**Guide and its Details**

**KMUTT Curriculum Blueprint Version 3.0**

**For the revised curriculum in the 2026 academic year.**

A close-up of a document

Description automatically generated

A picture containing text

Description automatically generated

**Degree Title ........................................ Program in ......................................**

**(Multidisciplinary Program) or (Interdisciplinary Program)**

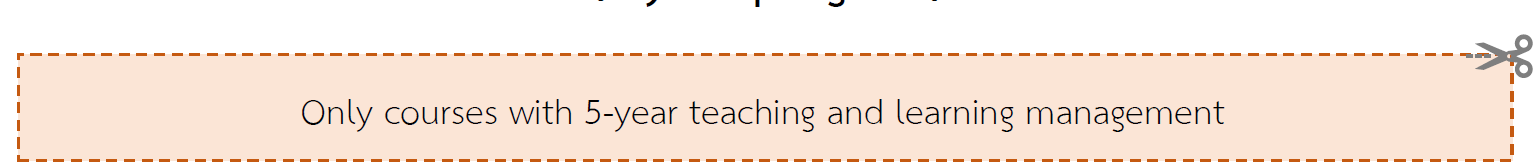
**A close-up of a sign

Description automatically generated**

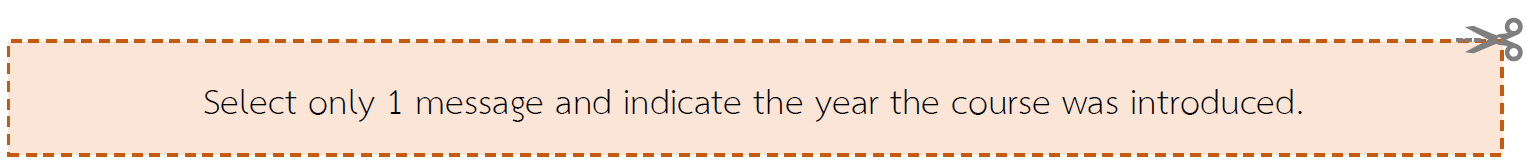
**(International Programs) or (English Courses) or (Bilingual Programs)**

****

**(5-year program)**

****

**New Curriculum B.E. ............ or Revised Curriculum B.E. .............**

****

**Department/Division...........................**

**Faculty or School.................................................**

**King Mongkut's University of Technology Thonburi**

**Table of Contents**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Components** | | | | **Page** |
| **Part 1 Executive Summary** | | | | **5** |
| **Part 2 Program Design and Concept** | | | | **7** |
|  | 2.1) | Rationale for Opening or Revising the Program and Processes Involved in Defining the Concept of the Program. | | 7 |
|  |  | 2.1.1) | Cut with solid fillStakeholder Requirements Gathering Processes and the Conversion of Voice of Customer (VOC) to Voice of Process (VOP) for Opening or Revising the Program. | 7 |
|  |  | 2.1.2) | External Environment Analysis | 9 |
|  |  | 2.1.3) | Internal Environment Analysis | 12 |
|  | 2.2) | Overall Product Concept | | 13 |
|  |  | 2.2.1) | Summary table of Issues from the Exploration and Stakeholder Analysis in topic 2.1 brings to the conclusion of the program design concept (Product concept). | 13 |
|  |  | 2.2.2) | Strength and Competitive Edge | 14 |
|  | 2.3) | Details of the Program Design | | 14 |
|  |  | 2.3.1) | Determination of Program Learning Outcomes (PLOs) | 14 |
|  |  | 2.3.2) | Design Concept for Program Structure and Courses | 20 |
|  |  | 2.3.3) | Cut with solid fillDesign Concept for Teaching and Learning approach, Measurement and Assessment approach of Learning Outcomes | 26 |
|  |  | 2.3.4) | Design Concept for Learning Supports | 34 |
|  |  | 2.3.5) | Program Development Mechanism for Quality Assurance | 38 |
| **Part 3 Program Specification** | | | | **53** |
|  | 3.1) | Program Code | | 53 |
|  | 3.2) | Program Name | | 53 |
|  | 3.3) | Degree Title and Field of Study | | 53 |
|  | 3.4) | Major (if any) | | 53 |
|  | 3.5) | Total Credit Hours | | 54 |
|  | 3.6) | Program Degree Level Type | | 54 |
|  | 3.7) | Program Type | | 54 |
|  | 3.8) | International Standard Classification of Education, ISCED | | 55 |
|  | 3.9) | Language of Instruction | | 55 |
|  | 3.10) | Collaboration with other Institutions (If any) | | 56 |
|  | 3.11) | Conferring Degrees | | 56 |

**Course Details (continued)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Components | | | | **Page** |
|  | 3.12) | Location of Instruction | | 56 |
|  | 3.13) | Dates and Time of Instruction | | 57 |
|  | 3.14) | Educational Management and Educational System | | 57 |
|  | 3.15) | Full Name, Academic Rank and Educational Qualifications of the Program Responsible Faculty Members | | 57 |
|  | 3.16) | Full Name, Academic Rank and Educational Qualifications of the Program Faculty Members | | 58 |
|  | 3.17) | Qualifications of Prospective Students | | 58 |
|  | 3.18) | Program Status and Program Consideration/Approval | | 59 |
|  | 3.19) | Preparedness for Publication of a High-quality, Standardized Program | | 59 |
|  | 3.20) | Career Opportunities of the Graduates | | 60 |
|  |  |  | |  |
| **Part 4 Appendix** | | | | **61** |
|  | Appendix A | | Opinions of the External Experts and Program Responses | 62 |
|  | Appendix B | | Unit of Learning Descriptions | 63 |
|  | Appendix B1 | | Unit of Learning Descriptions: General Education / Basic Engineering / Basic Science and Mathematics | 63 |
|  | Appendix B2 | | Unit of Learning Descriptions of the subjects in the course | 64 |
|  | Appendix(B2.1) | | Unit of Learning Descriptions: Course | 64 |
|  | Appendix(B2.2) | | Unit of Learning Descriptions: Learning Path | 64 |
|  | Appendix(B2.3) | | Unit of Learning Descriptions: OBEM | 66 |
|  | Appendix C | | Background of the Program Faculty Members and Supporting Staff | 68 |
|  | Appendix C1 | | Background of the Program Faculty Members | 68 |
|  | Appendix C2 | | Background of the Supporting Staff | 72 |
|  | Appendix D | | Appointment of the Program Development/ Revision Committee | 73 |
|  | Appendix E | | Regulations of KMUTT on Undergraduate/ Graduate Studies | 73 |
|  | Appendix F | | Cooperation with other institutions (if any) | 73 |
|  | Appendix G | | Course Comparison between the Former Program and the Revised Program (Only for Revised Program) | 74 |

**Part 1 Executive Summary**

**A close-up of a text

Description automatically generated**

1. **The Rationale for Opening the New Program or Revising the Program**

.....................................................................................................................................................................

**2. The Product Concept of the New Program or the Main Concept of the Revised Program**

.....................................................................................................................................................................

**3. Issues changed from the former version of the program can be summarized as follows:**

* 1. Revise the program learning outcomes (PLOs) corresponding to align with the needs of the key stakeholders.

|  |  |
| --- | --- |
| Program Learning Outcomes of  The Former Version | Program Learning Outcomes of  The Revised Version |
| PLO1: ........................................................................  Sub-PLO1A: ...........................................................  Sub-PLO1B: ...........................................................  PLO2: ........................................................................ | PLO1: ......................................................................  Sub-PLO1A: ..........................................................  Sub-PLO1B: ..........................................................  PLO2: ...................................................................... |

The Program Learning Outcome (PLOs) are revised due to ........................................................................................................................................................................................................................................................................................................................................................................

* 1. Improve the Program structure as following:

[Take the table in section 2.3.2.1) Comparison the Program structure with the Notification of the Commission on Higher Education Standards (CHES) on B.E.2565 (Diploma / Bachelor's / Graduate Program)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Example**  **Category** | **Number of Credits** | | | | **Difference in Number of Credits** |
| **Higher Ed. Criteria** | **professional council criteria or others. Specify ........**  **(if any)\*** | **Former**  **Program**  **B.E. 25....** | **Revised Program**  **B.E. 25...** |
| 1. **General Education** | ≥ 24 |  | 31 | 27 | - 4 |
| 1. **Specific Courses**    1. Subject Group ....................    2. Subject Group ....................    3. Subject Group.....................    4. Subject Group..................... | ≥ 72 (4 years)  ≥ 90 (5 years)  (Choose one) |  | ....... | ...... | + 3 |
| 1. **Free Elective** | ≥ 6 |  |  |  |  |
| **Total number of credits** | ≥ 120  (4 years)  ≥ 150  (5 years)  (Choose one) |  |  |  |  |

Explain the reasons of the changes. ..........................................................................................................................................................................

..........................................................................................................................................................................

*For example,*

Adjust courses in the program *(Indicate course code, course name, credits and credit hours as examples below and explain supporting reasons)*

* + *Add (Number) specific courses in the science and mathematics*
  + *Reduce (Number) specific courses in the compulsory engineering subject group.*
  + *Increase WiL Plan*
  1. The curriculum establishes the Learning Pathway named ………………… that leads to career/competency........................................................................................................................................

.............................................................................................................................................................................

.............................................................................................................................................................................

* 1. Other issues

...........................................................................................................................................................................

...........................................................................................................................................................................

*For example ,*

*3.4) Improve the teaching and learning approaches*

*3.5) Increase / decrease the student admission plan*

*3.6) Increase the tuition fee or other specific fees*

*Etc.*

**Part 2 Program Design and Concept**

**2.1) Rationale for Opening or Revising the Program and Processes Involved in Defining the Concept of the Program.**

**A close-up of a paper

Description automatically generated**

**2.1.1) Stakeholder Requirements Gathering Processes and the Conversion of Voice of Customer (VOC) to Voice of Process (VOP) for Opening or Revising the Program.**

**A close-up of a document

Description automatically generated**

2.1.1.1) Exploration of Labor Market Needs

..........................................................................................................................................................................................................................................................................................................................................................

2.1.1.2) Exploration of Current Students Needs

..........................................................................................................................................................................................................................................................................................................................................................

2.1.1.3) Exploration of the Needs of other Stakeholder Groups; for example, Prospective Students, Alumni, Academic Staff, Supporting Staff, Parents, etc.

..........................................................................................................................................................................................................................................................................................................................................................

After gathering all the information above, key stakeholder requirements can be summarized as shown in Table ………..

