

## Computer Science

### Introduction

In the new millennium and the global era, the role of information and automation in the various domains and activities of the business industry are becoming more important. The successes of the activities are determined by how computer science can support in managing the information. Information must be up-to-date, accurate and comprehensive to allow decision makers to determine the enterprise's strategy. Furthermore, automation can facilitate human activity, accelerate the pace of work and make it more effective and efficient, while also increasing productivity in various activities. The development of communication and computer technology has made it possible to get information that is rapid, exact, and accurate. It also increases the application of automation in various fields such as industry, business, office affairs and development of science and technology.

Computer Science Undergraduate Study Program Bina Nusantara University Malang is one of the Study Programs of School of Computer Science Bina Nusantara University Jakarta. This study program focuses on learning process in the field of computer science with a Sarjana Komputer (S.Kom.) Academic Degree. The learning process is managed within 4 years by the 2 + 1 + 1 Program. The learning process in the first to third semesters is carried out in Malang Campus, East Java. The students then have the opportunity to study at Bina Nusantara Jakarta campus for a year, in the fourth and fifth semesters as part of the Mobility Program. Students also have the opportunity to enrich their learning with various partners of Bina Nusantara University for one year in the sixth and seventh semesters through Enrichment Program. The Enrichment Program offers seven optional tracks: Certified Internship, Certified Entrepreneurship, Certified Research, Certified Community Development, Certified Study Abroad, Certified Specific Independent Study, and Further Study. On the last semester every student takes a thesis as final course and will be guided by Faculty Member at Bina Nusantara University Malang. Computer Science Study Program at Bina Nusantara University @Malang campus emphasizes the processes, techniques, and tools that go into developing computer-based systems.

### Vision

A world class study program by providing excellent educational experiences in computer science, fostering and empowering the society in building and serving the nation through digital technology and technopreneur.

### Mission

The mission of Computer Science Department is to contribute to the global community through the provision of world-class education by:

1. Educating students to effectively apply their educational experiences in computer science to solve real-world problems through digital technology and technopreneur approach.
2. Preparing our graduates to develop exemplary soft skills & technical skills required as ICT professionals, leaders and entrepreneurs in global market.
3. Promoting high impact research that contributes to the nation in digital technology themes.
4. Fostering BINUSIAN as lifelong learners through self-enrichment.
5. Empowering BINUSIAN to continuously improve and society's quality of life through digital technology and technopreneur approach.

### Program Objective

The objectives of the program are:

1. Graduates will become successful professionals in ICT fields;
2. Graduates will obtain employment in global companies or become entrepreneurs;
3. Graduates will obtain professional certification or continue their study to the postgraduate level

### Student Outcomes

After completing the study, graduates are:

1. Able to analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions
2. Able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of computer science
3. Able to communicate effectively in a variety of professional contexts
4. Able to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles
5. Able to function effectively as a member or leader of a team engaged in activities appropriate to computer science
6. Able to apply computer science theory and software development fundamentals to produce computing-based solutions

### **Prospective Career of the Graduates**

After finishing the program, the graduate of Computer Science Program could follow a career as:

1. Analyst
2. Developer
3. Entrepreneur

### **Curriculum**

The curriculum of the Computer Science Study Program has been developed in line with the National Curriculum. Also, the local content has been developed in line with the Computer Science Curriculum standard of ACM (Association for Computing Machinery), several local and foreign universities, and market trends, so that the graduates of the Computer Science are expected to be able to face competition at both a national and international level.

Generally, the subjects of the curriculum are divided into these following groups of subjects:

#### **Mathematics Group (Science)**

The objective of this group is to provide an understanding of mathematics as one of the principal foundations of computer science. Another objective is to give an understanding of scientific methodology (data collection, hypothesis, research, analysis) in problem solving.

#### **Character Building Group (Professional Practices)**

The objective of this group is to develop the personal strengths of the student and to provide him or her with a professional character, professionalism in their field, management skills, oral and written communication skills, understanding of business ethic, ability to work as a team, and to develop a "Binusian" Character.

#### **Core Group**

The objective of this group is to provide a grounding in Computer Science through practice as well as applied theory which is required by business both now and in the future. The subjects that are included in this group are programming, algorithm design and analysis, software engineering, database systems, computer graphics, multimedia technology, human and computer interaction, operation systems, computer architecture, and computer network.

#### **Streaming**

All campuses of Computer Science Undergraduate Study Program Bina Nusantara University have the same core courses to ensure the main competency standards in Computer Science. However, every student also has the opportunity to enrich into various streaming in the fourth and fifth semesters. There are 12 streaming (specialization) options for students of Computer Science Undergraduate Study Program Bina Nusantara University Malang, namely Digital Creative Technology, Immersive technology, Intelligent System, Database Technology, Network Technology, Network Security, Game Technology, Mobile Technology, Interactive Multimedia, Software Engineering, Data Science, and Internet of Things.

### Streaming BINUS @Malang Campus

- **Digital Creative Technology:** Focus on smart software application development based on big data analytics regarding business innovation and digital transformation on Industry 4.0. era (**Digital Business Innovation and Transformation**).
- **Immersive Technology:** Focus on development of immersive technology-based solutions supported by AR (Augmented Reality), VR (Virtual Reality), and XR (Extended Reality) technologies.

### Streaming BINUS @Greater Jakarta Campus

- **Intelligent System:** Focus on smart software development through complex algorithm based on Artificial Intelligence to solve problem.
- **Database Technology:** Focus on software development through database technology for business operation and business analytics and business intelligent.
- **Network Technology:** Focus on software development on computer network through computer network design and computer network programming.
- **Network Security:** Focus on secure software development through secure computer network design and secure computer network programming.
- **Game Technology:** Focus on interactive software development through game art, game design and game programming for entertainment and business solution.
- **Interactive Multimedia:** Focus in exploring interactive multimedia applications based on computer programming, design tools, and software engine.
- **Software Engineering:** Focus on development of software through software architecture, various methodologies and software engineering equipment.
- **Data Science:** Focus on exploring the latest technologies and various tools in finding solutions and reaching conclusions based on Data.

### Streaming BINUS @Bandung Campus

- **Cloud Technology:** Focus on various techniques for cloud management, especially managing the network and computing services.
- **Internet of Things:** Focus on various techniques and implementation of IoT.

### Streaming BINUS @Semarang Campus

- **Mobile and Game Technology:** Focus on mobile and game application development, as well as artificial intelligence.

### Course Structure

| Sem | Code                                   | Course Name                                  | SCU | Total |
|-----|----------------------------------------|----------------------------------------------|-----|-------|
| 1   | CHAR6030004                            | Character Building: Pancasila                | 2   | 20    |
|     | MATH6118004                            | Discrete Mathematics                         | 4   |       |
|     | MATH6119004                            | Linear Algebra                               | 2   |       |
|     | COMP6764004                            | Basic Statistics                             | 2   |       |
|     | COMP6360004                            | Algorithm and Programming <sup>2)</sup>      | 4/2 |       |
|     | COMP6840004                            | Program Design Methods <sup>1)</sup>         | 2   |       |
|     | LANG6117004                            | Indonesian                                   | 2   |       |
|     | Foreign Language Courses <sup>3)</sup> |                                              | 0   |       |
| 2   | CHAR6031004                            | Character Building: Kewarganegaraan          | 2   | 20    |
|     | COMP6362004                            | Data Structures <sup>1), 2)</sup>            | 4/2 |       |
|     | MATH6120004                            | Calculus                                     | 4   |       |
|     | MATH6193004                            | Scientific Computing                         | 2/1 |       |
|     | COMP6851004                            | Human and Computer Interaction <sup>2)</sup> | 2/1 |       |
|     | ENPR6315002                            | Creativity and Innovation                    | 2   |       |
|     | Foreign Language Courses <sup>3)</sup> |                                              | 0   |       |
| 3   | CHAR6032004                            | Character Building: Agama                    | 2   | 21    |
|     | COMP6365004                            | Algorithm Design and Analysis <sup>1)</sup>  | 4   |       |

