prerequisite: 261 106 Architectural Design IV

Architectural design of extra-large-scale public buildings; relationship among functions, architectural characteristics, shape and size of site, environment, continuity and flow of spaces, circulation patterns for internal and external spaces as well as adjacent areas; regulations related to architectural and structural design, construction methods, and building utility systems; integrating knowledges to design practice.

Field trips required.

261 108   Architectural Presentation II   **3(1-4-4)**

Architectural presentation; principles of architectural drawing; thinking through drawing; various art media and techniques in architectural presentation.

261 109   Interior Architecture   **3(2-2-5)**

Interior design fundamentals for specific activities; design of spaces, elements of interior architecture; use of colors, material and structure selection, lighting design to serve specific functional requirements and create atmosphere and moods to convey certain meanings; using interior design as an instrument to stimulate social interactions.

261 110   Model Making   3(2-2-5)

Architectural models; materials, tools and processes in model making; modeling and architectural design.

261 111   Community Architecture   3(2-2-5)

Introduction to theory and concept of creative design for communities; use of creative design process as a tool for building community and fostering human interaction; use of design knowledge as a strategy for inclusive community development.

Field trips required.

261 112   Perception in Architecture   3(2-2-5)

Theories related to architectural perception, sensory, space, experience, place, and architectural language; application of related knowledges to architectural work.

Field trips required.

261 201   Architectural Theories and Concepts   3(3-0-6)

Theories, philosophical thoughts, and concepts of various ideological groups; past and present examples of means, approaches and points of view on architectural interpretations; associations with related arts; society, culture, and technology which impact creativity, standpoints, and trends in architectural movements.

261 202   Architectural Design VI   5(2-9-4)

Prerequisite: 261 107 Architectural Design V

Research, and practice of architectural design for extra-large buildings, as defined in building codes; structural designs for long-span and high-rise buildings; team research on architectural programs including data collection and analysis of functional requirements, building regulations, and mechanical equipment; site selection and site analyses; conceptualization process of creative design; integrative design of building mechanical and structural systems; determining the relationship of the design to the surrounding context.

261 203   Architectural Design VII   5(2-9-4)

Prerequisite: 261 202 Architectural Design VI

Research and practice of architectural design, site planning and master planning of extra-large buildings, as defined in building codes; public projects, hospital and resort building typologies, with a wide range of usages for a large number of users; team research on architectural programs to collect and analyse data on functional requirements, building regulations, mechanical equipment; site selection and site analyses; conceptualization process of creative design; integrative design of building mechanical equipment; determining the relationship of the design to the surrounding context.

261 204   Pre-design Studies   3(3-0-6)

Pre-design research including types and procedures of works, financial feasibility, marketing, environmental constraints, site selection analysis, regulations, standards, design constraints, spatial requirements of mechanical systems; techniques in data collection for site planning and architectural design; factors affecting scale and quality of architectural projects.

261 205   Architectural Practical Training   0 (minimum of 210 hrs. or equivalent)

Note: Evaluation shall be made in terms of S or U.

Students must have already passed and obtained a minimum of 109 credits.

Professional internship training with an architectural firm or government agency.

261 206   Architectural Design VIII   5(2-9-4)

Prerequisite: 261 203 Architectural Design VII

Architecture in the context of the community that is undergoing economic, social and cultural developments as well as natural environmental changes; producing architectural design solutions for sustainable urban community.

Field trips required.

261 207   Architectural Professional Practice   3(3-0-6)

Principles and ethics of the architectural professional practice; related laws and regulations; establishing and managing an office; providing professional services; contract documentation; project management, construction management, collaboration with other related professions.

261 208   Thesis Preparation   3(0-6-3)

Prerequisites: 261 203 Architectural Design VII

261 204 Pre-design Studies

261 205 Architectural Practical Training

Preparation of terms of references through systematic analytical process and write-up program for a design project to be carried out in the following thesis course.

261 209   Thesis   9(0-18-9)

Prerequisites: 261 201 Architectural Theories and Concepts

261 206 Architectural Design VIII

261 208 Thesis Preparation

Students must have already passed and obtained a minimum of 140 credits.

Design work on approved project proposed at the end of Thesis Preparation course, under the advice of assigned supervisors and assessors.

261 210   Seminar in Contemporary Architecture   3(2-2-5)

Discussions on developments in contemporary architecture with emphasis on architecture in Thailand including economic and social factors related to urban and community environment.