A close-up of a card

Description automatically generated

| **Key Stakeholders** | **Time period** | **Methods** | **Survey Issues** | **Results as Requirements** |
| --- | --- | --- | --- | --- |
| The University (University Council) |  | Gather from the university documents,  - university’s strategic plan  - KMUTT student QF, etc. | - KMUTT students/ graduates attributes  - Vision, mission and policy | - KMUTT graduates require leadership skills, communication capability, and good presentation skills |
| Academic Staff  (Instructors, Academic advisors, University supervisors for internship, Mentors/ Trainers in Company or Factory) | Before, during, and after each semester | Meeting / Seminar | CLOs, Course Content, Teaching methods, Problems found in classes | Using interesting teaching techniques and new technologies in teaching will be advantageous for students. |
| Alumni  (Graduated 1-2 years ago)  (Graduated 3-4 year ago)  (Graduated more than 5 years) | September – November 2022 | - Questionnaire  - Interview   * - Alumni Seminar | Nature of work and job assigned, Knowledge application in works,  New technology tools, Problems at work | - Ability to adapt themselves to technology disruption is needed. |
| Learner | ..................................  .................................. | ..................................   * .................................. | ..................................  .................................. | ..................................  .................................. |
| Employer | ..................................  .................................. | ..................................  .................................. | ..................................  .................................. | ..................................  .................................. |
| Please fill in the information of **all stakeholder groups** according to the actual exploration needs of each group. | | | | |

**2.1.2) External Environment Analysis**

**A close-up of a text

Description automatically generated**

2.1.2.1) Analysis of Demand and Supply in Labor Market (Both Quantitative Data)

..........................................................................................................................................................................................................................................................................................................................................................

2.1.2.2) Competitive Benchmarking Analysis

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

**Examples (Guideline for preparation; can be adjusted according to the appropriateness of the program)**

| **Issue** | **Programs and Universities** | | | |
| --- | --- | --- | --- | --- |
| **B.Eng. in Measurement Engineering (Continuous), KMITL** | **B.Eng. in Mechatronics and Automation Engineering, KMITL** | **B.Eng.in Robotics and Automation, KMUTNB** | **B.Sc. in Control Systems and Instrumentation Engineering, KMUTT (Current Course)** |
| Years of Program | B.E. 2563 | B.E. 2563 | B.E. 2563 | B.E. 2563 |
| Format of the Program | Bachelor's Degree 3 years (Continuous) | Bachelor's Degree 4 years | Bachelor's Degree 4 years | Bachelor's Degree 4 years |
| Languages | Thai | Thai | English | Thai |
| Total number of credits | 123 Credits | 149 Credits | 139 Credits | 143 Credits |
| Number of General Course Credits | 30 Credits | 30 Credits | 30 Credits | 31 Credits |
| Number of credits for specific courses | 87 Credits | 113 Credits | 103 Credits | 106 Credits |
| Number of credits for Free Elective Courses | 6 Credits | 6 Credits | 6 Credits | 6 Credits |
| Number of students according to the admission plan | 30 persons | 120 persons | 80 persons | 80 persons |
| Admission Qualified | Thai students and international students with good Thai language skills | Thai students and international students with good Thai language skills | Thai or international students who can use English | Thai and international students with good Thai language skills. |
| Internship/Cooperative Education | No compulsory internship courses. | Internship in the special semester of the 3rd academic year and can choose elective courses for cooperative internships. (6 credits) to go on an internship in the 1st semester of the 4th academic year | No compulsory internship courses. | two study plans: 1) regular internship in the special semester of the 3rd academic year and 2) a cooperative internship plan in the 1st semester of the 4th academic year. |
| Tuition fee per semester | 35,000 THB | 25,000 THB | 60,000 THB | Regular Plan: 20,937.50 THB,  Co-op Learning Plan: 42,000 THB |
| Academic Competence and Competence | - Graduates are able to apply knowledge and skills in automation design and development.  - Focus on self-learning, teamwork, communication, and professional ethics.  - Organize engineering and economics project management courses as compulsory courses. | - Graduates are able to apply knowledge and skills in automation design and development.  - Focus on System Integration to automate processes. | - Graduates are able to กesign and develop various types of robots using both pneumatic and hydraulic systems. | - Graduates are able to apply knowledge and skills in automation design and development.  - Focus on producing graduates who are ready to use and practical work.  - Learning emphasises on theory and practical experiences.  - Students can relate the course contents via the mini-projects with other necessary work skills added.  - Encourage students to keep pace with new technologies. |

2.1.2.3) Other External Factors to be Considered (If any)

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

**2.1.3) Internal Environment Analysis**

**A close-up of a piece of paper

Description automatically generated**

2.1.3.1) Performance Appraisal

..........................................................................................................................................................................................................................................................................................................................................................

**A close-up of a message

Description automatically generated**

**Table ....** Numberof students in the program from the academic year 20xx-20xx

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Degree Title and Field of Study:**  **Student Admission Plan:**  (In case of several admission plans, specify in remark) | | | | | |
| **Student ID** | **First-time Student (pers.)** | **Dropout**  **(pers.)** | **Left Behind**  **(pers.)** | **Graduate**  **(pers.)** | **Average Time to Graduate (year)** |
| Code xx |  |  |  |  |  |
| Code xx |  |  |  |  |  |
| Code xx |  |  |  |  |  |
| Code xx |  |  |  |  |  |
| Code xx |  |  |  |  |  |
| Code 68 |  |  |  |  |  |

Remark: The data shown in the table (Row) represents the number of students in the same cohort.

2.1.3.2) Strengths Analysis

..........................................................................................................................................................................................................................................................................................................................................................

**2.2) Overall Product Concept**

**2.2.1) Summary table of Issues from the Exploration and Stakeholder Analysis in topic 2.1 brings to the conclusion of the program design concept (Product concept).**

| **Issues from the Data Analysis**  **in topic 2.1** | **Improvement Issues** | **PLOs related** | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **PLO 1** | | **PLO 2** | | **PLO 3** |
| **1A** | **1B** | **2A** | **2B** |
| **Group 1: Experts from both**  **Academic and Industrial**  **Sector**  + .........................................................  + .........................................................  (Issue is taken from the summary in topic 2.1.) | Explain how has the program revised on these issues (in each bullet)?  .............................................................. |  |  |  |  |  |
| If any issue affects the determination of PLO, please specify which PLO is developed due to that revision, but if there is none (because it may only be an adjustment in teaching and learning management). | | | | |
| **Group 2: Graduates student**  **during academic year**  **2015 – 2025**  + ....................................................... | ............................................................... | **/** | **/** |  |  | **/** |
| + ......................................................... | ................................................................ |  |  | **/** |  |  |
| + ........................................................... | ................................................................ |  |  |  | **/** |  |
| **Please enter the information according to the actual perform of the program completely.** | | | | | | |

**2.2.2) Strength and Competitive Edge**

.............................................................................................................................................................................

.......highlight or focus points of the program that create competitiveness to other programs ……

.............................................................................................................................................................................

**2.3) Details of the Program Design**

The overall product concept of the program (in topic 2.2) evolved into the details of the program, which are:

**2.3.1) Determination of Program Learning Outcomes (PLOs)**

**A close-up of a document

Description automatically generated**

2.3.1.1) Philosophy, Importance and Objectives of the Program

A close-up of a document

Description automatically generated

............................................................................................................................................................................. .............................................................................................................................................................................

2.3.1.1.1) Program Philosophy

**A close-up of a text

Description automatically generated**

.............................................................................................................................................................................

.............................................................................................................................................................................

2.3.1.1.2) Importance of the Program

............................................................................................................................................................................. .............................................................................................................................................................................

2.3.1.1.3) Program Objectives

............................................................................................................................................................................. .............................................................................................................................................................................

2.3.1.2) Program Learning Outcomes; PLOs

**PLO 1: ....................................................**

Sub PLO 1A ……………………

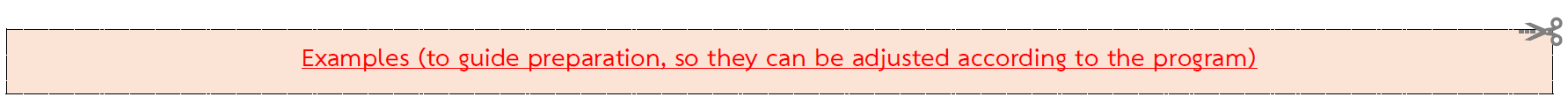
Sub PLO 1B ……………………

**PLO 2: .....................................................**

Sub PLO 2A ……………………

Sub PLO 2B …………………..

2.3.1.3) The relationship between curriculum learning outcomes (PLOs), Graduate Attribute of King Mongkut's University of Technology Thonburi. (KMUTT student QF) and the Learning outcomes according to Thailand Qualification Framework (TQF).

****

| **Program Learning Outcomes (PLOs)** | | **KMUTT Student QF** | | | | | | | | | | **TQF Learning Outcomes** | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **KMUTT’s citizenship** | | | **Knowledge** | **Professional** | **Thinking skill** | **Learning skill** | **Management skill** | **Communication skill** | **Leadership** | **1. Knowledge** | | | **2. Skills** | | **3. Ethics** | | **4. Character** | | |
| **Responsibility** | **Adaptability** | **Humanization** | **1.1 ...................** | **1.2 ...................** | **1.3 ...................** | **2.1 ...................** | **2.2 ...................** | **3.1 ...................** | **3.2 ...................** | **4.1 ...................** | **4.2 ...................** | **4.3 ...................** |
| **PLO 1:** | **..................** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sub PLO 1A | ……………… |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sub PLO 1B | ……………… |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **PLO 2:** | **..................** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sub PLO 2A | ……………… |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sub PLO 2B | ……………… |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

* **Definition of the Desirable Graduate Attribute Framework of King Mongkut's University of Technology Thonburi (KMUTT-Student QF)**

1. **Knowledge:** having a deep academic knowledge base in the field of study and having extensive knowledge about the changes that have occurred and being able to apply knowledge to practice one's profession with expertise and in living a good life.

**2) Professional Skills :** the ability to translate knowledge into practice, have expertise in using professional tools and equipment, have the ability to apply technology to work, have the ability to guide and train others to be able to work and use various equipment.

**3) Thinking skills :** being creative, having a logical thinking system, knowing how to process information, brainstorming from different perspectives, being able to choose to use various thought patterns, and using them to solve problems and make decisions logically.

**4) Learning Skills** : knowing how to seek knowledge, seeing learning as occurring anywhere and anytime, which will help develop into a lifelong learner, able to learn through various forms of media, having a good system and method of thinking, and being able to distinguish and filter information obtained from learning appropriately.