| Sem | Code                                                 | Course Name                                            | SCU | Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|-----|------------------------------------------------------|--------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|     | CPEN6250004                                          | Computer Networks                                      | 2/1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | SCIE6067004                                          | Computational Physics                                  | 2/1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6852004                                          | Database Technology <sup>2)</sup>                      | 2/1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6853004                                          | Artificial Intelligence <sup>2)</sup>                  | 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6854004                                          | Object Oriented Programming <sup>1), 2)</sup>          | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | Foreign Language Courses <sup>3)</sup>               |                                                        | 0   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| 4   | COMP6712004                                          | Research Methodology in Computer Science <sup>1)</sup> | 2   | <ul style="list-style-type: none"><li>▪ Total SCU of Streaming Mobile Technology: 18</li><li>▪ Total SCU of Streaming Game Technology, Network Security, Mobile, Data Science, &amp; Cloud Technology: 19</li><li>▪ Total SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 21</li><li>▪ Total SCU of Minor Program Malang: 19</li><li>▪ Total SCU of Minor Program Jakarta, Bandung, Semarang Free Electives<sup>5,6)</sup> :17</li><li>▪ Cumulative SCU of Streaming Mobile Technology: 79</li><li>▪ Cumulative SCU of Streaming Game Technology, Network Security, Data Science, Cloud Technology: 80</li><li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, Mobile and Game Technology: 82</li><li>▪ Cumulative SCU of Minor Program Malang: 80</li></ul> |  |
|     | SCIE6068004                                          | Computational Biology                                  | 2/1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6855004                                          | Software Engineering <sup>2)</sup>                     | 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6955004                                          | Database Design                                        | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | Streaming: Digital Creative Technology <sup>4)</sup> |                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6679004                                          | Web Programming <sup>2)</sup>                          | 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6109004                                          | Popular Programming Technology <sup>1)</sup>           | 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6001004                                          | User Experience                                        | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | Streaming: Immersive Technology <sup>4)</sup>        |                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6002004                                          | User Experience for Digital Immersive Technology       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6003004                                          | Multimedia and 3D Modelling                            | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6004004                                          | 3D Web Programming                                     | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | Streaming: Internet Of Things <sup>5)</sup>          |                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6849031                                          | Embedded System                                        | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6850031                                          | Multimedia & Mixed Reality                             | 2/1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | MOBI6072031                                          | Mobile Programming                                     | 2/1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6655031                                          | Cyber Security in IoT                                  | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | Streaming: Cloud Technology <sup>5)</sup>            |                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6988031                                          | Introduction to Cloud Computing                        | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6989031                                          | Web Based Programming                                  | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6990031                                          | Introduction to Cloud security                         | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | Streaming: Intelligent System <sup>6)</sup>          |                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6885001                                          | Natural Language Processing <sup>1), 2)</sup>          | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6577001                                          | Machine Learning                                       | 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP7116001                                          | Computer Vision <sup>1)</sup>                          | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | Streaming: Database Technology <sup>6)</sup>         |                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6097001                                          | Data Engineering                                       | 2/1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6579001                                          | Big Data Processing <sup>1), 2)</sup>                  | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6098001                                          | Data Visualization                                     | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP6099001                                          | Data Analytics                                         | 2/1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | Streaming: Interactive Multimedia <sup>6)</sup>      |                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COMP8129001                                          | User Experience <sup>1), 2)</sup>                      | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6095001                                          | Multimedia System and Programming Foundation           | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
|     | COSC6096001                                          | Extended Reality                                       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |

| Sem | Code                                                        | Course Name                                          | SCU | Total                                                                                                                                                                                                  |
|-----|-------------------------------------------------------------|------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | COMP7128001                                                 | Game Design                                          | 2   | <ul style="list-style-type: none"> <li>Cumulative SCU of Minor Program Jakarta, Bandung, Semarang, Free Electives: 78</li> </ul>                                                                       |
|     | <b>Streaming: Network Technology <sup>6)</sup></b>          |                                                      |     |                                                                                                                                                                                                        |
|     | COMP6824001                                                 | Computer Security <sup>1)</sup>                      | 2/2 |                                                                                                                                                                                                        |
|     | COMP6584001                                                 | Network and System Programming <sup>1), 2)</sup>     | 2/2 |                                                                                                                                                                                                        |
|     | COSC6100001                                                 | Cloud Infrastructure                                 | 2/2 |                                                                                                                                                                                                        |
|     | <b>Streaming: Software Engineering <sup>6)</sup></b>        |                                                      |     |                                                                                                                                                                                                        |
|     | COSC6092001                                                 | Code Reengineering                                   | 2/2 |                                                                                                                                                                                                        |
|     | COSC6093001                                                 | Software Architecture                                | 2/2 |                                                                                                                                                                                                        |
|     | COSC6094001                                                 | Mobile Hybrid Solution <sup>2)</sup>                 | 2/2 |                                                                                                                                                                                                        |
|     | <b>Streaming: Game Technology <sup>6)</sup></b>             |                                                      |     |                                                                                                                                                                                                        |
|     | GAME6069001                                                 | Game Programming <sup>1), 2)</sup>                   | 4   |                                                                                                                                                                                                        |
|     | GAME6082001                                                 | Game Animation <sup>1), 2)</sup>                     | 2   |                                                                                                                                                                                                        |
|     | COSC6094001                                                 | Mobile Hybrid Solution <sup>2)</sup>                 | 2/2 |                                                                                                                                                                                                        |
|     | <b>Streaming: Data Science <sup>6)</sup></b>                |                                                      |     |                                                                                                                                                                                                        |
|     | DTSC6013001                                                 | Data Mining and Visualization <sup>1), 2)</sup>      | 2   |                                                                                                                                                                                                        |
|     | DTSC6011001                                                 | Survey and Sampling Methods                          | 2   |                                                                                                                                                                                                        |
|     | COMP6577001                                                 | Machine Learning                                     | 4   |                                                                                                                                                                                                        |
|     | DTSC6003001                                                 | Big Data Infrastructure and Technology <sup>1)</sup> | 2   |                                                                                                                                                                                                        |
|     | <b>Streaming: Network Security <sup>6)</sup></b>            |                                                      |     |                                                                                                                                                                                                        |
|     | COMP6842001                                                 | Server and Network Administration <sup>1), 2)</sup>  | 2   |                                                                                                                                                                                                        |
|     | COMP6549001                                                 | Software Security <sup>1), 2)</sup>                  | 2   |                                                                                                                                                                                                        |
|     | COMP6844001                                                 | Mobile Penetration Testing <sup>2)</sup>             | 2/2 |                                                                                                                                                                                                        |
|     | LAWS6110001                                                 | Cyber Law                                            | 2   |                                                                                                                                                                                                        |
|     | <b>Streaming: Mobile And Game Technology <sup>7)</sup></b>  |                                                      |     |                                                                                                                                                                                                        |
|     | COMP6897051                                                 | Game Design & Programming                            | 2/2 |                                                                                                                                                                                                        |
|     | COMP6898051                                                 | User Experience <sup>2)</sup>                        | 2   |                                                                                                                                                                                                        |
|     | COMP6899051                                                 | Machine Learning                                     | 2   |                                                                                                                                                                                                        |
|     | COMP6900051                                                 | Mobile Embedded Systems                              | 4   |                                                                                                                                                                                                        |
|     | <b>Foreign Language Courses <sup>3)</sup></b>               |                                                      | 0   |                                                                                                                                                                                                        |
|     | <b>Minor Program</b>                                        |                                                      | 8   |                                                                                                                                                                                                        |
|     | <b>Free Electives <sup>4), 6)</sup></b>                     |                                                      | 8   |                                                                                                                                                                                                        |
| 5   | COMP6390004                                                 | Compilation Techniques                               | 4   | <ul style="list-style-type: none"> <li>Total SCU of Streaming Mobile Technology: 21</li> <li>Total SCU of Streaming : Cloud Technology, Game Technology, Data Science, Network Security: 20</li> </ul> |
|     | COMP6713004                                                 | Operating System                                     | 2   |                                                                                                                                                                                                        |
|     | ENPR6316002                                                 | Venture Creation                                     | 2   |                                                                                                                                                                                                        |
|     | <b>Streaming: Digital Creative Technology <sup>4)</sup></b> |                                                      |     |                                                                                                                                                                                                        |
|     | COMP6678004                                                 | Big Data Analytics for Business                      | 4   |                                                                                                                                                                                                        |
|     | MOBI6063004                                                 | Mobile Application Programming <sup>2)</sup>         | 4   |                                                                                                                                                                                                        |