261 211   Light and Colour in Architecture   3(2-2-5)

Theory of light and colour concerning an experience of architecture; colour systems; psychology of colour; light sources; lighting technologies; lighting techniques; application of light and colour in architectural design.

261 212 Selected Topic   3(1-4-4)

      Special topic in architecture; research and data analysis in architecture; experiment and architectural design.

261 213 Building Design Analysis   3(3-0-6)

      Building design based on design process that connects designers' concepts to form-creating techniques; comparative study of different groups of architects in terms of creativity, ideology, and socio-cultural environment for deeper understanding of architecture.

261 214 Individual Study in Architecture   3(1-4-4)

      Special topic; experimentation in architecture; data collection and analysis; introduction to research in architecture.

261 215 International Architectural Design Workshop   3(2-2-5)

Note: Evaluation shall be made in terms of S or U.

      Intensive international design workshop to encourage cross-cultural exchange of ideas; collaboration to discover solutions to architectural design problems; development of a global mindset in design and work.

261 216 International Architecture Field Study   1(0-2-1)

Note: Evaluation shall be made in terms of S or U.

      Field study and/or training in foreign country to enhance architectural experience; development of a global mindset in design and work.

261 217 Theory and Design Methodology in Japanese Architecture   3(3-0-6)

      Development of theory and design methodology in Japanese architecture; Japanese history, culture, environment, behavior, ergonomics, philosophy; theory of space; relationship between Japanese architecture and that of other cultures; products with architectural values.

261 218 Architectural Photography   3(3-0-6)

        Theory of architectural photography; principles of lighting, visual composition, perspectives, still and motion photography; post-processing, and architectural presentation.

261 219 Architecture in Thailand   1(1-0-2)

Note: Evaluation shall be made in terms of S or U.

        Introduction to architecture in Thailand including traditional and contemporary architecture; major factors affecting architectural, landscape and urban designs in Thailand.

        Field trips required.

262 102 Basic Delineations   3(1-4-4)

        Drawings of objects of various shapes and sizes, and basic architectural elements; principles and exercises on perspective drawing of spaces, forms, projection of shades and shadows.

262 104 Architectural Presentation I   3(1-4-4)

        Drawing with pencils, ink, and different color mediums; application of rendering techniques to express atmosphere of architecture and its surrounding environment.

262 107 History of Thai Architecture I   3(3-0-6)

        History of architecture in Thailand from Dvaravati (6th – 10th century) to Early Rattanakosin periods (19th century); influences of ancient civilizations on architecture in the Southeast Asian region; evolution of Buddhist art and architecture, such as stupa and vihara.

262 108 Thai Ornaments in Architecture   3(1-4-4)

        Origin and derivation of Thai ornamental patterns and structure of their designs; designing patterns for decorative purposes in Thai architecture.

262 110   History of Thai Architecture II   3(3-0-6)

        History of architecture in Thailand from the period of King Mongkut, or Rama IV (1851-1868), to the present day; styles and cultural influences affecting Thai architecture.

262 115   Foundation in Thai Architecture   3(1-4-4)

        Factors influencing styles in Thai architecture of residential and religious nature; analyzing different types of buildings in terms of planning, architectural characteristics and details.

262 116   Thai Traditional Arts and Crafts   3(2-2-5)

        Background of traditional arts and crafts in Thai architecture; decorative lime stucco molding, wood carving, mirrored glass mosaic, mother of pearl inlay, perforated paper, lacquered and gilded decorations.

262 117   Delineations in Thai Architecture   3(1-4-4)

        Drafting and analyzing various types of structural forms and ornamental details of Thai architecture.

262 118   Architecture and Culture Contexts in Asia   3(3-0-6)

        Cultural origins of architectural creativity reflecting the outlook of builders and users; social systems, rituals, beliefs and religions influencing architectural creations, people, and cultures in the Asian region.

262 119   Vernacular Architecture and Cultural Ecology   3(3-0-6)

        Various aspects of regional vernacular architecture and cultural ecology; influences of natural and cultural environment on local characteristics of vernacular architecture and built environment.

262 120   Thai Architectural Design   3(2-3-4)

 Thoughts, beliefs, and practices associated with constructing domestic and vernacular buildings in each region of Thailand; unique architectural characteristics in terms of proportion, styles, materials, and structure to apply in design.

262 202   History of Architecture from Egypt to Baroque   3(3-0-6)

 History of Western architecture from Prehistory to the period of Baroque in the 18th century through underlying ideas which gave rise to the creation of architecture of each period; architecture and human body; art of deception and architectural folly.