**5) Communication skills :** having good skills in using Thai and English in listening, speaking, reading, and writing, being able to communicate with others correctly and appropriately, being able to convey and present work, and having good judgment in listening.

**6) Management Skills: a**ble to set goals, plan and execute effectively within resource constraints and on the basis of morality and ethics to achieve personal, organizational and social goals. Able to anticipate problems, impacts, and related factors, as well as have a positive attitude and the ability to prepare, prevent, and proactively resolve situations or problems.

**7) Leadership : h**ave confidence and value in themselves and others, have an understanding of the basics and needs of the team, be able to create a teamwork atmosphere, inspire and stimulate creativity, be aware of situations, opportunities, and challenges, and be able to seek/create ways to achieve a variety of goals. be to communicate and coordinate to create cooperation in team thinking and action, as well as being a good role model.

**8) KMUTT’s Citizenship:** Professionalism and Integrity, including adherence to the Code of Ethics to develop into a fully human being (Humanization)

**a. Responsibilities: Be** responsible for themselves, professionally, and society, be disciplined and punctual, care for the environment and the public., do not abandon work or shirk responsibility, be ready to accept and deal with the consequences of actions, both direct and indirect, respect the rules and regulations of the organization and society, as well as academic and professional ethics.

**b. Adaptation:** be flexible and not cling to any thing to the point of blocking oneself from others, and be prepared to accept changes without resisting them, but are ready to understand the necessity of the change that occurs.

**c. Humanization: h**ave an optimistic attitude, not look down on oneself and others, value humanity, care for environment and public, be able to live well with others, and know how to give, share, and sacrifice.

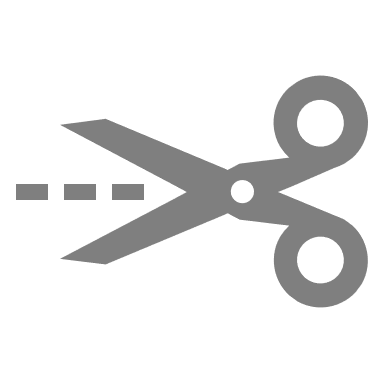
* **Definition of Higher Education Qualification Framework (TQF) Learning Outcomes**

**A close-up of a text

Description automatically generated**

........................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

............................................................................................................................................................................................................................................................................

****

|  |
| --- |
| **References**   * Office of Education Development and Services Website <https://eds.kmutt.ac.th> * Higher Education Standards Board (HEC) website Notification of [the Higher Education Standards Committee Re: Details of Learning Outcomes in accordance with Higher Education Qualification Standards B.E. 2565 (2022)](https://www.ops.go.th/th/ches-downloads/edu-standard/item/6940-2022-07-22-02-54-49) |

**2.3.2) Design Concept for Program Structure and Courses**

**A close-up of a document

Description automatically generated**

2.3.2.1) Comparison between the program structure and the Notification of the Higher Education Standards Committee for Diploma/ Bachelor/ Graduate Programs B.E. 2565 (2022)

A close-up of a sign

Description automatically generated

**Diploma**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Category** | **Number of Credits** | | | | **Difference in Number of Credits** |
| **Higher Ed. Criteria** | **Professional council criteria or others. Specify ........ (if any)\*** | **Former Program B.E. 25…..** | **Revised Program B.E. 25…..** |
| 1. **General Education** | ≥ 24 |  | 31 | 27 | - 4 |
| 1. **Specific Courses**    1. Subject Group .................    2. Subject Group .................    3. Subject Group...................    4. Subject Group................... | ≥ 30 |  | ....... | ...... | + 3 |
| 1. **Free Elective** | ≥ 3 |  |  |  |  |
| **Total number of credits** | ≥ 60 |  |  |  |  |

\*Other criteria that the curriculum must consider such as the Council of Engineers, the Architect Council of Thailand, the Teachers Council of Thailand, etc. The number of credits in each subject must be determined in accordance with the above criteria.

**Bachelor Degree**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Category** | **Number of Credits** | | | | **Difference in Number of Credits** |
| **Higher Ed. Criteria** | **Professional council criteria or others. Specify ........ (if any)\*** | **Former Program B.E. 25…..** | **Revised Program B.E. 25…..** |
| **1. General Education** | ≥ 24 |  | 31 | 27 | - 4 |
| **2. Specific Courses**   * 1. Subject Group.........   2. Subject Group.......   3. Subject Group.......   4. Subject Group....... | ≥ 72 (4 years)  ≥ 90 (5 years)  (Choose one) |  | ....... | ...... | + 3 |
| **3. Free Elective** | ≥ 6 |  |  |  |  |
| **Total number of credits** | ≥ 120 (4 years)  ≥ 150 (5 years)  (Choose one) |  |  |  |  |

\*Other criteria that the curriculum must consider such as the Council of Engineers, the Architect Council of Thailand, the Teachers Council of Thailand, etc. The number of credits in each subject must be determined in accordance with the above criteria..

**Master’s Degree**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Categories** | | **Number of Credits** | | | | **Difference in Number of Credits** |
| **Higher Ed. Criteria** | **Professional council criteria or others. Specify ........**  **(if any)\*** | **Former Program**  **B.E. 25…..** | **Revised Program**  **B.E. 25…..** |
|  | **Plan 1 (Academic)** | | | | | |
| Compulsory Courses | | - |  |  |  |  |
| Elective Courses | |  |  |  |  |
| Thesis | | ≥ 12 |  |  |  |  |
| Total number of credits | | ≥ 36 |  |  |  |  |
|  | **Plan 2 (Professional)** | | | | | |
| Compulsory Courses | | - |  |  |  |  |
| Elective Courses | |  |  |  |  |
| Independent Study | | ≥ 3 < 6 |  |  |  |  |
| Total number of credits | | ≥ 36 |  |  |  |  |

\*Other criteria that the curriculum must consider such as the Council of Engineers, the Architect Council of Thailand, the Teachers Council of Thailand, etc. The number of credits in each subject must be determined in accordance with the above criteria..

**Doctoral Degree**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Categories** | | **Number of Credits** | | | | **Difference in Number of Credits** |
| **Higher Ed. Criteria** | **Professional council criteria or others. Specify ........ (if any)\*** | **Former Program B.E. 25…..** | **Revised Program B.E. 25…..** |
|  | **Plan 1.1 Applicants with a master's degree (48 credits thesis)** | | | | | |
| thesis | | ≥ 48 |  |  |  |  |
| Total number of credits | | ≥ 48 |  |  |  |  |
|  | **Plan 1.2 Applicants with a bachelor's degree (72 credits thesis)** | | | | | |
| thesis | | ≥ 72 |  |  |  |  |
| Total number of credits | | ≥ 72 |  |  |  |  |
|  | **Plan 2.1 Applicants with master's degree (36 credits thesis)** | | | | | |
| Compulsory Courses | | ≥ 12 |  |  |  |  |
| Elective Courses | |  |  |  |  |
| thesis | | ≥ 36 |  |  |  |  |
| Total number of credits | | ≥ 48 |  |  |  |  |
|  | **Plan 2.2 Applicants with a bachelor's degree (48 credits thesis)** | | | | | |
| Compulsory Courses | | ≥ 24 |  |  |  |  |
| Elective Courses | |  |  |  |  |
| thesis | | ≥ 48 |  |  |  |  |
| Total number of credits | | ≥ 72 |  |  |  |  |

\*Other criteria that the curriculum must consider such as the Council of Engineers, the Architect Council of Thailand, the Teachers Council of Thailand, etc. The number of credits in each subject must be determined in accordance with the above criteria.

2.3.2.2) Details of the program structure and courses

a) Total number of credits in the program: ............... credits

b) Program Structure (by Category)

**Examples of Undergraduate Program Structure**

|  |  |  |  |
| --- | --- | --- | --- |
| A. | General Education | ....... | credit |
| B. | Specific Courses | ....... | credit |
|  | - Basic Engineering | ....... |  |
|  | - Basic Science and Mathematics | ....... |  |
|  | - Compulsory ......... | ....... |  |
|  | - Electives......... | ....... |  |
| C. | Free Electives | ....... | credit |

**Example of Master's Program Structure**

Plan 1 (Academic Plan)

|  |  |  |  |
| --- | --- | --- | --- |
| A. | Compulsory Courses | ....... | credit |
| B. | Elective Courses | ....... | credit |
| C. | Thesis | ....... | credit |

Plan 2 (Professional Plan)

|  |  |  |  |
| --- | --- | --- | --- |
| A. | Compulsory Courses | ....... | credit |
| B. | Elective Courses | ....... | credit |
| C. | Independent Study | ....... | credit |

**Examples of Doctoral Program Structure**

Plan 1.1 Applicants who have completed a master's degree (48 credits thesis)

|  |  |  |  |
| --- | --- | --- | --- |
| A. | Thesis | ....... | credit |

Plan 2.1 Applicants who have completed a master's degree (36 credits thesis)

|  |  |  |  |
| --- | --- | --- | --- |
| A. | Compulsory Courses | ....... | credit |
| B. | Elective Courses | ....... | credit |
| C. | Thesis | ....... | credit |

c) Courses

The course code consists of alphabets and numbers with the following meanings:

The course code is divided into (1) the case of Course, consisting of three alphabets and three digits and (2) the case of OBEM, consisting of three alphabets and five digits.

**Alphabet Code**

GEC stands for Compulsory Learning Unit in General Education.

GES stands for Elective Learning Unit in the General Education

LNG stands for Language and Communication subject group.

...... means ........................................ subject group.