| Sem | Code                                            | Course Name                                           | SCU | Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----|-------------------------------------------------|-------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | COSC6005004                                     | Agile Software Development                            | 2   | <ul style="list-style-type: none"><li>▪ Total SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent Systems, Database Technology, Interactive Multimedia, Network Technology, Software Engineering, Mobile and Game Technology: 18</li><li>▪ Total SCU of Minor Malang: 20</li><li>▪ Total SCU of Minor Jakarta,Bandung, Semarang, Free Electives: 22</li><li>▪ Cumulative SCU of Streaming : Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent Systems, Database Technology, Interactive Multimedia, Network Technology, Software Engineering, Mobile and Game Technology, Cloud Technology, Game Technology, Data Science, Network Security, Mobile Technology: 100</li><li>▪ Cumulative SCU of Minor Program, Free Electives: 100</li></ul> |
|     | Streaming: Immersive Technology <sup>4)</sup>   |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COSC6006004                                     | Augmented Reality Application Programming             | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COSC6007004                                     | Virtual Reality Application Programming               | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COSC6008004                                     | Immersive Technology Capstone Project                 | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Streaming: Internet Of Things <sup>5)</sup>     |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6757031                                     | Computer vision in IoT                                | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6882031                                     | IoT Development and Architecture                      | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Elective Course                                 |                                                       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Streaming: Cloud Technology <sup>5)</sup>       |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6991031                                     | Cloud Services                                        | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6992031                                     | Software Development Operations in Cloud Environments | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6993031                                     | Application Development in Cloud                      | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Elective Course                                 |                                                       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Streaming: Intelligent System <sup>6)</sup>     |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6822001                                     | Speech Recognition                                    | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6826001                                     | Deep Learning                                         | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Elective Course                                 |                                                       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Streaming: Database Technology <sup>6)</sup>    |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6590001                                     | Geographical Information System <sup>1)</sup>         | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6140001                                     | Data Mining                                           | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Elective Course                                 |                                                       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Streaming: Interactive Multimedia <sup>6)</sup> |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP6583001                                     | Computer Graphics                                     | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COMP7139001                                     | Game Programming                                      | 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Elective Course                                 |                                                       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Streaming: Network Technology <sup>6)</sup>     |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COSC6104001                                     | Cloud Interfacing with Virtualization                 | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COSC6105001                                     | Cloud Native Applications                             | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Elective Course                                 |                                                       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Streaming: Software Engineering <sup>6)</sup>   |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COSC6102001                                     | Software Metrics and Quality assurance                | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | COSC6103001                                     | Mobile Technology Solution2                           | 2/2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Elective Course                                 |                                                       | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | Streaming: Game Technology <sup>6)</sup>        |                                                       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | GAME6093001                                     | Serious Game & Gamification                           | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | GAME6084001                                     | Game Development Capstone Project <sup>1), 2)</sup>   | 4   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | GAME6071001                                     | 3D Modeling for Games <sup>1), 2)</sup>               | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | GAME6092001                                     | Fundamental in Game Balancing                         | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|     | GAME6091001                                     | Advanced Game Development                             | 2   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Sem | Code                                                       | Course Name                                    | SCU | Total                                |
|-----|------------------------------------------------------------|------------------------------------------------|-----|--------------------------------------|
|     | <b>Streaming: Data Science <sup>6)</sup></b>               |                                                |     |                                      |
|     | DTSC6010001                                                | Bayesian Data Analysis                         | 2   |                                      |
|     | COMP6826001                                                | Deep Learning                                  | 2/2 |                                      |
|     | DTSC6002001                                                | Data Management and Organization <sup>1)</sup> | 2   |                                      |
|     | DTSC6008001                                                | Text Mining                                    | 2   |                                      |
|     | DTSC6004001                                                | Data Security                                  | 2   |                                      |
|     | <b>Streaming: Network Security <sup>6)</sup></b>           |                                                |     |                                      |
|     | COMP6544001                                                | Network Penetration Testing <sup>2)</sup>      | 2/2 |                                      |
|     | COMP6695001                                                | Secure Programming <sup>1), 2)</sup>           | 2   |                                      |
|     | COMP6843001                                                | Reverse Engineering and Binary Exploitation    | 2   |                                      |
|     | COMP6646001                                                | Computer Forensic <sup>1), 2)</sup>            | 2   |                                      |
|     | COMP6873001                                                | Blockchain Fundamental                         | 2   |                                      |
|     | <b>Streaming: Mobile And Game Technology <sup>7)</sup></b> |                                                |     |                                      |
|     | COMP6903051                                                | Computer Vision                                | 2/2 |                                      |
|     | COMP6905051                                                | Mobile and Game Development Capstone Project   | 4   |                                      |
|     | <b>Elective Course <sup>9&amp;11)</sup></b>                |                                                |     |                                      |
|     | COMP6921031                                                | Web Development                                | 2   |                                      |
|     | COMP6922031                                                | Cloud Computing                                | 2   |                                      |
|     | <b>Elective Course <sup>10&amp;11)</sup></b>               |                                                |     |                                      |
|     | COSC6009031                                                | Mobile Programming                             | 2   |                                      |
|     | COSC6010031                                                | Embedded Systems                               | 2   |                                      |
|     | <b>Elective Course <sup>8)</sup></b>                       |                                                |     |                                      |
|     | COSC6108001                                                | Mobile Programming                             | 2   |                                      |
|     | COMP6586001                                                | Embedded Systems                               | 2   |                                      |
|     | COMP6226001                                                | Competitive Programming <sup>1)</sup>          | 2   |                                      |
|     | COMP6681001                                                | Web Programming                                | 2   |                                      |
|     | COSC6065001                                                | Network Security Fundamental                   | 2   |                                      |
|     | COSC6101001                                                | Mobile Professional Solution                   | 2   |                                      |
|     | <b>General Course <sup>12)</sup></b>                       |                                                |     |                                      |
|     | COMP6923051                                                | Hybrid Application Development                 | 2   |                                      |
|     | <b>Minor Program</b>                                       |                                                | 12  |                                      |
|     | <b>Free Electives <sup>4), 6)</sup></b>                    |                                                | 12  |                                      |
| 6   | Enrichment Program I                                       |                                                | 20  | Total SCU: 20<br>Cumulative SCU: 120 |
| 7   | Enrichment Program II                                      |                                                | 20  | Total SCU: 20<br>Cumulative SCU: 140 |

| Sem                   | Code        | Course Name | SCU | Total        |
|-----------------------|-------------|-------------|-----|--------------|
| 8                     | COMP6747004 | Pre-Thesis  | 2   | Total SCU: 6 |
|                       | COMP6748004 | Thesis      | 4   |              |
|                       | COMP6872004 | Thesis      | 6   |              |
| Total Credits 146 SCU |             |             |     |              |

- 1) This course is delivered in English
- 2) Global Learning System course
- 3) Students will take foreign language courses according to BINUS University English proficiency test results. See foreign language courses appendix for the detail.
- 4) Conducted in BINUS@Malang
- 5) Conducted in BINUS@Bandung
- 6) Conducted in BINUS@Greater Jakarta
- 7) Conducted in BINUS@Semarang
- \*) Students choosing stream/minor in @Malang must take general course Database Design in semester 4. Students undertaking mobility (Jakarta/Bandung) are required to take a general course/FE (2 SCU) on the host campus in semester 5.
- 8) Students will choose 1 course (2 credits) from the list of elective courses for Streaming Software Engineering, Intelligent Systems, Interactive Multimedia, Database Technology, Network Technology, Minor Program, Free Electives, and Multidisciplinary Stream at Jakarta in semester 5
- 9) Students will choose 1 course (2 credits) from the list of elective courses who enrolled in Computer Science BINUS@Bandung in semester 5
- 10) Students will choose 1 course (2 credits) from the list of elective courses for streaming Cloud Technology Computer Science BINUS@Bandung
- 11) Students will choose 1 course (2 credits) from the list of elective courses for Minor Program BINUS@Bandung
- 12) Students choosing stream/minor in @Semarang must take general course Hybrid Application Development

**Student will take one of enrichment program tracks (off campus).** See enrichment appendix for the tracks detail.

**Pre-thesis (2 SCU) & Thesis (4 SCU)** can be taken in the 6<sup>th</sup> and/or 7<sup>th</sup> semester by the students who meet the requirements from the Study Program/Program

### Appendix Foreign Language Courses

Foreign language courses are personalized courses that can be taken by the students according to their own pace from semester 1 until semester 4 or before they take enrichment. The courses are available at BINUSMAYA – Beelingua.