262 211   Individual Study in Thai Architecture   3(1-4-4)

 Individualized topic of student's interest related to Thai architecture.

262 212   Building Re-use and Rehabilitation   3(2-2-5)

 Architectural conservation principles and practices concerning rehabilitation of registered buildings, historic buildings, and old buildings in various contexts to suit present-day requirements; renovation, re-use, additions, and designing new buildings in old contexts.

262 213   Building Surveys and Documentation   3(2-2-5)

 Techniques and technologies in survey, data collection, data organization, and architectural drafting of ancient buildings; preliminary building condition recording.

262 214   History of Architecture from Neoclassicism to Modernism   3(3-0-6)

 History of Western architecture from the Neo-classic period in the 18th century to the period of the Modern movement in the first half of the 20th century and subsequent developments to the end of the century through underlining ideas which gave rise to the creation of architecture of each period.

262 215   **Contemporary Asian Architecture**   **3(3-0-6)**

Designs and developments of contemporary architecture in Asia with emphasis on those in ASEAN countries; design process and other relevant factors such as environment, technology, economics, and social and cultural contexts.

262 216   **Architecture and Modern Thai Society**   **3(3-0-6)**

Changes in Thai society since 1932 influencing formation of architectural concepts and styles over different periods until present day; related disciplines including history, political science, art and literature; architecture in the context of constantly changing modern Thai society.

262 217   **Conservation and Adaptation of Architectural Heritage:**   **3(3-0-6)**

Philosophy, Theory and Practice

Concept and philosophy of international and Thailand's architectural heritage conservation; concept of conservation and improvement of buildings in Thailand from the past to the present; case studies including ancient sites, historic buildings, old towns, cultural heritage and archaeological sites.

263 101   **Construction Technology I**   **3(2-2-5)**

Building components; basic structural concepts; materials in architecture; construction drawing standard; architectural and construction drawing reading; exercises in drawing and model making of building components and small structures.

Field trip(s) required.

263 102   **Construction Technology II**   **3(2-3-4)**

Prerequisite: 263 101 Construction Technology I

Timber and reinforced concrete construction technology; properties of timber and reinforced concrete; post and lintel structural system; finishing materials; construction method and techniques; basic mechanical equipment; specifications reading and writing; exercises in construction drawings of a small timber and reinforced concrete building.

Field trip(s) required.

263 103   Structural Systems in Architecture I   3(3-0-6)

   Properties and behavior of structural materials and components under acting forces; theories and definitions of different units of forces; various structural systems and the way they work; acting loads, load transfer, structural stability, causes of structural damage and failure; making structural estimations; designing suitable and viable structures.

   Field trip(s) required.

263 104   Construction Technology III   3(2-3-4)

Prerequisite: 263 102 Construction Technology II

   Cast-in-situ reinforced concrete and steel construction technology; properties of reinforced concrete and steel; post and lintel structural system; size estimation and positioning of concrete elements; masonry and finishing materials; construction methods and techniques; related mechanical equipment; exercises in construction drawings of reinforced concrete and steel.

   Field trip(s) required.

263 105   Structural Systems in Architecture II   3(3-0-6)

Prerequisite: 263 103 Structural Systems in Architecture I

   Application of statistics for simple structural analysis, calculating loads and reaction forces, bending moments, shear force, etc.; drawing shear diagrams and bending moment diagrams; look at the various structural components reacting under external forces; behavior and design of various building components for timber-frame structure.

   Field trip(s) required.

263 106   Construction Technology IV   3(2-2-5)

   Prerequisite: 263 104 Construction Technology III

   Pre-cast and pre-tensioned concrete; joints in construction; load-bearing wall; specific construction technology such as structural glazing, roof and vertical garden, swimming pools in buildings, skylight; exercises in architectural detail drawings; self-study and analysis of the integration of construction technology in architectural design.

   Field trip(s) required.

263 107   Structural Systems in Architecture III   3(3-0-6)

   Prerequisite: 263 105 Structural Systems in Architecture II

   Behavior and design of various building components for steel structures, and reinforced concrete structures.

   Field trip(s) required.

263 108   Construction Technology V   3(2-3-4)

   Prerequisite: 263 106 Construction Technology IV

   Long-span construction technology; properties of steel and manufacturing; steel skeleton frame, portal frame, truss; size estimation and positioning of steel elements; finishing materials; construction methods and techniques; related mechanical equipment; exercises in construction drawings and model making of a long-span building.

   Field trip(s) required.