...... means ........................................ subject group.

| **Course Number Code**  (Only the XXX numeric code of this program is specified) | **OBEM Course Number Code**  (Only the XXXXX numeric code of this program is specified) |
| --- | --- |
| **Hundreds digit r**efers to the level of the course  Numbers 1-4 refers to undergraduate course.  Number 5 refers to graduate course but  undergraduate students can choose  to study.  Number 6 and above refers to graduate course.  **Tens** digit refers to a group of subjects.  The number 0 refers to the ........................ subject group.  The number 1 refers to the ........................ subject group.  The number 2 refers to the ........................ subject group.  The number 3 refers to the ........................ subject group.  The number 4 refers to the ........................ subject group.  The number 5 refers to the ........................ subject group  The number 6 refers to the ........................ subject group  The number 7 refers to the ........................ subject group  The number 8 refers to the ........................ subject group  The number 9 refers to the ........................ subject group  **The unit digit** refers to the sequences of courses. | **Digit 10,000** refers to the level of the course.  Numbers 1-4 refers to undergraduate course.  Number 5 refers to graduate course but  undergraduate students can choose to  study.  Number 6 and above refers to graduate course.  **Thousands** of numbers refers to a group of subjects.  The number 0 refers to the ....................... subject group.  The number 1 refers to the ....................... subject group.  The number 2 refers to the ....................... subject group.  The number 3 refers to the ....................... subject group.  The number 4 refers to the ....................... subject group.  The number 5 refers to the ........................ subject group  The number 6 refers to the ........................ subject group  The number 7 refers to the ........................ subject group  The number 8 refers to the ........................ subject group  The number 9 refers to the ........................ subject group  **The hundreds** digit refers to the sequence of the courses.  **The tens digit number**  refers to the sequences of course in the OBEM type, which divides into two cases:   1. OBEM without splitting from any course, use 00 (last two digits) 2. OBEM with splitting from any course, use the number 01-09 respectively |
| Example  MTH 666  STD 111 | Example :  1) OBE101 Adjust to OBE10100  2) EDS101 Divided into EDS10101, EDS10102 |

A. Compulsory Course Category (Based on the Program Structure) .........credit

XXX xxx ……….Course Name (in English) .…… x(x-x-x)

(........... Course Name (in Thai) ............)

XXX xxxxx …….Module Name (in English) .…… x(x-x-x)

(........... Module Name (in Thai) ............)

GEC 11100 Humans and Ethics for Lifestyle 2(2-0-6)

(Man and Ethics of Living)

INT 60402 Information Governance 3(3-0-6)

(Data Governance)

B. Specific Course Category (Based on the Program Structure) .........credit

Please clearly state the conditions for choosing a course. For example, choose to take courses across subject groups, choose to study only one group of subjects, or choose extracurricular courses according to the approval of the program responsible faculty members, etc.

XXX xxx ………..Course Name (in English)....................... x(x-x-x) (........Course Name (in Thai)..........)

XXX xxxxx ……….Module Name (in English)....................... x(x-x-x) (........Module Name (in Thai).................)

C. Free Elective Courses 6 Credits

Learners can choose any courses offered at King Mongkut's University of Technology Thonburi.

d) Components Relating to Fieldwork Experience (specified) *e.g. internship/ CWIE/Cooperate Education /Work Practice****/****WIL/others*. For each category, the following topics must be specified:

d.1) Learning outcomes of field experience

Specify the course name and course learning outcomes as stated in the Appendix. B. Details of the Unit of Learning in the Curriculum.

d.2) Duration

d.3) Number of Credits

d.4) Preparation

Briefly describe the preparation of providing academic advice and support to learners. .

d.5) Learning Management

Explain the learning management of the course to achieve the learning outcomes of the prescribed course

d.6) Assessment Process

Explain the assessment process, including the mechanism for standard verification. .

d.7) List of cooperative field experience (if any)

Name of the agency/institution.

e) Specifications related to the Project or Research (if any)

e.1) Learning outcomes of projects or research

Specify the course name and course learning outcomes of the project or research to match those specified in Appendix B. Details of the Unit of Learning in the course.

e.2) Duration

e.3) Number of Credits

e.4) Preparation

Briefly describe the preparation of providing academic advice and support to learners.

e.5) Learning Management

Explain the learning management of the course in order to achieve the specified learning outcomes of the course. .

e.6) Assessment Process

Describe the assessment process, including the mechanism for standard verification .

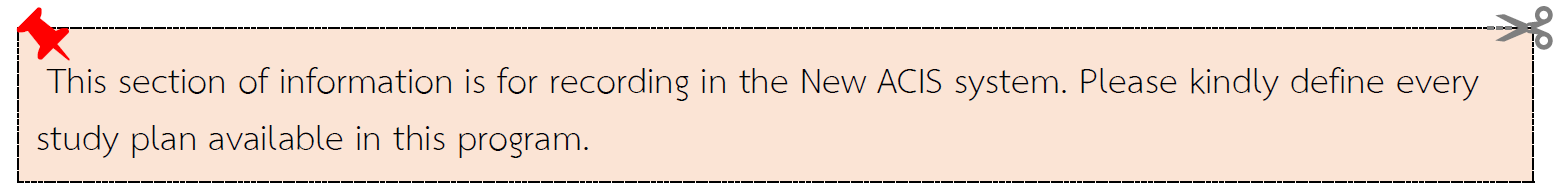
**2.3.3) Design Concept for Teaching and Learning approach, Measurement and Assessment approach of Learning Outcomes**

**A screenshot of a computer screen

Description automatically generated**

2.3.3.1) The teaching and learning process to enable learners achieve the program learning outcomes (PLOs) and course learning outcomes (CLOs).

1. Study Plan



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Study Plan................. | | | | | |
| Year of Study...... Semester ....... | | | | | |
| XXX xxx | ………. Course Name ..............…… | credit | (L | P | S) |
| XXX xxx | ………. Course Name ..............…… |  |  |  |  |
| XXX xxx | ………. Course Name ..............…… |  |  |  |  |
| XXX xxxxxx | ………. Module Name .................... |  |  |  |  |
| XXX xxxxxx | ………. Module Name .................... |  |  |  |  |
|  | Total |  |  |  |  |
|  | Number of Hours/Week | = x | | | |

1. Learning Pathway

A screenshot of a computer

Description automatically generated

**Learning Path Name**: ...................................................................................................................................

**Learning Path Descriptions**:

....................................................................................................................................................................................................

....................................................................................................................................................................................................

**Learning path Diagram:**

....................................................................................................................................................................................................

....................................................................................................................................................................................................

A screenshot of a computer

Description automatically generated

#### c) Explain how to design the teaching and learning process that encourages learners to learn, know how to seek knowledge, cultivate learners to have lifelong learning, and develop a growth mindset.

..........................................................................................................................................................................................................................................................................................................................................................

2.3.3.2) Assessment Approaches at Program-level and Course-level (PLOs) and CLOs)

a) The alignment of learning outcomes, teaching and learning approach, and assessment approach aims to develop learners to achieve the program learning (Constructive Alignment). This can be summarized as follows:

Table No. xxxxx …………………………………

|  |  |  |
| --- | --- | --- |
| **Program Learning Outcomes (PLOs)** | **Teaching and Learning Approach** | **Assessment Approach** |
| PLO1……………………………..  Sub PLO1A………………….  Sub PLO1B…………………. | ...................................................... | ...................................................... |
| PLO2……………………………..  Sub PLO2A………………….  Sub PLO2B…………………. | ...................................................... | ...................................................... |
| ...................................................... | ...................................................... | ...................................................... |

1. Stage Learning Outcomes (Stage-LOs) or Year Learning Outcomes (Year-LOs)

A close-up of a paper

Description automatically generated

To ensure that learners have achieved the program learning outcomes, the program must set a control point or check point of learning outcomes to assessment the learning development of learners periodically and continuously. It can be summarized as follows:

b1) Stage-LO 1:

.............................................................................................................................................

b2) Time Period for Assessment

..................................................................................................................................................

b3) Assessment Methods

..................................................................................................................................................

b4) Criteria for Assessment

..................................................................................................................................................

Moreover, how is the process of tracking learners? And when learners are not able to pass or achieve the learning outcome, how is the curriculum’s management approach to assist them?

..................................................................................................................................................

..................................................................................................................................................

..................................................................................................................................................

..................................................................................................................................................

c) The relationship between program learning outcomes and course learning outcomes (PLOs-CLOs Curriculum Mapping)

c.1) Curriculum Mapping of the General Education Category for Undergraduate / the English Fundamentals course for Graduate students.

A screenshot of a computer

Description automatically generated

c.2) Curriculum Mapping of the program

A screenshot of a computer

Description automatically generated

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Example 1 (As a guideline, it can be adjusted according to the curriculum)**   | **Courses** | **PLO 1** | | | **PLO 2** | | **PLO 3** | | **PLO 4** | | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **1A** | **1B** | **1C** | **2A** | **2B** | **3A** | **3B** | **4A** | **4B** | | **Plan 1 Academic Plan** |  |  |  |  |  |  |  |  |  | | **Academic Year 1 Semester 1** |  |  |  |  |  |  |  |  |  | | MTH 111 Calculus 1 | I |  |  |  | I |  | I |  |  | | SED 613 Statistics for Artificial Intelligence |  | R |  |  |  | I |  | I |  | | INT 60401 Database Management |  |  | R | R |  |  |  | I | I | | INT 60402 Governance Information |  | R |  |  | I | R |  |  |  | | **Academic Year 1 Semester 2** |  |  |  |  |  |  |  |  |  | | XXX xxx …………………………………. |  |  | R | I |  |  |  |  | I | | XXX xxx …………………………………. |  |  | R |  |  | R |  |  |  | | **Academic Year 2 Semester 1** |  |  |  |  |  |  |  |  |  | | XXX xxx …………………………………. |  | M |  |  |  |  |  |  |  | | **Academic Year 2 Semester 2** |  |  |  |  |  |  |  |  |  | | XXX xxx …………………………………. | M |  |  |  | M |  |  | M |  | | XXX xxx …………………………………. |  |  |  |  |  | M |  |  |  | | **Elective Courses** |  |  |  |  |  |  |  |  |  | | XXX xxx …………………………………. | I |  |  |  | I |  |  | R |  | | XXX xxx …………………………………. |  |  | R |  |  | I |  |  |  | | XXX xxx …………………………………. |  | I |  | I |  |  | I |  |  |   **Definition or meaning of each level**  e.g. I = Introduced; indicate students are introduced to the outcome  R = Reinforced; indicate the outcome is reinforced and student afforded opportunities to practice  M = Mastery, indicate that students have had sufficient practice and can now demonstrate mastery |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Example 2 (as a guideline for preparation, so it can be adjusted according to the curriculum)**   | **Stage-LO** | **Courses** | **PLO 1** | | | **PLO 2** | | **PLO 3** | | **PLO 4** | | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **1A** | **1B** | **1C** | **2A** | **2B** | **3A** | **3B** | **4A** | **4B** | | **Stage LO 1** | **Academic Year 1 Semester 1** |  |  |  |  |  |  |  |  |  | | MTH 111 Calculus 1 | I |  | I |  | I | I | I |  |  | | SED 613 Statistics for Artificial Intelligence |  | I | R |  |  | R |  | I |  | | **Academic Year 1 Semester 2** |  |  |  |  |  |  |  |  |  | | INT 60401 Database Management |  |  | R | I |  |  |  |  | I | | **XXX xxx ……………… (Check point)**  **..............................................................** |  |  | **R**  **.......** |  |  | **R**  **........** |  |  |  | | *(if any) If the curriculum has any courses or activities defined. It is a point of examination for learners, such as Capstone Project, QE exam, thesis outline exam, etc.* | | | | | | | | | | | **Stage LO 2** | **Academic Year 2 Semester 1** |  |  |  |  |  |  |  |  |  | | INT 60402 Governance Information |  | R |  |  | R |  |  |  |  | | **XXX xxx ……………… (Check point)** |  |  |  |  | R |  |  |  |  | | **Stage LO 3** | **Academic Year 2 Semester 2** |  |  |  |  |  |  |  |  |  | | XXX xxx …………………………………. | R |  |  |  | M |  |  | M |  | | XXX xxx …………………………………. |  |  |  |  | M |  |  |  |  | | **XXX xxx ……………… (Check point)** |  |  | M |  | M | M |  |  |  | | **Elective Courses** | XXX xxx …………………………………. |  |  |  |  |  |  |  |  |  | | XXX xxx …………………………………. |  |  |  |  |  |  |  |  |  |   **Definition or meaning of each level**  e.g. I = Introduced; indicate students are introduced to the outcome  R = Reinforced; indicate the outcome is reinforced and student afforded opportunities to practice  M = Mastery, indicate that students have had sufficient practice and can now demonstrate mastery |