The following are the provisions of the courses that must be taken by students:

| Group | Foreign Language Courses                  | SCU |
|-------|-------------------------------------------|-----|
| MKB   | ENGL6268002 English for Frontrunners      | 0   |
| MKB   | ENGL6269002 English for Independent Users | 0   |
| MKB   | ENGL6267002 English for Professionals     | 0   |
| MKB   | JAPN6208002 Basic Japanese Language       | 0   |
| MKB   | CHIN6185002 Basic Chinese Language        | 0   |

1. Students with Binus University English Proficiency Test score less than 437 are required to take English for Frontrunners and English for Independent Users.
2. Students with Binus University English Proficiency Test score less than 520 are required to take English for Independent Users and English for Professionals.
3. Students with Binus University English Proficiency Test score equal to or greater than 520 are required to take English for Professionals and choose Basic Japanese Language or Basic Chinese Language.
4. Students are required to pass the foreign language courses before they take enrichment.
5. Students can see the requirements to pass the foreign language courses at BINUSMAYA – Beelingua.

## Minor Scheme

| Minor Program                         | Semester 4 | Semester 5 |
|---------------------------------------|------------|------------|
| <b>Minor @ Binus Kemanggisian</b>     |            |            |
| Human Capital in Digital Workplace    | V          | V          |
| Sustainable Development               | V          | V          |
| Cross Cultural Communication          | V          | V          |
| Interactive & Users Experience Design | V          | V          |
| Robotic Process Automation            | V          | V          |
| Event Business and Entertainment      | V          | V          |
| Creative Digital Storytelling         | V          | V          |
| Digital Banking                       | V          | V          |
| Blockchain Technology and Business    | V          | V          |
| English for Business Professional     | V          | V          |
| <b>Minor @ Binus Alam Sutera</b>      |            |            |
| Digital Transformation                | V          | V          |
| <b>Minor @ Binus Bekasi</b>           |            |            |
| Korean Culture and Creativity         | V          | V          |
| Culinary                              | V          | V          |
| <b>Minor @ Binus Malang</b>           |            |            |
| Digital Technopreneur                 | V          | V          |
| English for Business Professional     | V          | V          |
| Digital Creative Strategy             | V          | V          |
| <b>Minor @ Binus Bandung</b>          |            |            |
| DesignPreneur                         | V          | V          |
| <b>Minor @ Binus Semarang</b>         |            |            |
| Metaverse in Business                 | V          | V          |
| Content Creation                      | V          | V          |
| Data Analytics                        | V          | V          |

The minor programs can change anytime based on the trends of knowledge and industry each year. Students will receive information about the updated minor programs during the registration period.

### 1. Minor Program: Human Capital in Digital Workplace

#### Fundamental Courses

| Course                                         | SCU       |
|------------------------------------------------|-----------|
| PSYC6174027 Psychology in The Workplace        | 4         |
| MGMT6349005 Digital Workplace Strategy         | 4         |
| ISYS6551003 Digital Workplace and Technology   | 4         |
| LAWS6157028 Legal Aspects in Digital Workplace | 4         |
| PSYC6175027 Human Resources Development        | 4         |
| <b>Total SCU</b>                               | <b>20</b> |

## 2. Minor Program: Sustainable Development

### Fundamental Courses

| Course                                              | SCU       |
|-----------------------------------------------------|-----------|
| ISYE6154011 Sustainable Design and Manufacture      | 4         |
| CPEN6217010 Digital for Sustainable Development     | 4         |
| ARCH6119014 Introduction to Sustainable Development | 2         |
| <b>Total SCU</b>                                    | <b>10</b> |

### Supporting Courses

| Course                                                                      | SCU       |
|-----------------------------------------------------------------------------|-----------|
| ISYE6155011 Occupational, Health, Safety, and Administration in Engineering | 2         |
| DSGN6835008 Engineering Material                                            | 4         |
| CIVL6118013 Engineering Economic                                            | 4         |
| <b>Total SCU</b>                                                            | <b>10</b> |

## 3. Minor Program: Cross Cultural Communication

### Fundamental Courses

| Course                                               | SCU       |
|------------------------------------------------------|-----------|
| CHIN6132026 Chinese Conversation in Daily Activities | 4         |
| COMM6502019 Communication in Diversity               | 2         |
| BUSS6170025 Asian Business Ethics                    | 4         |
| <b>Total SCU</b>                                     | <b>10</b> |

### Supporting Courses

| Course                                                     | SCU       |
|------------------------------------------------------------|-----------|
| CHIN6134026 Chinese Conversation in Business Communication | 4         |
| LAWS6158028 Private International Law                      | 2         |
| INTR6135029 Comparative Politics                           | 4         |
| <b>Total SCU</b>                                           | <b>10</b> |

## 4. Minor Program: Interactive & Users Experience Design

### Fundamental Courses

| Course                                            | SCU       |
|---------------------------------------------------|-----------|
| ISYS6553003 User-Centered Research and Evaluation | 4         |
| PSYC6176027 Psychology and User Experience        | 4         |
| DSIN6003007 Fundamental of Interface Design       | 2         |
| <b>Total SCU</b>                                  | <b>10</b> |

### Supporting Courses

| Course                                          | SCU       |
|-------------------------------------------------|-----------|
| ISYS6554003 Core Principles: Interactive Design | 4         |
| DSGN6837007 Digital Design Production           | 4         |
| ISYS6556003 Information Architecture            | 2         |
| <b>Total SCU</b>                                | <b>10</b> |

## 5. Minor Program: Data Analytics

### Fundamental Courses

| Course                                              | SCU       |
|-----------------------------------------------------|-----------|
| INFS6066052 Introduction to Data Analytics          | 2         |
| INFS6067052 Data Management & Descriptive Analytics | 4         |
| ISYE6371054 Statistical for Decision Making         | 4         |
| <b>Total SCU</b>                                    | <b>10</b> |

### Supporting Courses

| Course                                                           | SCU       |
|------------------------------------------------------------------|-----------|
| COSC6183051 Application of Predictive Analytics to Business Data | 4         |
| ISYE6372054 Prescriptive Analytics and Optimization              | 4         |
| BUSS6277055 Digitalization of Markets and Consumption            | 2         |
| <b>Total SCU</b>                                                 | <b>10</b> |

## 6. Minor Program: Robotic Process Automation

### Fundamental Courses

| Course                                       | SCU       |
|----------------------------------------------|-----------|
| COMP6857001 Basic Programming for Automation | 2         |
| COMP6858001 RPA Concept & Design             | 2         |
| ISYS6684003 RPA Developer Fundamental        | 4         |
| ISYS6687003 Business Process Improvement     | 2         |
| <b>Total SCU</b>                             | <b>10</b> |

### Supporting Courses

| Course                                         | SCU       |
|------------------------------------------------|-----------|
| ISYS6685003 RPA Developer Advance              | 4         |
| ISYS6686003 RPA Business Analytics Fundamental | 4         |
| COMP6859001 Intelligence Automation            | 2         |
| <b>Total SCU</b>                               | <b>10</b> |

## 7. Minor Program: Event Business and Entertainment

### Fundamental Courses

| Course                                                                   | SCU       |
|--------------------------------------------------------------------------|-----------|
| HTMN6151021 Event Marketing Management                                   | 2         |
| HTMN6152021 Catering Management                                          | 4         |
| TRSM6232022 MICE (Meeting, Incentive, Convention, Exhibition) Management | 4         |
| <b>Total SCU</b>                                                         | <b>10</b> |

### Supporting Courses

| Course                                               | SCU       |
|------------------------------------------------------|-----------|
| TRSM6233022 Event Sponsorship and Funding            | 2         |
| TRSM6234022 Sport and Entertainment Event Management | 4         |
| TRSM6235022 Festival & Cultural Event                | 4         |
| <b>Total SCU</b>                                     | <b>10</b> |