263 109   Construction Technology VI   3(2-3-4)

   Prerequisite: 263 108 Construction Technology V

   Large building and high-rise building construction technology; integration of building envelope systems, structural systems, and building services systems; specifications writing for large buildings and high-rise buildings; exercises on large buildings and high-rise buildings design and working drawings.

   Field trip(s) required.

263 110   Mechanical Equipment   3(3-0-6)

      Principles concerning mechanical systems and equipment in buildings; spatial arrangement for air conditioning system, plumbing and sanitary system, electrical system, lighting system, lightning protection system, fire protection system, communication and security systems; fundamentals of good acoustic design for buildings; related laws and regulations regarding inspection of building equipment and energy conservation.

      Field trip(s) required.

263 111   2D Drafting   1(0-2-1)

Note: Evaluation shall be made in terms of S or U.

      2D computer drafting; construction drawing standards and management.

263 112   3D Modeling   1(0-2-1)

Note: Evaluation shall be made in terms of S or U.

      3D computer modeling and solid modeling technique.

263 113   Concrete Technology in Architecture   3(2-2-5)

      Methods for selecting and storing materials and aggregates in concrete mixing; determining mixing ratio; methods for setting up boxing, molding, pouring and curing concrete; designing special textural effects, and pre-casting.

      Field trip(s) required.

263 114   Real-Time Rendering   1(0-2-1)

Note: Evaluation shall be made in terms of S or U.

      Architectural design presentation using Real-Time Rendering software.

263 115   Digital Tools for Design Presentation   1(0-2-1)

Note: Evaluation shall be made in terms of S or U.

      Architectural design presentation using Graphic Design software.

263 116   3D Freeform Modeling   **1(0-2-1)**

Note: Evaluation shall be made in terms of S or U.

Applications of 3D freeform modeling for assisting architectural design.

263 117   VDO Presentation   **1(0-2-1)**

Note: Evaluation shall be made in terms of S or U.

Applications of VDO Editing software for architectural design presentation.

263 118   Spreadsheet Software   **1(0-2-1)**

Note: Evaluation shall be made in terms of S or U.

Applications of Spreadsheet software for architectural design data management.

263 119   Python   **1(0-2-1)**

Note: Evaluation shall be made in terms of S or U.

Applications of programming languages, such as Python, for assisting architectural design.

263 120   Laser Cutting and 3D Printing   **1(0-2-1)**

Note: Evaluation shall be made in terms of S or U.

Applications of fabrication tools, laser cutting machine and 3D printer, for assisting architectural design.

263 121   3D Point Cloud and Photogrammetry   **1(0-2-1)**

Note: Evaluation shall be made in terms of S or U.

Applications of 3D Point Cloud and Photogrammetry for architectural design and architectural conservation.

263 122   Principle of Marketing in Construction Industry   **3(3-0-6)**

Basics knowledge about marketing in the construction industry.

263 201 Industrialized Building Construction 3(2-2-5)

Industrialized building construction systems to reduce time and cost in design and construction process as well as to improve construction quality; application of modular coordination in building design and construction; different types of building products and construction joints; exercises on modular system design.

Field trip(s) required.

263 202 Architectural Detailing 2(1-2-3)

Materials, tools and architectural detailing techniques; limitations of materials and applying alternative materials to suit a building context and construction constraints.

Field trip(s) required.

263 203 Advanced Timber Construction 3(3-0-6)

Heavy timber construction, mass timber, engineered wood glue laminated timber and cross laminated timber, high-rise timber building construction and technology.

Field trip(s) required.

263 204 Individual Study in Building Technology 3(2-2-5)

A topic of interest concerning building technology; carrying out one's own study under the guidance of a supervisor.

263 205 Cost Estimation 3(2-2-5)

Principles of cost estimation and valuation; estimation process, basis of estimation, labor costs, quantity survey, bill of materials and bill of quantities; direct costs, indirect costs, cost index; comparing costs of building components.

263 206 Construction Management 3(3-0-6)

Principles of construction management; planning, management tools and decision making; construction problems involving architects, engineers and other related professions.

263 207   Building Information Modeling   3(2-2-5)

Applications of Building Information Modeling (BIM) for architectural design and presentation; applications of add-ons, such as Visual Programming, for assisting architectural design.

263 208   Parametric Design   3(2-2-5)

Applications of Visual Programming for advanced architectural design; design by algorithm processes; determining parameters and rules in architectural design.

263 209   Individual Study in Computer Applications in Architecture   3(2-2-5)

A topic of interest concerning alternative software, digital technologies, or programming languages, for assisting architectural design.