d) Graduation criteria

* In accordance with the Notification of the Higher Education Standards Committee on Standards for Diploma/**Bachelor's/Graduate Programs B.E. 2565 (2022**) and in accordance with the Regulations of King Mongkut's University of Technology Thonburi. Regarding Undergraduate Education B.E. 2557 (2014) / **Graduate Education B.E. 2562 (2019**) or other amended regulations
* If there are other conditions other than the KMUTT regulations. Please specify more.

..........................................................................................................................................................................................................................................................................................................................................................

**2.3.4)** **Design Concept for Learning Supports**

2.3.4.1) Analysis of competency and readiness of academic staff and supporting staff

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

2.3.4.2) Guidelines for the development of academic staff and supporting staff

A close-up of a paper

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

2.3.4.3) Facilities & Infrastructure and Student support services

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

2.3.4.4) Incomes and Expenses of the program

a) 5-year plan for admissions and graduates.

Number of students based on the program plan (for consideration by the OPS)

| **Detail** | **2026** | **2027** | **2028** | **2029** | **2030** |
| --- | --- | --- | --- | --- | --- |
| Plan 1.1 for Master's Degree Candidates | | | | | |
| Year 1 | 2 | 2 | 2 | 2 | 2 |
| Year 2 | - | 2 | 2 | 2 | 2 |
| Year 3 | - | - | 2 | 2 | 2 |
| Total | 2 | 4 | 6 | 6 | 6 |
| Plan 2.1 for Master's Degree Graduates | | | | | |
| Year 1 | 2 | 2 | 2 | 2 | 2 |
| Year 2 | - | 2 | 2 | 2 | 2 |
| Year 3 | - | - | 2 | 2 | 2 |
| Total | 2 | 4 | 6 | 6 | 6 |
| Total for all plans | 4 | 8 | 12 | 12 | 12 |
| Prospective graduates | - | - | 4 | 4 | 4 |

Total number of students of the program (for university consideration)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Detail** | **2026** | **2027** | **2028** | **2029** | **2030** |
| Plan 1.1 for Master's Degree Graduates | | | | | |
| Year 1 | 2 | 2 | 2 | 2 | 2 |
| Year 2 | **1** | 2 | 2 | 2 | 2 |
| Year 3 | **1** | **1** | 2 | 2 | 2 |
| Total | 4 | 5 | 6 | 6 | 6 |
| Plan 2.1 for Master's Degree Graduates | | | | | |
| Year 1 | 2 | 2 | 2 | 2 | 2 |
| Year 2 | **1** | 2 | 2 | 2 | 2 |
| Year 3 | **2** | **1** | 2 | 2 | 2 |
| Total | 5 | 5 | 6 | 6 | 6 |
| Total for all plans | 9 | 10 | 12 | 12 | 12 |
| Prospective graduates | 3 | 2 | 4 | 4 | 4 |

1. Tuition Plan

|  |  |  |  |
| --- | --- | --- | --- |
| Tuition fee | 16,000 Baht/person/semester | 32,000 | Baht/person/year |
| Registration Fee | 1,800 Baht/credit | 42,300 | Baht/person/year |
| Tuition included | | 74,300 | Baht/person/year |
| Tuition fees throughout the program | | 148,600 | Baht/person |

The details are as follows (for the purpose of preparing the announcement of the tuition fee of the program)

1. Students studying within the duration of the program

1.1 Regular semester

- Tuition Fee per semester ........... THB

- Course/Module Fee per credit ........... THB

- Thesis/independent study fee per credit THB

or - Tuition fee, flat rate per semester ........... THB

1.2 Special semester (choose 1 item)

□ No teaching and learning activities

□ Have teaching and learning activities (if necessary)

- Tuition fee per semester ........... THB

- Course/Module Fee per credit ........... THB

- thesis/independent study fee per credit ........... THB

or - Tuition fee, flat rate per semester ........... THB

2. Students studying over the time limit of the program (choose 1 item)

□ 2.1 The same rate as item 1.

□ 2.2 Collect other rates, as

2.2.1 Regular semester

- Tuition Fee per semester ........... THB

- Course/Module Fee per credit ........... THB

- Thesis/independent study fee per credit THB

or - Tuition fee, flat rate per semester ........... THB

2.2.2 Special semester (choose 1 item)

□ No teaching and learning activities

□ Have teaching and learning activities (if necessary)

- Tuition fee per semester ........... THB

- Course/Module Fee per credit ........... THB

- thesis/independent study fee per credit ........... THB

or - Tuition fee, flat rate per semester ........... THB

3. Other special fees (if any) per semester ........... THB

..........(Specify details and conditions for the special fees.) ..............

However, The tuition fee is subject to the announcement of the university.

c) Average expenses per student per 5 fiscal years .... THB

**2.3.5) Program Development Mechanism for Quality Assurance**

**A screenshot of a computer screen

Description automatically generated**

2.3.5.1) Quality Management Issues

A close-up of a document

Description automatically generated

2.3.5.1(a) Educational Standard Criteria

A close-up of a document

Description automatically generated

..............................................................................................................................................................................

..............................................................................................................................................................................

**Examples**

|  |  |
| --- | --- |
| **Process** | **Educational Standard Criteria**  For consumer protection, every program must comply with Educational Curriculum Standards (Component 1) of the Office of the Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation (OPS MHESI) and every program must record information on component 1 in the Commission on Higher Education Quality Assessment online system (CHE QA online) every year. Therefore, the program will set up instructors and supporting staff as a working committee to supervise, monitor, and assess various operations of the program in accordance with the curriculum standards. This must be completed before the start of the semester. In addition, there will be an assessment by the faculty level committee at the end of the academic year on an annual basis and the results of the assessment which has been approved by the Faculty Committee will be reported to the university level and OPS MHESI, respectively. Recommendations from every level will be used as input to improve the program next round. |
| **Control Points** | * Compliance with curriculum standards * Meet the criteria of professional councils such as the Council of Engineers Thailand, the Medical Council of Thailand, etc**.** |
| **Person in charge** | * Program responsible faculty members * QMR (Quality Manager) * The program responsible faculty members and quality assurance committee at the faculty level |
| **Time period** | At the end of semester |
| **Inspectors** | * Quality assurance committee at the faculty level * Faculty Committee * **Associate Dean for Academic Affairs / Quality assurance** |
| **Monitoring and Evaluation process/ procedures** | The person in charge of the curriculum is required to work together with the Associate Dean for Quality Assurance. The Assistant Dean for Quality Assurance verifies the accuracy of course data and lecturer information in the course, and evaluates the results of notifications and academic performance tracking, and finds ways to improve the implementation in the next year. |

2.3.5.1.(b) Students

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

**Writing Guidelines**

|  |
| --- |
| **Process: (1) Student Admissions**  .................................................................................................................................................................................  .................................................................................................................................................................................  **Control Points** .....................................................................................................................................................  **Person in Charge** .......................................................................................................................................  Time period ..........................................................................................................................................................  **Inspectors** ...........................................................................................................................................................  Monitoring and Evaluation process/procedures  .................................................................................................................................................................................  .................................................................................................................................................................................  **Process: (2) Preparation for learners before starting their studies.**  ..................................................................................................................................................................................  ..................................................................................................................................................................................  **Control Points**......................................................................................................................................................  **Responsible Person** ..........................................................................................................................................  **Person in Charge** .................................................................................................................................................  **Inspectors** ............................................................................................................................................................  Monitoring and Evaluation process/procedures  .................................................................................................................................................................................  ................................................................................................................................................................................. |

**Example**

|  |  |
| --- | --- |
| **Process** | * + 1. **Student Admissions**   The program conducts student admissions in accordance with the university's admission guidelines, following the timeline set by the faculty and university for each semester with the following steps:  1. Initial Preparation: Coordinate with the university's admissions office to disseminate information about the program and the student intake. Set the application period, admission criteria, and the number of students to be accepted in each round.  2. Preparation for Each Application Round: Receive applicant information from the university's admissions office, Prepare the interview system and establish the selection and interview committee members.  3. Execution in Each Application Round: Screen the qualifications of applicants (academic records, thesis outlines). Conduct interviews, announce eligible candidates for interviews, clarify selection guidelines to the interview committee, conduct interviews, and report the interview results to the university for both the Petchra Pra Jom Klao Scholarship program and the Direct Admission.  4. Conclusion: Summarize the admission data for each round, issues that arose, and suggestions for improvement in the next round. |
| **Control Points** | * Plan vs actual number of student admissions * The number and qualifications of students are as specified by the program. |
| **Person in charge** | Faculty member and staff |
| **Time period** | Semester 1 from January to June  Semester 2 from July to December |
| **Inspectors** | Program Committee |
| Monitoring and Evaluation process/procedures | 1. Designate the program chair or concerned parties to monitor and verify each step of the process, especially at the checkpoints, and present findings to the program committee. Are the results in line with the goals? In cases where there are discrepancies from the expected outcomes, what actions does the program take?  2. After evaluating the interview results, the program chair or concerned parties should present the admission data for each round, address issues that arose, and discuss suggestions for improvement in the next round at the program committee meeting. |

2.3.5.1.(c) Graduates

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

2.3.5.1.(d) Program, Teaching and Learning, Learner Assessment

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

2.3.5.1.(e) Instructors

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

2.3.5.1.(f) Learning facilities and infrastructure

A close-up of a document

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

2.3.5.1.g) Others

..........................................................................................................................................................................................................................................................................................................................................................