## 8. Minor Program: Creative Digital Storytelling

### Fundamental Courses

| Course                                            | SCU       |
|---------------------------------------------------|-----------|
| ENGL6274024 Approaches in Multimodal Storytelling | 2         |
| DSIN6033007 Visual Storytelling                   | 2         |
| ENGL6275024 Storytelling for Business             | 2         |
| FILM6118009 Script Development & Pitching         | 4         |
| <b>Total SCU</b>                                  | <b>10</b> |

### Supporting Courses

| Course                                              | SCU       |
|-----------------------------------------------------|-----------|
| ENGL6276024 Cultures, Language, and Arts Production | 4         |
| JAPN6212025 Anime and Manga as Storytelling         | 2         |
| ENGL6277024 Music as Medium for Storytelling        | 4         |
| <b>Total SCU</b>                                    | <b>10</b> |

## 9. Minor Program: Digital Banking

### Fundamental Courses

| Course                                                   | SCU       |
|----------------------------------------------------------|-----------|
| ISYS6824003 Technology Innovation in Banking             | 2         |
| FINC6217020 Bank Risk Management in the Digital Era      | 4         |
| FINC6218020 Digital Finance and The Role of Central Bank | 4         |
| <b>Total SCU</b>                                         | <b>10</b> |

### Supporting Courses

| Course                                                         | SCU       |
|----------------------------------------------------------------|-----------|
| MGMT6510005 Business Process Management in Banking and Finance | 4         |
| ISYS6825003 Data Analytics in Banking and Finance              | 4         |
| MGMT6511005 Digital Leadership                                 | 2         |
| <b>Total SCU</b>                                               | <b>10</b> |

## 10. Minor Program: Blockchain Technology and Business

### Fundamental Courses

| Course                                            | SCU       |
|---------------------------------------------------|-----------|
| ISYS6826003 Introduction to Blockchain Technology | 4         |
| ISYS6827003 Blockchain Economy & Business         | 4         |
| DTSC6016001 Basic Blockchain Programming          | 2         |
| <b>Total SCU</b>                                  | <b>10</b> |

### Supporting Courses

| Course                                                        | SCU       |
|---------------------------------------------------------------|-----------|
| ISYS6828003 Blockchain Architecture Design and Implementation | 4         |
| DTSC6017001 Advanced Blockchain Programming                   | 2         |
| DTSC6018001 Prototyping Blockchain Project                    | 4         |
| <b>Total SCU</b>                                              | <b>10</b> |

## 11. Minor Program: Digital Transformation

### Fundamental Courses

| Course                                                | SCU       |
|-------------------------------------------------------|-----------|
| ISYS6559003 Business Models and Technology Innovation | 4         |
| ISYS6557003 Business Data Management                  | 4         |
| MGMT6484005 Digital Strategy                          | 2         |
| <b>Total SCU</b>                                      | <b>10</b> |

### Supporting Courses

| Course                                                        | SCU       |
|---------------------------------------------------------------|-----------|
| ISYS6695003 Digital Marketing Analysis                        | 4         |
| STAT6200049 Practical Statistics for Digital Business         | 4         |
| ISYS6560003 Success Factor for Leading Digital Transformation | 2         |
| <b>Total SCU</b>                                              | <b>10</b> |

## 12. Minor Program: Culinary

### Fundamental Courses

| Course                                   | SCU       |
|------------------------------------------|-----------|
| HTMN6108021 Food and Beverage Management | 2         |
| HTMN6008021 Kitchen Operation            | 4         |
| HTMN6128021 Pastry and Bakery Operation  | 4         |
| <b>Total SCU</b>                         | <b>10</b> |

SCU for HTMN6008021, HTMN6128021 are practical

### Supporting Courses

| Course                           | SCU       |
|----------------------------------|-----------|
| HTMN6155021 Indonesian Cuisine   | 4         |
| HTMN6125021 Restaurant Operation | 4         |
| HTMN6154021 Culinary Tourism     | 2         |
| <b>Total SCU</b>                 | <b>10</b> |

SCU for HTMN6155021, HTMN6125021 are practical

## 13. Minor Program: Digital Technopreneur

### Fundamental Courses

| Course                                    | SCU       |
|-------------------------------------------|-----------|
| ENTR6528002 The Entrepreneurial Innovator | 4         |
| ENPR6370002 Market Intelligence           | 4         |
| COMP6687004 User Experience Design        | 4         |
| COSC6164004 Web Programming for Business  | 4         |
| COSC6165004 Data Analytics for Business   | 4         |
| <b>Total SCU</b>                          | <b>20</b> |

#### 14. Minor Program: Designpreneur

##### Fundamental Courses

| Course                                     | SCU       |
|--------------------------------------------|-----------|
| ENTR6525032 Fundamental of Designpreneur   | 4         |
| COMP6688031 UI/UX Development              | 4         |
| DSGN6797034 Surface Packaging Design       | 4         |
| ENTR6526032 Hospitality and Service Design | 4         |
| DSGN6843033 Project Design                 | 4         |
| <b>Total SCU</b>                           | <b>20</b> |

#### 15. Minor Program: Metaverse in Business

##### Fundamental Courses

| Course                        | SCU       |
|-------------------------------|-----------|
| ISYS6777052 Business Model    | 2         |
| COMP6889051 Virtual Reality   | 4         |
| COMP6890051 Augmented reality | 4         |
| <b>Total SCU</b>              | <b>10</b> |

##### Supporting Courses

| Course                       | SCU       |
|------------------------------|-----------|
| ISYS6778052 Data Analytics   | 2         |
| DSGN6981053 Design Thinking  | 4         |
| DSGN6980053 Interface Design | 4         |
| <b>Total SCU</b>             | <b>10</b> |

#### 16. Minor Program: Content Creation

##### Fundamental Courses

| Course                               | SCU       |
|--------------------------------------|-----------|
| FILM6105009 Filmmaking Fundamental   | 4         |
| MKTG6392055 Digital marketing        | 4         |
| DSIN6042053 Photography for Creators | 2         |
| <b>Total SCU</b>                     | <b>10</b> |

##### Supporting Courses

| Course                                                  | SCU       |
|---------------------------------------------------------|-----------|
| DSGN6990053 Creative Storytelling                       | 4         |
| DSIN6043053 Strategic Influence                         | 2         |
| DSIN6041053 Introduction to Visual Communication Design | 4         |
| <b>Total SCU</b>                                        | <b>10</b> |

## 17. Minor Program: English for Business Professional

### Fundamental Courses

| Course                                                        | SCU       |
|---------------------------------------------------------------|-----------|
| ENGL6154024 English for Business Communications               | 4         |
| MKTG6112024 Language Innovations in Marketing and Advertising | 2         |
| ENGL6244024 Social Media Broadcasting                         | 4         |
| <b>Total SCU</b>                                              | <b>10</b> |

### Supporting Courses

| Course                                                | SCU       |
|-------------------------------------------------------|-----------|
| ENGL6258024 English for Global Leadership             | 2         |
| ENGL6169024 English for Professionals                 | 2         |
| COMM6506024 Current Issues in Business Communications | 2         |
| ENGL6245024 Business Rhetoric                         | 4         |
| <b>Total SCU</b>                                      | <b>10</b> |

## 18. Minor Program: Korean Culture and Creativity

### Fundamental Courses

| Course                                       | SCU       |
|----------------------------------------------|-----------|
| HTMN6163021 Korean Cuisine and Culinary Arts | 4         |
| COMM6718019 Korean Language and Media        | 4         |
| FILM6134009 Hallyu Creative Content          | 2         |
| <b>Total SCU</b>                             | <b>10</b> |

### Supporting Courses

| Course                                                    | SCU       |
|-----------------------------------------------------------|-----------|
| FILM6135009 K-Drama and Beyond: Analysis and Appreciation | 4         |
| COMM6719019 K-Pop Culture and Performance                 | 4         |
| MKTG6339005 K-Pop and K-Drama Marketing and Promotion     | 2         |
| <b>Total SCU</b>                                          | <b>10</b> |

## 19. Minor Program: Digital Creative Strategy

### Fundamental Courses

| Course                                    | SCU       |
|-------------------------------------------|-----------|
| DSIN6150023 Creative Project Management   | 4         |
| COMM6770012 Media Strategy & Planning     | 4         |
| COMM6771018 Business Communication        | 2         |
| DSIN6152006 Visual Language               | 4         |
| DSIN6151023 Creative Business Development | 4         |
| COMM6772012 Digital Literacy              | 2         |
| <b>Total SCU</b>                          | <b>20</b> |