263 210   Building Inspection   3(3-0-6)

Basic survey of building usage and condition; laws and standards related to building inspection; inspection of structural safety; building systems and equipment inspection; performance testing; building management for safety.

263 211   Energy Conservation Building Assessment   3(3-0-6)

Building regulations related to building design for energy conservation; reading construction drawings and applying software for energy conservation evaluation to comply with energy conservation building design standards.

263 212   Architectural Design for Withstanding Disasters   3(3-0-6)

Concepts for designing durable architecture that can withstand geohazards, landslides, earthquakes, floods, tsunamis, storms, fire and other natural disasters.

263 213   Architectural Acoustics   3(3-0-6)

Theory of sound; design principles for good acoustic quality in connection with building forms, materials, structures, and mechanical systems; reduction and prevention of noise interference; audio and acoustical equipment; computer software for simulating room acoustics; case studies of auditoriums, concert halls, theaters, and cinemas.

Field trip(s) required.

263 214   Sustainable Building Standards   3(3-0-6)

Sustainable building standards; rating systems for energy and environmental sustainability in Thailand, overseas and at international levels; background and objectives of criteria development; rating categories and certification process; design approaches based on the criteria; case studies of certified buildings.

Field trip(s) required.

263 215   Health and Well-being Building Standards   3(3-0-6)

Well-being building standards; rating systems for well-being buildings in Thailand, overseas and at international levels; background and objectives of criteria development; rating categories and certification process; design approaches based on the criteria; case studies of certified buildings.

Field trip(s) required.

263 216   Real Estate Development   3(3-0-6)

Basic knowledge about real estate project development, feasibility study for real estate projects.

263 217   Building Renovation   3(3-0-6)

Basic knowledge about the characteristics of old buildings; guidelines for renovation of old buildings.

263 218   Construction Materials in the Past   3(3-0-6)

Background and characteristics of old construction materials.

263 219 Structural Application for Special Buildings   **3(3-0-6)**

    Applications of structural knowledge in architectural design of special buildings.

264 201 Evolution of Human Settlements   **3(3-0-6)**

    Human settlements through the ages, from past to present; influencing factors affecting urban changes; impacts of social and economic developments on urban growth and physical characteristics.

264 202 Introduction to Urban Planning   **3(3-0-6)**

    Roles, significances, and purposes of urban planning; urban planning process and methods; implementation of plans; land use, traffic, transportation, infrastructure, and environment.

264 203 Human Behavior and Environment   **3(3-0-6)**

    Structure of relationships between human bevaviours and physical environments; perception and cognition; territoriality and personal space behaviour.

264 204 Sustainable Community Development   **3(1-4-4)**

    Various aspects of community and basic principles for developing sustainable community; analyses of relationship between internal and external factors affecting the community; fieldwork involving design and planning of physical environment for selected community.

    Field trips required.

264 205 Urban Design   **3(1-4-4)**

    Aspects of urban design associated with architecture; various components of the urban environment and context; exercises in urban design projects.

264 206   Field Study in Urban Design   3(1-4-4)

        Selected case studies of urban design; relationship between architecture and urban aspects of built environment; field excursions both within the country and abroad.

        Field trips required.

266 101   Sustainable Site Planning and Design   3(3-0-6)

        Process and factors in site planning in relation to architectural works; principles of sustainable environmental design in site design; exercises in site planning and design.

266 102   Landscape Architecture   3(3-0-6)

        Principles of landscape architecture; basic landscape architectural design; factors in landscape architectural design including natural environment, ecology, social and community structure, and human behavior; studio exercises in landscape architectural design.

266 201   Individual Study in Landscape Architecture   3(1-4-4)

        Individualized study topic concerning landscape architecture; to be carried out under the guidance of an assigned supervisor.

266 202   Design for Sustainable Environment   3(3-0-6)

        Concept of sustainable development; design fundamentals for a sustainable environment; basics in urban ecological design; environmental relationships in terms of city, community, and architecture.

266 203   Field Study in Landscape Architecture   3(1-4-4)

        Field studies and case studies of landscape design and site planning; integration of theories and concepts of landscape architectural works; relationships of architecture, landscape architecture, and several other built environments; experience in landscape architecture from on-site studies both in Thailand and abroad

        Field trips required.

266 204   Aesthetics in Design and Environment   3(3-0-6)

      Principles and theories of environmental aesthetics; elements of environmental aesthetic in landscape architectural designs; design techniques for environmental aesthetics; physical, cultural, and social contexts in environmental aesthetic design.