**Details of the program improvement and development process for quality assurance can be summarized in a Table .......**

| **Issues** | **Control Points** | **Tools / Processes / Procedures / Approaches** | **Responsible Person** | **Examiner** | **Time Period** |
| --- | --- | --- | --- | --- | --- |
| **1. Regulatory standards** | * Qualifications, attributes, and number of instructors * Structure of the curriculum that includes all subjects in accordance with the standards set by the Engineering Council * Ensure compliance with the criteria of professional councils (e.g., Engineering Council, Teacher Council) | * Announcement of the Higher Education Standards Committee regarding Standards Criteria for Undergraduate/ Graduate Curriculum B.E.2565 (2022) * CHE-QA Online system * Certificate for practicing controlled engineering professions * Certificate of educational qualifications for professional practice from the Teacher Council * Process for verification Component 1 and various criteria | * Program coordinator * QMR (Quality Manager) * Curriculum Committee or Academic Committee of the Department | * Quality Assurance Committee at the faculty level * Faculty Committee * Associate Dean for Academic Affairs / Quality Assurance | At the end of semester (twice a year, in general) |
| **2. Students** | - Enrollment plan vs. actual student intake  - Number and qualifications of students meet the program's requirements  - Student dropout/withdrawal rates  - Proportion of students failing basic courses (OBEM with grades lower than C)  - In the case of graduate students, OBEM grades lower than B | - Student Admission Process  - Preparatory Activities for Enrollment in the Program  - Placement Test Results  - Student Status and Academic Performance Tracking | - Program Faculty and Staff | - Program Director | Every Academic Year |
| **3. Graduate** | **(1) Ensure compliance with graduation requirements:** | | | | |
| * Achievement of Program Learning Outcomes (PLOs) | - The process used to monitor and evaluate the Program Learning Outcomes (PLOs) established by the faculty or program  - LEB2 | - Year Advisors/Thesis Advisors  - Program Coordinator | - Faculty Committee  - Associate Dean for Academic Affairs/Graduate Studies  - Program Coordinator | Within 1month after the thesis/project defense exam |
| * Completion of required credits according to the curriculum structure | Registration System (NewACIS System) | - Program Supporting Staff  - Graduate | - Registrar's Office  - Program Coordinator | When requesting for graduation |
| * Student work, such as thesis, independent study (IS), and other requirements according to KMUTT graduate regulations and/or additional program-specific requirements | - Thesis Defense Exam  - Publications | - Thesis Advisor  - Thesis Examination Committee | - Program Coordinator | - |
| **(2) Graduate Quality Assessment:** | | | | |
| * Employment status of graduates in accordance with the needs of the program's stakeholders | - Questionnaire  - Interview | Program instructors and program supporting staff | - Program Coordinator | Every 6 months after graduation |
| * Achievement of competencies (Skills or Competencies as specified) | - Skill Transcript | All relevant instructors | - Program Coordinator  - Dean | Upon graduation (closing transcript) |
| * Career advancement after graduation | Questionnaire | Program instructors and program supporting staff | - Program Coordinator | Annually |
| * Satisfaction, feedback, and the achievement of expectations of graduates regarding the program (self-assessment of whether their expectations were met) | Questionnaire  Focus Group  Interview | Program instructors and program supporting staff | - Program Coordinator | After graduation, at 5-year and 10-year intervals. |
|  | * Program Learning Outcomes (PLO) of graduates as assessed through the perspective of employers. | Interview with employers or supervisors | Every instructor involved | - Program Coordinator | Within 1-2 year after employment |
| **4. Lecturer** | Teaching Performance of the Instructor (Coaching/Facilitation) | - Instructor's PSF (Professional Standards Framework)  - Teaching Evaluation System for Instructors  - Class evaluation by Students | Program instructors and program supporting staff | - HRD/HRM  - Associate Dean for Administration | At least once a year |
| **5. Curriculum / Teaching and Learning Approach/ Assessment** | Assurance of Student Learning Outcomes by Stage-LOs | - As specified in the KMUTT Curriculum blueprint | - Program Coordinator | - Program Director in collaboration with Academic Advisors  Department/Faculty Academic Committee | - As specified in the KMUTT Curriculum blueprint |
| Soft skill (according to KMUTT Student QF) | - As specified in the KMUTT Curriculum blueprint | - Program Coordinator | - Program Director in collaboration with Academic Advisors  Department/Faculty Academic Committee | - As specified in the KMUTT Curriculum blueprint |
| 5.1 Graduate Level | * Assessment of readiness to conduct research | * QE Exam * Progress Exam   Comprehensive Exam (for non-IS/Thesis study plan) | * Thesis Committee   - Thesis Advisor | * Thesis Examination Committee   Program Director | - As specified in the KMUTT Curriculum blueprint |
|  | Research Competency Assessment | - Thesis Defense Exam | * Thesis Committee * Thesis Advisor | * Thesis Examination Committee   Program Director | - As specified in the KMUTT Curriculum blueprint |
| **6. Learning facilities and infrastructure**  - Tools and equipment  - Place  - Technology  - Others | * Sufficient and readiness for learners * Up-to-date materials | * Checklist * Questionnaire regarding sufficient and readiness * Productive and preventive maintenance plan * Procurement process for learning facilities | Instructors, technicians, learning facilitators, teaching assistants | - Program Director | At the end of each semester (twice a year) |
| Note: The person responsible and the examiner must not be the same individual. | | | | | |

2.3.5.2) Risk Management

A close-up of a document

Description automatically generated

**Example (as a guideline for preparation, it can be adjusted according to the suitability of the program)**

|  |  |
| --- | --- |
| **Risk Issues** | **Risk Management Plans** |
| 1. Rapid changes in new technologies | The program prepares by including a Special Topics course to respond to technological changes, ensuring that the program remains up-to-date and meets the demands of the labor market. |
| 1. Increased competition leading to fewer students being enrolled than planned or a reduced number of enrollments. | The program has activities to mitigate risks as follows:  (1) Proactive student recruitment activities, such as increasing promotional channels through social media, Open-house events both annually and for specific target groups, providing quotas through specialized camps, workshops, and hosting academic or skill competitions for target student groups, etc.  (2) Educational guidance activities for younger students by seniors |
| 1. ............................................. ............................................. | ......................................................................................................................................  ...................................................................................................................................... |

2.3.5.3) Complaints and Appeals Management

A close-up of a document

Description automatically generated

................................................................................................................................................................................................................................................................................................................................................

2.3.5.4) Stakeholder Engagement and Communication Plan

A screenshot of a computer

Description automatically generated

..........................................................................................................................................................................................................................................................................................................................................................

**Part 3**  **Program Specification**

* 1. **Program Code:** ............... Specify 14-digit code in CHECO system..............
  2. **Program Name**

(Thai) : Program ........................ Major...................................................

(English) : …………………. of …………………. Program in ……………..................

**A black text on a white background

Description automatically generated**

* 1. **Degree Title and Field of Study (Thai/ English)**

3.3.1 Full Name (Thai) : ……………………….. (……………………………………..) (English) : ……………………….. (……………………………………..)

3.3.2 Abbreviation (Thai) : ……………………….. (……………………………………..) (English) : ……………………….. (……………………………………..)

A close up of a text

Description automatically generated

* 1. **Major (if any):**
* None
* Available which is/are (Specify) ................................................................

A close-up of a message

Description automatically generated

* 1. **Total Credit Hours:**

............. credit

A close-up of a sign

Description automatically generated

Bachelor’s Degree …….….. credit

Master's Degree

Plan 1 (Academic; a research-focused and thesis program) …......... credit

Plan 2 (Professional; a coursework-focused program with no thesis) …….….. credit

Doctoral Degree

Plan 1.1 Students who hold a master’s degree …….….. credit

plan 1.2 Students who hold a bachelor’s degree …….….. credit

plan 2.1 Students who hold a master’s degree …….….. credit

plan 2.2 Students who hold a bachelor’s degree …….….. credit

* 1. **Program Degree Level Type:**

4-Year or 5-Year Undergraduate (Bachelor’s) Program

2-Year Graduate (Master’s) Program under Plan ….. [Plan 1 (Academic) and/or

Plan 2 (Professional)]

3-Year Ph.D. Program under Plan .... (1.1/2.1) or 4-Year Ph.D. Program under Plan ......(1.2/2.2)

* 1. **Program Type**

**A close-up of a text

Description automatically generated**

Bachelor's Degree (choose 1 type)

* Academic Bachelor’s Degree
* Professional Bachelor’s Degree
* Operations Bachelor’s Degree

Master's Degree

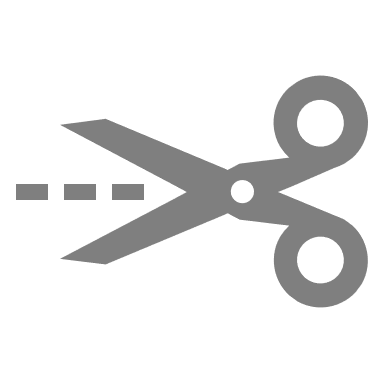
* Academic Master's Degree
* Professional Master's Degree

Doctoral Degree

* Academic Ph.D. Degree
  1. **International Standard Classification of Education, ISCED**

1) Broad Field: …06 Information and Communication Technologies (ICTs)...

2) Narrow Field: …061 Information and Communication Technologies (ICTs)...

****3) Detail Field: …0612 Database and network design and administration......

|  |
| --- |
| **Explanation**  Please specify all topics (1-3) completely and in more detail; for more information, [see the ISCED 2013 classification document](https://mailkmuttacth-my.sharepoint.com/:b:/g/personal/kanoklada_nun_kmutt_ac_th/ESo-cGiyNK9BgpjJrAKWmAsBALCgUfFqwNz0RS7kI4E0qg?e=Vc67Ie). |

A close-up of a computer

Description automatically generated

* 1. **Language of Instruction**

**A close-up of a card

Description automatically generated**

The language of instruction is ......... [Thai, English or other foreign languages (specify)] with textbooks and supporting course materials in......... [Thai, English or other foreign languages (specify)]

* 1. **Collaboration with other Institutions (If any)**

**A close-up of a paper

Description automatically generated**

* A program specific to the institution which is being taught directly by the institution.
* A program which is organized in collaboration with another institution as follows:
* MOU-based collaboration: : .......................................................
  1. **Conferring Degrees**

.......................................................................................