**20. Minor Program: Global Creative Business and Technology**

| Course           |                                          | SCU       |
|------------------|------------------------------------------|-----------|
| DSIN6142066      | Global Interactive Design                | 4         |
| BUSS6275061      | E-Commerce and Digital Entrepreneurship  | 4         |
| COSC6159060      | Emerging Technologies in Global Business | 4         |
| ISYS6997064      | Blockchain for Digital Economy           | 4         |
| TRDE6001065      | Global Regulatory Environment            | 4         |
| <b>Total SCU</b> |                                          | <b>20</b> |

**Appendix: Free Electives**

| No | Course Owner Department           | Course Category | Course Code | Course Name                                         | SCU | Semester |
|----|-----------------------------------|-----------------|-------------|-----------------------------------------------------|-----|----------|
| 1  | Business Creation                 | MKK             | ENTR6580005 | Digital Business Transformation                     | 2   | 4        |
| 2  | Business Creation                 | MKB             | ENTR6494005 | Managing Growing Business                           | 2   | 5        |
| 3  | Business Management               | MKB             | MGMT6401005 | Digital Supply Chain Management                     | 2   | 4        |
| 4  | Business Management               | MKB             | MKTG6298005 | Service Marketing Management                        | 2   | 4        |
| 5  | Business Management               | MKB             | MGMT6365005 | Current Issue in Service Business and Technology    | 2   | 5        |
| 6  | International Business Management | MKB             | BUSS6162005 | Market Entry Strategy                               | 2   | 4        |
| 7  | International Business Management | MKB             | MGMT6370005 | E-Business for International Business               | 2   | 5        |
| 8  | Management                        | MKB             | BUSS6088005 | Current Issue in Business and Technology            | 2   | 4        |
| 9  | Management                        | MKB             | BUSS6109005 | Business Development                                | 4   | 4        |
| 10 | Management                        | MKB             | BUSS6173005 | Managing Innovation and Knowledge                   | 4   | 4        |
| 11 | Management                        | MKB             | ISYS6079005 | E-Business System                                   | 4   | 4        |
| 12 | Management                        | MKB             | MGMT6276005 | Leadership & Managing Human Capital in Organization | 4   | 4        |
| 13 | Management                        | MKB             | MGMT6374005 | Analysis on E-Business Investment                   | 4   | 4        |
| 14 | Management                        | MKB             | ISYS8175005 | E-Business Strategy and Implementation              | 4   | 5        |
| 15 | Management                        | MKB             | MGMT6029005 | Knowledge Management                                | 2   | 5        |
| 16 | Management                        | MKB             | MGMT6063005 | Strategic Management                                | 2   | 5        |
| 17 | Management                        | MKB             | MGMT6297005 | Operations Management                               | 4   | 5        |
| 18 | Management                        | MKB             | MGMT6341005 | Strategic Management                                | 4   | 5        |
| 19 | Accounting                        | MKB             | ACCT6358020 | Management Audit                                    | 4   | 4        |
| 20 | Accounting Bekasi                 | MKB             | ACCT6382020 | Business Process Analysis and Solution              | 2   | 4        |
| 21 | Accounting Bekasi                 | MKB             | ACCT6389020 | Big Data Analytics in Accounting & Finance          | 2   | 5        |
| 22 | Marketing Communication           | MKB             | COMM6541019 | Digital Corporate Communication                     | 2/2 | 5        |
| 23 | Marketing Communication           | MKB             | COMM6543019 | Digital Brand Communicaton                          | 2/2 | 5        |
| 24 | Tourism                           | MKB             | TRSM6208022 | Tourism Innovation and Product Development          | 4   | 5        |
| 25 | Civil Engineering                 | MKB             | CIVL6025013 | Hydrology                                           | 2   | 5        |
| 26 | Civil Engineering                 | MKB             | CIVL6035013 | Airport Engineering                                 | 2   | 5        |
| 27 | Civil Engineering                 | MKB             | CIVL6037013 | Railway Engineering                                 | 2   | 5        |
| 28 | Civil Engineering                 | MKB             | CIVL6080013 | Construction Methods & Heavy Equipment              | 2   | 5        |
| 29 | Civil Engineering                 | MKB             | COMP6046013 | Computer Applications in Construction Management    | 2   | 5        |
| 30 | Computer Engineering              | MKB             | CPEN6126010 | Cross Platform Application Development              | 4   | 5        |
| 31 | Computer Engineering              | MKB             | CPEN6225010 | Telco Network & Switching System                    | 2   | 5        |
| 32 | Computer Engineering              | MKB             | CPEN6232010 | Cloud Technology Practice                           | 2   | 5        |
| 33 | Food Tech                         | MKB             | FOOD6073015 | Current Issues in Food Technology                   | 2   | 4        |

| No | Course Owner Department                   | Course Category | Course Code | Course Name                                    | SCU | Semester |
|----|-------------------------------------------|-----------------|-------------|------------------------------------------------|-----|----------|
| 34 | Industrial Engineering                    | MKB             | ISYE6041011 | Engineering Economy                            | 2   | 4        |
| 35 | Industrial Engineering                    | MKB             | ISYE6113011 | Leadership & Organizational Behavior           | 2   | 4        |
| 36 | Industrial Engineering                    | MKB             | ISYE6181011 | System Engineering & Analysis                  | 2   | 4        |
| 37 | Computer Science                          | MKB             | COMP6586001 | Embedded Systems                               | 2   | 5        |
| 38 | Computer Science                          | MKB             | COMP6226001 | Competitive Programming                        | 2   | 5        |
| 39 | Computer Science                          | MKB             | MOBI6059001 | Mobile Programming                             | 2   | 5        |
| 40 | Computer Science                          | MKB             | COMP7116001 | Computer Vision                                | 2/2 | 5        |
| 41 | Computer Science                          | MKB             | COMP6821001 | Web Programming                                | 2   | 5        |
| 42 | Computer Science                          | MKB             | COMP6590001 | Geographical Information System                | 2/2 | 5        |
| 43 | Game Application and Technology           | MKB             | GAME6082001 | Game Animation                                 | 2   | 4        |
| 44 | Game Application and Technology           | MKB             | GAME6085001 | Object Oriented Game Programming               | 2   | 5        |
| 45 | Animation                                 | MKB             | DSGN6693007 | Motion Graphic                                 | 4   | 4        |
| 46 | Animation                                 | MKB             | DSGN6694007 | Visual Effect (VFX)                            | 4   | 4        |
| 47 | Animation                                 | MKB             | DSGN6695007 | Asset Creation                                 | 4   | 4        |
| 48 | Animation                                 | MKB             | DSGN6689007 | Concept Art & Production Design                | 2   | 5        |
| 49 | Creative Advertising                      | MKB             | DSGN6671007 | Creative Writing for Commercials               | 4   | 4        |
| 50 | Film                                      | MKB             | FILM6026009 | History of Indonesian Cinema                   | 2   | 4        |
| 51 | New Media                                 | MKB             | DSGN6743007 | Digital Graphic Reproduction                   | 4   | 4        |
| 52 | Interior Design                           | MKB             | DSGN6611008 | Business in Interior Design                    | 2   | 4        |
| 53 | Business Information Technology           | MKB             | ISYS6574003 | Information Retrieval                          | 4   | 4        |
| 54 | Business Information Technology           | MKB             | ISYS6577003 | Machine Learning & Foundations                 | 2   | 4        |
| 55 | Business Information Technology           | MKB             | ISYS6606003 | Smart Application                              | 2   | 4        |
| 56 | Business Information Technology           | MKB             | ISYS6579003 | Knowledge-Based AI: Cognitive Systems          | 4   | 5        |
| 57 | Information Systems                       | MKB             | BUSS6043003 | Introduction to E-Business                     | 4   | 4        |
| 58 | Information Systems                       | MKB             | ISYS6016003 | Social Media Fundamental                       | 2   | 4        |
| 59 | Information Systems                       | MKB             | ISYS6203003 | Mobile Application Development                 | 2/2 | 4        |
| 60 | Information Systems                       | MKB             | ISYS6210003 | Data Visualization                             | 2   | 4        |
| 61 | Information Systems                       | MKB             | ISYS6285003 | Digital and New Media                          | 2   | 4        |
| 62 | Information Systems                       | MKB             | ISYS6594003 | Coding for Finance                             | 2   | 4        |
| 63 | Information Systems                       | MKB             | ISYS6196003 | Business Analytics                             | 2   | 5        |
| 64 | Information Systems                       | MKB             | ISYS6199003 | Data & Text Mining                             | 4   | 5        |
| 65 | Information Systems                       | MKB             | ISYS6202003 | Social Informatics                             | 4   | 5        |
| 66 | Information Systems                       | MKB             | ISYS6289003 | Collaborative Computing                        | 4   | 5        |
| 67 | Information Systems                       | MKB             | ISYS6402003 | Business Analytics                             | 2/2 | 5        |
| 68 | Information Systems                       | MKB             | ISYS8066003 | Business Process Management                    | 4   | 5        |
| 69 | Information Systems Accounting & Auditing | MKB             | ISYS6608003 | IT Service & Risk Management                   | 2   | 5        |
| 70 | Data Science                              | MKB             | DTSC6007001 | Deep Learning                                  | 2   | 4        |
| 71 | Data Science                              | MKB             | DTSC6008001 | Text Mining                                    | 2   | 5        |
| 72 | Cyber Security                            | MKB             | COMP6646001 | Computer Forensic                              | 2   | 5        |
| 73 | Mobile Application & Technology           | MKB             | MOBI6068001 | Web Design                                     | 2   | 5        |
| 74 | International Relations                   | MKB             | INTR8043029 | International Media and State Role             | 4   | 4        |
| 75 | International Relations                   | MKB             | INTR6162029 | Multiculturalism and Digital Society           | 2   | 5        |
| 76 | Business Law                              | MKB             | LAWS6017028 | Intellectual Property Rights                   | 4   | 4        |
| 77 | Business Law                              | MKB             | LAWS6110028 | Cyber Law                                      | 2   | 4        |
| 78 | Business Law                              | MKB             | LAWS6171028 | Business Competition & Consumer Protection Law | 2   | 4        |
| 79 | Business Law                              | MKB             | LAWS6052028 | Bankruptcy Law                                 | 2   | 5        |
| 80 | Business Law                              | MKB             | LAWS6167028 | Legal Philosophy & Professional Ethics         | 2   | 5        |
| 81 | Business Law                              | MKB             | LAWS6176028 | Tax Law                                        | 2   | 5        |
| 82 | Chinese Literature                        | MKB             | CHIN6157026 | Chinese Business for Etiquette (Beginner)      | 4   | 4        |