266 205   Urban Landscape   3(3-0-6)

      Concepts in urban landscape; elements of urban landscape including identities, landmarks, and historical sites; urban recreational and open space systems, influences of urban ecology on humans; landscape planning and design in urban areas to improve visual quality of urban environment.

266 206   Plants and Design   3(2-2-5)

      Principles of planting design in gardens and other built environments; plant materials and plant characteristics; plant community in environmental design of architectural works; uses of plants in architectural projects; basic landscape construction and drawings; exercises in planting design.

Academic System

1. Organization

An academic year is divided into two regular semesters, each of which comprises not less than 15 study weeks. All pertaining rules and regulations shall comply with the announcements issued by The Commission on Higher Education Standards regarding Standard Specifications for Study Programs at Undergraduate Level 2022, and/or subsequent changes.

2. Summer sessions

A summer session of not less than 8 weeks may be organized upon necessity, subject to approval by the Faculty Board or the Program Coordinating Committee.

3. Semester system credit equivalents

(Not applicable)

Program Operation

1. Teaching schedule / Calendar

Semester 1:   July - November

Semester 2:   November - March

Summer Session: April - June

2. Mode of education

[✔]   Classroom attendance

[ ]   Distance learning via printed media

[ ]   Distance learning via audio-visual broadcasting media

[ ]   Distance learning via electronic media (E-learning)

[ ]   Distance learning via the internet

[ ]   Others (specify) ....

Note: Some classes may also be taught online upon necessity or on occasions.

Practical / Fieldwork Training

1. Standard Expectancy of Learning Outcome

Students are required to enroll in 261 205 Architectural Practical Training and undergo fieldwork of not less than 210 hours or equivalent during the Summer Session after having passed and accumulated a number of at least 109 credits. Training shall be carried out with an architectural firm or government agency that has an architectural

division, subject to approval by the instructor in charge of the course and student's academic advisor. The intention is to provide students with background experience and an understanding of the profession, and results shall be evaluated in terms of S or U while it is anticipated that students shall acquire the following attributes and abilities:

(1) Working skill and experience, understanding of important principles and the need to gain further theoretical knowledge,

(2) Ability to integrate acquired knowledge in the process of solving design and related problems,

(3) Have good human relations and able to work well with others,

(4) Disciplined, punctual, have an understanding of corporate culture, and able to adapt readily to working environment,

(5) Have confidence in expressing and applying creative ideas in dealing with tasks,

(6) Ability to analyze and synthesize information as well as communicate clearly by verbal means and in writing.

2. Scheduled Period

261 205 Architectural Practical Training course during the Summer Session of students' 4th academic year.

3. Course Undertaking and Duration

261 205 Architectural Practical Training

Type of Training	Duration of Training
Practical training with an architectural firm or government agency that has an architectural division.	Minimum of 210 hours or equivalent.

Final Project / Research Undertaking

1. General Remark

Students are required to undertake thesis work systematically based on a topic of interest, commencing from carrying out preliminary studies, making analyses, setting up conceptual premise, going through the process of problem-solving, and making final presentation of proposed solutions, according to a set timeline under the advice of a supervisor and thesis reviewing committee.

2. Standard Expectancy of Learning Outcome

(1) Students gain good understanding of the design process, ability to think, analyze and synthesize information that leads to establishing framework for design, systematically and according to establihed principles.

(2) Able to produce design work in the form of architectural 2D and 3D presentations as well as write up a thesis that can communicate the content of the work clearly and precisely.

3. Scheduled Period

Semester 2 of students' 5th academic year

4. Number of Credits

9 credits

5. Course Preparation

(1) The person in charge of the course provides a briefing about the overall objectives, working process and schedules that are to be observed and followed.

(2) Instructors give advice on each student's choice of topic and scope of work, along with matters to be concerned in the studies.

(3) Provide examples of past thesis works for students to study and refer to.

(4) Appoint a thesis advisor for each student.

(5) Set consultation hours for students to be able meet and discuss with advisors.

6. Evaluation / Assessment Process

(1) Thesis reviewing committee and students jointly agree and acknowledge the approval of each thesis topic and criteria or standards to be used for evaluating results of the undertaking.

(2) Assessments shall be based on student's progress report of work according to schedules set for the course.

(3) Thesis examining committees shall assess and evaluate the results of students' works.

(4) Students shall present their works for assessment before respective examining committee assigned to each group, who shall attend the presentations given by each student.