**A close-up of a paper

Description automatically generated**

* 1. **Location of Instruction**

Department of..........................., Faculty of………………….

King Mongkut’s University of Technology Thonburi,

Bangmod Campus / Bangkhuntian Campus / Ratchaburi Learning Park

* 1. **Dates and Time of Instruction**

**A close-up of a message

Description automatically generated**

* Business hours (Mon – Fri, 08.30 am – 4.30 pm) and/or
* Outside of business hours (Mon – Fri, 6.00 pm – 8.00 pm and Sat – Sun, 09.00 am – 6.00 pm)

The date and time of instruction may be subject to change as appropriate.

**Academic Calendar**

Semester 1: August – December

Semester 2: January – May

Special Semester: June – July (if any)

* 1. **Educational Management and Educational System**

Education Management

The system divides each year of study into two semesters for full-time studies. Each semester has a duration of at least 15 weeks.

Education System

* The mode of instruction comprises in-person classroom settings and/or the use of electronic media.
* Others (Specify) ...................................................
  1. **Full Name, Academic Rank and Educational Qualifications of the Program Responsible Faculty Members**

(Add the symbol \* after the name of the program director)

|  |  |  |
| --- | --- | --- |
| **No.** | **Full Name** | **Educational Qualifications (Field of Study),  Name of Institution, Country (Graduation Year)**  **(Organize by the highest level of qualification to Bachelor’s degree level of studies)** |
| 1 | Dr. Sombat Appropriate\* | Ph.D. (Computer Science) University of Alabama, U.S.A. (2020)  M.Sc. (Computer Science) Vanderbilt University, U.S.A. (1999)  B.Sc. (Computer Science) Thammasat University, Thailand. (1991) |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |

* 1. **Full Name, Academic Rank and Educational Qualifications of the Program Faculty Members.** (Include the list of the Program Responsible Faculty Members.)

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Full Name** | **Educational Qualifications** | **Focus Areas**  **Related to the Program (Explain)** |
|  | Name | Direct/ Related  (Specify whether they are direct or related to the program) | Specify only in cases related to the program of study or specific areas |
| 1 | Dr. Sombat Moesom | Direct | - |
| 2 | Asst. Prof. Dr. Sudsuay Saendee | Related | The instructor has expertise in computer science and information technology, as well as communication and public relations, both in online media and media innovations, which aligns with the needs of the program. |

* 1. **Qualifications of Prospective Students**

1. Specify whether “Thai students” or “international students” or “Both Thai and international students” are eligible for enrolment.
2. Specify the qualities and qualifications of the target students of the program, whereby the expected qualities and qualifications must be adequate to enable students to graduate in accordance with the program.
3. Qualities and qualifications of prospective students may be separate based on each plan of study.

A close-up of a text

Description automatically generated

* 1. **Program Status and Program Consideration/Approval**

**A close-up of a card

Description automatically generated**

* New Program 🢧 Scheduled to commence in (Month)............................. Year .......................

Semester................... Academic Year........................................

* Revised Program 🢧 Scheduled to commence in (Month).......................... Year .......................

Semester................... Academic Year.......................................

* Instruction began since (Year)..........

[Specify the year in which the instruction of the program began for the first time.]

* Revised from (Degree Title) ............ Program in (Field of Study) ................. New Program/ Revised Program B.E. .........

[Specify the degree title, field of study and the year of the existing program prior to the revision.]

Considered by the Academic Council at Meeting No. ............/.............

Date................... Month............................. Year ......................

Approved by the University Council at Meeting No. .....................

Date................... Month............................. Year ......................

* 1. **Preparedness for Publication of a High-quality, Standardized Program**

**A close-up of a paper

Description automatically generated**

The department is prepared to engage in the publication of a high-quality, standardized program in accordance with the Standards for Higher Education Qualifications B.E. 2565 (2022) in Academic Year ..........

* 1. **Career Opportunities of the Graduates**

**A close-up of a card

Description automatically generated**

(1) …………………………………………………………………………………………….………..

(2) ………………………………………………………………………………………….…………..

(3) ………………………………………………………….………………………………………….

**Part 4 Appendix**

Appendix A Opinions of the External Experts and Program Responses

Appendix B Unit of Learning Descriptions

Appendix B1 Unit of Learning Descriptions : General Education / Basic Engineering / Basic Science and Mathematics

Appendix B2 Unit of Learning Descriptions of the subjects in the course

Appendix (B2.1) Unit of Learning Descriptions: Course

Appendix (B2.2) Unit of Learning Descriptions: Learning Path

Appendix (B2.3) Unit of Learning Descriptions: OBEM

appendix C Background of the Program Faculty Members and Supporting Staff

appendix C1 Background of the Program Faculty Members

appendix C2 Background of the Supporting Staff

appendix D Appointment of the Program Development/ Revision Committee

Appendix E Regulations of KMUTT on Undergraduate/ Graduate Studies

Appendix F Collaboration with other Institutions (If any)

Appendix G Course Comparison between the Former Program and the Revised Program (Only for Revised Program)

Appendix H .... Others.... (If any)

**Appendix A: Opinions of the External Experts and Program Responses**

A close-up of a text

Description automatically generated

Example

|  |  |
| --- | --- |
| Full Name: ……………………………………………..........................................................……………..  Position and/or Academic Rank: ......................................................................................  Affiliation: ………………………………...........................................................................................  Type of Expert: *…*Academic, Industry, Employer... *(Specify the role of the experts as approved by the Academic Council)*  Approves the program, but has the following suggestions: | |
| Suggestions | Program Responses |
| Information which should not be included, as they are suggestions which do not reflect the quality of teaching, for example:  ~~1. The course name for course code number xxx123 on page 23 does not match the one on page 145.~~  ~~2. Many spelling errors were found.~~ | ~~1. All inconsistencies have been rectified.~~  ~~2. All spelling errors have been rectified.~~ |
| Suggestions | Program Responses |
| Good examples to be followed, for example, the program should provide training on communication skills and presentation skills to students. | Courses XXX and YYY have been added to the program. These courses aim to provide all students with training in presentation skills. All courses in the program have been requested to integrate presentations as part of the course component in order to help students improve their communication skills and presentation skills. |

**Appendix B Unit of Learning Descriptions**

Appendix B1 Unit of Learning Descriptions : General Education / Basic Engineering / Basic Science and Mathematics

**A close-up of a document

Description automatically generated**

|  |
| --- |
| **Course Code**  .............................................................  **Course Name (Thai):** .............................................................................................................  **(English):** .............................................................................................................  **Number of Credits:** ......... 3(3-0-6) .......  **Category**: ......Compulsory Course/Elective.............  **Course Requirements (if any):**   * **Pre-requisite** : ......... None / Yes (Specify module code and course name)....... * **Co-compulsory** : ......... None / Yes (Specify module code and course name)....... * **Other (specify):** ...............................................................................................................   ................ *e.g. This course/module is offered only in this program. /This course/module is available only to fourth-year students. ............................*  **Course Description**:  **(Thai):** .........................................................................................................................................  **(English):** ....................................................................................................................................  **Course Learning Outcomes (CLOs)**:   1. ......................................................................................................... 2. .......................................................................................................... |

**Appendix B2 Unit of Learning Descriptions of the subjects in the course**

**Appendix (B2.1) Unit of Learning Descriptions: Course**

**Course Code** ................**MMD123**..........................

**Course Name (Thai):** .............................................................................................................

**(English):** .............................................................................................................

**Number of Credits:** ......... 3(3-0-6) .......

**Category**: ......Compulsory Course/Elective.............

**Course Requirements (if any):**

* **Pre-requisite** : ......... None / Yes (Specify module code and course name).......
* **Co-compulsory** : ......... None / Yes (Specify module code and course name).......
* **Other (specify):** ...............................................................................................................

....... *e.g. This course/module is offered only in this program. /This course/module is available only to fourth-year students. ............................*

**Course Description**:

**(Thai):** .........................................................................................................................................

**(English):** ....................................................................................................................................

**Course Learning Outcomes (CLOs)**:

1. .........................................................................................................
2. ..........................................................................................................

**Appendix (B2.2) Unit of Learning Descriptions: Learning Path**

**Learning Pathway Name**: ...............................................................................................................................................

**Learning Pathway Descriptions:**

.................................................................................................................................................................................................... ....................................................................................................................................................................................................

**Competencies or Qualifications of Prospective Students:**

....................................................................................................................................................................................................

....................................................................................................................................................................................................

**Learning Pathway consists of the Following OBEM:**

.................................................................................................................................................................................................... ....................................................................................................................................................................................................

**Learning Requirements (if any):**

.................................................................................................................................................................................................... ....................................................................................................................................................................................................

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Example**  **Learning Path Name**: Medical and Scientific Mannequin Maker Development Course  **Learning Path Descriptions:**  This course is designed to develop learners with mold making skills. Molding Casting of high-convex mannequins, low convex and floating to enhance the skills, abilities and efficiency of mannequin production for use in the medical and scientific industries.  **Competencies or qualifications of Prospective students:**  Student must have completed upper Secondary Education or its equivalent in all subject areas, or have completed an equivalent level of upper Secondary Education from abroad, or have graduated with a Vocational Certificate or its equivalent in the field of Medical Audio Visual Education, or Audio Visual Education (Medical demonstration), or Information and Communication Technology, or Computer Science, or Arts, or other related fields, subject to the discretion of the curriculum committee.  **Components of the Learning pathway:**  The learning pathway of the curriculum for developing medical and scientific simulation producers consists of 5 OBEMs as follows:   | **ลำดับ** | **รายวิชา** | หน่วยกิต/ชั่วโมง | | --- | --- | --- | | 5 | MMD 35002 Model Sculpting production in Medical and Science  (การสร้างหุ่นจำลองทางการแพทย์และวิทยาศาสตร์) | 3 | | 4 | MMD 25000 Relief Sculpting production in Medical and Science  (การสร้างหุ่นจำลองนูนสูงและนูนต่ำทางการแพทย์และวิทยาศาสตร์) | 3 | | 3 | MMD 23101 Medical and Science Illustration  (ภาพประกอบทางการแพทย์และวิทยาศาสตร์) | 2 | | 2 | MMD 12200 Principles of Anatomy Drawing  (หลักการวาดภาพกายวิภาคศาสตร์) | 2 | | 1 | MMD 12100 Human Anatomy  (กายวิภาคศาสตร์ของมนุษย์) | 3 |   Learning Requirements:   * o Learners must complete all 5 courses in the sequence of skill development to receive a Certificate from the university. They may transfer the credits from those courses to equivalent courses in a Degree Program, according to the course transfer conditions of the program and by university regulations. * o Additionally, learners must achieve the learning outcomes for each course and obtain a grade of at least B in all courses as assessed by the instructor. |

**Appendix (B2.3) Unit of Learning Descriptions: OBEM**

**b (2.3.1) OBEM: (Part of the Learning pathway)**

...................................................................................................................................................................