| No  | Course Owner Department           | Course Category | Course Code | Course Name                                      | SCU | Semester |
|-----|-----------------------------------|-----------------|-------------|--------------------------------------------------|-----|----------|
| 83  | Chinese Literature                | MKB             | CHIN6157026 | Chinese Business for Etiquette (Beginner)        | 4   | 5        |
| 84  | English Literature                | MKB             | ENGL6169024 | English for Professionals                        | 2   | 4        |
| 85  | English Literature                | MKB             | SOC6021024  | Social and Digital Media Writing                 | 2   | 4        |
| 86  | English Literature                | MKB             | ENGL6244024 | Social Media Broadcasting                        | 4   | 5        |
| 87  | Primary Teacher Education         | MKB             | EDUC6018030 | Micro Teaching                                   | 4   | 4        |
| 88  | Primary Teacher Education         | MKB             | EDUC6041030 | Current Issues in Primary Education              | 2   | 4        |
| 89  | Primary Teacher Education         | MKB             | EDUC6062030 | International and National Curriculum            | 2   | 4        |
| 90  | Primary Teacher Education         | MKB             | EDUC6033030 | Physical Education                               | 2   | 5        |
| 91  | Primary Teacher Education         | MKB             | EDUC6061030 | ICT for Distance Learning                        | 2   | 5        |
| 92  | Psychology                        | MKB             | PSYC6124027 | Psychology of Early Childhood Education          | 4   | 4        |
| 93  | Psychology                        | MKB             | PSYC6125027 | Psychology of Special Needs Education            | 4   | 4        |
| 94  | Psychology                        | MKB             | PSYC6130027 | Human Performance Technology                     | 4   | 4        |
| 95  | Business Creation                 | MKB             | ENTR6580005 | Digital Business Transformation                  | 2   | 4        |
| 96  | Business Creation                 | MKB             | ENTR6494005 | Managing Growing Business                        | 2   | 5        |
| 97  | Business Management               | MKB             | MGMT6401005 | Digital Supply Chain Management                  | 2   | 4        |
| 98  | Business Management               | MKB             | MKTG6298005 | Service Marketing Management                     | 2   | 4        |
| 99  | Business Management               | MKB             | MGMT6365005 | Current Issue in Service Business and Technology | 2   | 5        |
| 100 | International Business Management | MKB             | BUSS6162005 | Market Entry Strategy                            | 2   | 4        |

### Enrichment Track Scheme

Track scheme for semester 6 and semester 7

| Track | Semester 6 |    |    |    |    |    |     | Semester 7 |    |    |    |    |    |    |     |
|-------|------------|----|----|----|----|----|-----|------------|----|----|----|----|----|----|-----|
|       | IN         | RS | EN | CD | SA | IS | etc | IN         | RS | EN | CD | SA | IS | FS | etc |
| 1     | v          |    |    |    |    |    |     | v          |    |    |    |    |    |    |     |
| 2     | v          |    |    |    |    |    |     |            |    |    |    |    |    | v  |     |
| 3     |            | v  |    |    |    |    |     |            | v  |    |    |    |    |    |     |
| 4     |            | v  |    |    |    |    |     |            |    |    |    |    |    | v  |     |
| 5     |            |    | v  |    |    |    |     |            |    | v  |    |    |    |    |     |
| 6     |            |    |    | v  |    |    |     | v          |    |    |    |    |    |    |     |
| 7     |            |    |    | v  |    |    |     |            |    |    | v  |    |    |    |     |
| 8     |            |    |    | v  |    |    |     |            |    |    |    | v  |    |    |     |
| 9     |            |    |    | v  |    |    |     |            |    |    |    |    | v  |    |     |
| 10    |            |    |    |    | v  |    |     | v          |    |    |    |    |    |    |     |
| 11    |            |    |    |    | v  |    |     |            |    |    | v  |    |    |    |     |
| 12    |            |    |    |    | v  |    |     |            |    |    |    |    | v  |    |     |
| 13    |            |    |    |    |    | v  |     | v          |    |    |    |    |    |    |     |
| 14    |            |    |    |    |    | v  |     |            |    |    | v  |    |    |    |     |
| 15    |            |    |    |    |    | v  |     |            |    |    |    | v  |    |    |     |
| 16    |            |    |    |    |    | v  |     |            |    |    |    |    |    | v  |     |
| 17    |            |    |    |    |    |    | v   | v          |    |    |    |    |    |    |     |
| 18    |            |    |    |    |    |    | v   |            |    |    | v  |    |    |    |     |
| 19    |            |    |    |    |    |    | v   |            |    |    |    | v  |    |    |     |

**Note:**

|    |                                   |     |                                        |
|----|-----------------------------------|-----|----------------------------------------|
| IN | : Certified Internship            | SA  | : Certified Study Abroad               |
| RS | : Certified Research              | IS  | : Certified Specific Independent Study |
| EN | : Certified Entrepreneurship      | FS  | : Further Study                        |
| CD | : Certified Community Development | etc | : Study Program Special Purposes       |

**Description:**

Student will take one of enrichment program tracks

Students who failed in Enrichment Program I can retake with the same track or change into another track. As for Enrichment Program II, student who failed with Internship, Research, Community Development, and Study Abroad track on Enrichment Program II, can retake with the same track or change into another track. However students who take Entrepreneurship track on Enrichment Program II, should retake with another track.