...................................................................................................................................................................

**b (2.3.2) OBEM: (not part of the Learning pathway)**

...................................................................................................................................................................

...................................................................................................................................................................

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** ....................**MMD12300**.................  **Course Name (Thai):** .............................................................................................................  **(English):** .............................................................................................................  **Number of Credits:** ......... 3(3-0-6) .......  **learning hours** ………………..  **Category**: ......Compulsory Course/Elective.............  **Course Requirements (if any):**   * **Pre-requisite** : ......... None / Yes (Specify module code and course name)....... * **Co-compulsory** : ......... None / Yes (Specify module code and course name)....... * **Other (specify):** ...............................................................................................................   ......................... *e.g. This course/module is offered only in this program. /This course/module is available only to fourth-year students. ............................*  **Course Description**:  **(Thai):** .........................................................................................................................................  **(English):** .......................................................................................................................................  **Course Learning Outcomes (CLOs)**:   1. ......................................................................................................... 2. ..........................................................................................................   **Upon completing this OBEM:**   1. Learners will have acquired certain competencies that enable them to successfully perform specific tasks or apply these skills effectively in various jobs or situations.   ..........................................................................................................................................................................................................................................................................................................................  consist of:  K-Knowledge: ...........................................................................................................................  S-Skills: ...............................................................................................................................  E-Ethics: .............................................................................................................................  C-Characters: ....................................................................................................................   1. Criteria for the Competency Levels of the Learning Outcome (Rubric)  |  |  | | --- | --- | | level | Explanation of the Steps in Evaluating Academic Performance (Performance Criteria) | | Level 1 |  | | Level 2 |  | | Level 3\* |  | | Level 4 |  | | Level 5 |  | |

**A close-up of a document

Description automatically generated**

**Appendix C Background of the Program Faculty Members and Supporting Staff**

**Appendix C1 Background of the Program Faculty Members**

**Name - Surname Thai ..........................................................**

**Name – Surname English** ........................................................

1. **Educational Background**

Year B.E. ......... Ph.D. (………………………..), University ……………...…., Thailand

Year A.D. .......... M.S. (………………………..), University of …………………., U.S.A.

Year A.D. .......... B.S. (………………………..), University of …….....…………., U.S.A.

**Qualifications and Fields of Study**

**A close-up of a paper

Description automatically generated**

🞎 Qualifications and fields of study are matched with those of the program.

🞎 Qualifications and fields of study/ subject areas are related to the course subjects of the program (Please explain) .....................

1. **Academic Work for the Past Five Years**

**Group 1 Research**  (for 1.1 and 1.2 must specify which database can be searched according to the Office of the Higher Education Commission’s announcement, such as Scopus, Web of Science, etc.)

* 1. International journal (Weight value 1)

.................................................................................................................

* 1. National Journal (0.4 weight value)

.................................................................................................................

* 1. International Conference (0.4 Weight)

.................................................................................................................

* 1. National Conference (0.2 weight)

.................................................................................................................

Group 2 Academic Works in other Forms

* 1. Academic Works for Industry

.................................................................................................................

* 1. Academic Works for Teaching and Learning Development

.................................................................................................................

* 1. Academic Works for the Development of Public Policy

.................................................................................................................

* 1. Case Studies

.................................................................................................................

* 1. Translation Works

.................................................................................................................

* 1. Dictionaries, Encyclopedias, Directories, and Similar Academic Works

.................................................................................................................

* 1. Creative Works in Science and Technology

.................................................................................................................

* 1. Aesthetics and Artistic Creative Works

.................................................................................................................

* 1. Patents

.................................................................................................................

* 1. Software

.................................................................................................................

Group 3 Academic Works for Serving Society

.................................................................................................................

Group 4

4.1 Textbooks

.................................................................................................................

4.2 Books

.................................................................................................................

4.3 Academic Articles

.................................................................................................................

|  |
| --- |
| **Guideline:** |
| * Identify only updates of 3-5 works that are relevant to their fields of study. (excluding categories without works). * Fill in information completely according to the principles of writing a bibliography. See the details of the manual for writing academic works according to the bibliographic format on the EDS website.   Example writing format for journal articles:  Author(s). (Year of publication). “Title of the article,” Full name of the journal. Volume (vol.), Issue or edition (No.), Pages. (Available from TCI database…)  For other formats of works, further details can be found in the manual for writing academic works. |
| * The specified work must be formatted and distributed in accordance with the Civil Service Commission in Higher Education Institutions. * Works of no. 1.1-1.4 must specify which database it can be searched from as announced by the Office of the Higher Education Commission, such as Scopus, Web of Science, etc. * Clearly separate the types of work. See the types of academic work attached to the Office of the Higher Education Commission's announcement regarding criteria and methods for considering appointments of persons to positions: Assistant Professor, Associate Professor, and Professor. * Works presented at international and national academic conferences since B.E. 2565 (2022) must come from academic conferences organized by academic or professional associations, in accordance with the notification of the Office of the Civil Service Commission in Higher Education Institutions and must specify which entities organized the academic conference completely. In cases where there are more than ten organizing bodies, at least five primary organizers must be identified. Additionally, a cover page of the proceedings book comprising the academic articles must be attached to the work submitted.   Articles in the conference proceedings should be formatted as follows:  Author's Name. (Year of Publication). “Article Title,” Conference Name. Conference Session (if applicable), Date of Conference, Location of Conference, Page Numbers. [Conference organized by...............] |
| **Example:**  “Niticai Lueang-aram, Kusakanna Kubaha, and Rungrojt Songkhaob. (2022). “Feasibility Assessment of Repurposing Lithium-Ion Batteries from Electric Vehicles as Energy Storage Systems along with Rooftop Solar Power in Thailand,” Proceedings of Kasetsart University’s Academic Conference, 60th Session, February 21-23, 2022, Kasetsart University, Bangkhen, Bangkok, Thailand, pp. 196-204.” [Conference organized by Kasetsart University in collaboration with the Ministry of Higher Education, Science, Research and Innovation, the Ministry of Agriculture and Cooperatives, the Ministry of Education, the Ministry of Digital Economy and Society, the Office of the National Science, Research, and Innovation Policy Council, and the Prachachuen Research Network.] |

**3. Workload**

**3.1) Current Workload**

- Undergraduate/graduate Workload (includes project/thesis/independent study)

|  |  |  |  |
| --- | --- | --- | --- |
| **Course Code** | **Course Name** | **Credit(s)** | **Credit Hour(s) per Academic Year (Approximately)** |
|  |  |  |  |
|  |  |  |  |

- Other workloads (if any)

.............................................................................................................................................................................

.............................................................................................................................................................................

**3.2) Workload in this course**

- Undergraduate/graduate Workload (includes project/thesis/independent study)

|  |  |  |  |
| --- | --- | --- | --- |
| **Course Code** | **Course Name** | **Credit(s)** | **Credit Hour(s) per Academic Year (Approximately)** |
|  |  |  |  |
|  |  |  |  |

4.Work experience/Operational experience

(for Professional Bachelor’s Degree or Operations Bachelor’s Degree program)

A close-up of a paper

Description automatically generated

............................................................................................................................................................... ...............................................................................................................................................................

**Appendix C2 Background of the Supporting Staff**

**Name of Supporting Staff in the Program** (e.g., laboratory staff, technicians, and practical teachers)

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Full name** | **All educational Background Information** | **Scope of Work** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Appendix D: Appointment of the Program Development/Revision Committee**

*(Attach this document before proposing the program for the university’s consideration)*

*A pink sign with red text

Description automatically generated*

**Appendix E: Regulations of KMUTT on Undergraduate / Graduate Studies**

*(Attach this document before proposing the program for the university’s consideration)*

**Appendix F: Collaboration with other Institutions (If any)**

*(Attach this document before proposing the program for the university’s consideration)*

*A close-up of a sign

Description automatically generated*

**Appendix H Comparison Table of Courses between the Original Course and the Revised Course (in case of the Revised Course)**

**A close-up of a document

Description automatically generated**

**Example**

| **The Former Program B.E. 25......** | **Credit(s)** | **The Revised Program B.E. 25......** | **Credit(s)** | **Details of the changes** |
| --- | --- | --- | --- | --- |
| List **ALL** courses (including those of General Education) based on their categories as appearing in the program structure of the former program. | X (x-x-x) | List **ALL** courses (including those of General Education) based on their categories as appearing in the program structure of the revised program. | X (x-x-x) | Clearly specify the changes, such as:    o Adjust course codes    o Change / Edit the Thai/English course name.    o Increase/Reduce the number of credits/credit hours    o Revisie course descriptions.    o Adjust/cancel prerequisite courses and co-requisite courses    o Open new courses.    o Cancel unnecessary courses.    o Move courses to different categories (XXXxxx)    etc.  If there is no change available, please specify the word "No change" |
| List courses which are available to students outside of the former program.  (If any) | X (x-x-x) | List courses which are available to students outside of the revised program.  (If any) | X (x-x-x) |
| DT130 Project Introduction  (การทำโครงงานเบื้องต้น) | 3 (0-6-6) | DT130 Project Introduction  (การทำโครงงานเบื้องต้น) | 4 (0-8-4) | - Increase the number of credits.  - Move to the course category No. B.5) Project and Fieldwork Experience. |
| INA 211 Color, Materials and Presentation  (สี วัสดุและการแสดงภาพทางสถาปัตยกรรมภายใน) | 3 (1-4-6) | INA 21101 Introduction of Color Theory and Usability  (ความรู้เบื้องต้นเกี่ยวกับทฤษฎีและการใช้งานสี) | 1 (1-0-2) | - Revise/Update the course content and improve the teaching and learning approaches. |
|  |  | INA 21102 Introduction of Material Theory and Usability  (ความรู้เบื้องต้นเกี่ยวกับทฤษฎีและการใช้งานวัสดุทางสถาปัตยกรรมภายใน) | 1 (0-2-2) |  |
|  |  | INA 21103 Color and Material Application in Interior Architecture  (การประยุกต์ใช้สีและวัสดุในงานสถาปัตยกรรมภายใน) | 1 (0-2-2) |  |