**CERTIFIED INTERNSHIP TRACK**
**Enrichment Program I**

| Group            | Course      |                                                          | SCU       |
|------------------|-------------|----------------------------------------------------------|-----------|
| MKB              | COMP6930004 | Industrial Experience in Information Technology          | 8         |
|                  | COMP6931004 | Information Technology Practice in Industrial Experience | 8         |
|                  | COMP6932004 | EES in Information Technology Industry                   | 4         |
| <b>Total SCU</b> |             |                                                          | <b>20</b> |

**Enrichment Program II**

| Group            | Course      |                                                             | SCU       |
|------------------|-------------|-------------------------------------------------------------|-----------|
| MKB              | COMP6933004 | Professional Experience in Information Technology           | 8         |
|                  | COMP6934004 | Information Technology Practice in Professional Experience  | 8         |
|                  | COMP6935004 | Professional Development in Information Technology Industry | 4         |
| <b>Total SCU</b> |             |                                                             | <b>20</b> |

**CERTIFIED RESEARCH TRACK**
**Enrichment Program I**

| Group            | Course      |                                                                            | SCU       |
|------------------|-------------|----------------------------------------------------------------------------|-----------|
| MKB              | RSCH6089004 | Research Experience I                                                      | 8         |
|                  | RSCH6573004 | Scientific Writing I                                                       | 8         |
|                  | RSCH6091004 | Global EES I (Team Work, Communication, Problem Solving & Decision Making) | 4         |
| <b>Total SCU</b> |             |                                                                            | <b>20</b> |

**Enrichment Program II**

| Group            | Course      |                                                                                 | SCU       |
|------------------|-------------|---------------------------------------------------------------------------------|-----------|
| MKB              | RSCH6092004 | Research Experience II                                                          | 8         |
|                  | RSCH4574004 | Scientific Writing II                                                           | 8         |
|                  | RSCH6094004 | Global EES II (Self-Management, Planning & Organizing, Initiative & Enterprise) | 4         |
| <b>Total SCU</b> |             |                                                                                 | <b>20</b> |

**CERTIFIED ENTREPRENEURSHIP TRACK**
**Enrichment Program I**

| Group            | Course                                                   | SCU       |
|------------------|----------------------------------------------------------|-----------|
| MKB              | ENPR6144004 New Venture Initiation in Computer Science   | 8         |
|                  | ENPR6145004 Computer Science Product Development Process | 8         |
|                  | ENPR6146004 EES in New Computer Science Business I       | 4         |
| <b>Total SCU</b> |                                                          | <b>20</b> |

**Enrichment Program II**

| Group            | Course                                              | SCU       |
|------------------|-----------------------------------------------------|-----------|
| MKB              | ENPR6147004 Computer Science Product Launching      | 8         |
|                  | ENPR6148004 Computer Science Business Development   | 8         |
|                  | ENPR6149004 EES in New Computer Science Business II | 4         |
| <b>Total SCU</b> |                                                     | <b>20</b> |

**CERTIFIED COMMUNITY DEVELOPMENT TRACK**
**Enrichment Program I**

| Group            | Course                                                | SCU       |
|------------------|-------------------------------------------------------|-----------|
| MKB              | CMDV6028004 Community Outreach Project Implementation | 8         |
|                  | CMDV6347004 Community Outreach Project Design         | 8         |
|                  | CMDV6030004 Employability and Entrepreneurial Skills  | 4         |
| <b>Total SCU</b> |                                                       | <b>20</b> |

**Enrichment Program II**

| Group            | Course                                                   | SCU       |
|------------------|----------------------------------------------------------|-----------|
| MKB              | CMDV6031004 Community Development Project Implementation | 8         |
|                  | CMDV6348004 Community Development Project Design         | 8         |
|                  | CMDV6033004 Employability and Entrepreneurial Skills     | 4         |
| <b>Total SCU</b> |                                                          | <b>20</b> |

**CERTIFIED STUDY ABROAD TRACK**
**Enrichment Program I**

| Group                                          | Course                                          | SCU |
|------------------------------------------------|-------------------------------------------------|-----|
| <b>Elective courses list for study abroad*</b> |                                                 |     |
| MKB                                            | GLOB6093004 Elective Course for Study Abroad 1  | 4   |
|                                                | GLOB6094004 Elective Course for Study Abroad 2  | 4   |
|                                                | GLOB6095004 Elective Course for Study Abroad 3  | 4   |
|                                                | GLOB6096004 Elective Course for Study Abroad 4  | 4   |
|                                                | GLOB6257004 Elective Course for Study Abroad 25 | 4   |
|                                                | GLOB6258004 Elective Course for Study Abroad 26 | 2   |
|                                                | GLOB6259004 Elective Course for Study Abroad 27 | 2   |
|                                                | GLOB6097004 Elective Course for Study Abroad 5  | 2   |
|                                                | GLOB6098004 Elective Course for Study Abroad 6  | 2   |
|                                                | GLOB6099004 Elective Course for Study Abroad 7  | 2   |
|                                                | GLOB6100004 Elective Course for Study Abroad 8  | 2   |

| Group            | Course                                          | SCU       |
|------------------|-------------------------------------------------|-----------|
|                  | GLOB6101004 Elective Course for Study Abroad 9  | 2         |
|                  | GLOB6102004 Elective Course for Study Abroad 10 | 2         |
|                  | GLOB6103004 Elective Course for Study Abroad 11 | 2         |
|                  | GLOB6104004 Elective Course for Study Abroad 12 | 2         |
| <b>Total SCU</b> |                                                 | <b>20</b> |

\*) Transferred courses will be transferred based on credit transfer policies on study program with total of 20 credits.

### Enrichment Program II

| Group                                          | Course                                          | SCU       |
|------------------------------------------------|-------------------------------------------------|-----------|
| <b>Elective courses list for study abroad*</b> |                                                 |           |
| MKB                                            | GLOB6105004 Elective Course for Study Abroad 13 | 4         |
|                                                | GLOB6106004 Elective Course for Study Abroad 14 | 4         |
|                                                | GLOB6107004 Elective Course for Study Abroad 15 | 4         |
|                                                | GLOB6108004 Elective Course for Study Abroad 16 | 4         |
|                                                | GLOB6286004 Elective Course for Study Abroad 28 | 4         |
|                                                | GLOB6287004 Elective Course for Study Abroad 29 | 2         |
|                                                | GLOB6288004 Elective Course for Study Abroad 30 | 2         |
|                                                | GLOB6109004 Elective Course for Study Abroad 17 | 2         |
|                                                | GLOB6110004 Elective Course for Study Abroad 18 | 2         |
|                                                | GLOB6111004 Elective Course for Study Abroad 19 | 2         |
|                                                | GLOB6112004 Elective Course for Study Abroad 20 | 2         |
|                                                | GLOB6113004 Elective Course for Study Abroad 21 | 2         |
|                                                | GLOB6114004 Elective Course for Study Abroad 22 | 2         |
|                                                | GLOB6115004 Elective Course for Study Abroad 23 | 2         |
|                                                | GLOB6116004 Elective Course for Study Abroad 24 | 2         |
| <b>Total SCU</b>                               |                                                 | <b>20</b> |

\*) Transferred courses will be transferred based on credit transfer policies on study program with total of 20 credits.

### CERTIFIED SPECIFIC INDEPENDENT STUDY

| Group | Course                                                                 | SCU |
|-------|------------------------------------------------------------------------|-----|
| MKB   | <b>Elective courses list for certified specific independent study*</b> |     |
|       | MICR6145004 Course Certification I                                     | 3   |
|       | MICR6146004 Technical Skill Enrichment I                               | 4   |
|       | MICR6147004 Industrial Project I                                       | 9   |
|       | MICR6148004 Soft Skill Enrichment I                                    | 4   |
|       | MICR6149004 Elective Course for Specific Independent Study 1           | 8   |
|       | MICR6150004 Elective Course for Specific Independent Study 2           | 8   |
|       | MICR6151004 Elective Course for Specific Independent Study 3           | 6   |
|       | MICR6152004 Elective Course for Specific Independent Study 4           | 6   |
|       | MICR6153004 Elective Course for Specific Independent Study 5           | 6   |
|       | MICR6154004 Elective Course for Specific Independent Study 6           | 5   |
|       | MICR6155004 Elective Course for Specific Independent Study 7           | 5   |
|       | MICR6156004 Elective Course for Specific Independent Study 8           | 5   |
|       | MICR6157004 Elective Course for Specific Independent Study 9           | 5   |
|       | MICR6158004 Elective Course for Specific Independent Study 10          | 4   |
|       | MICR6159004 Elective Course for Specific Independent Study 11          | 4   |
|       | MICR6160004 Elective Course for Specific Independent Study 12          | 4   |

| Group            | Course                                                        | SCU       |
|------------------|---------------------------------------------------------------|-----------|
|                  | MICR6161004 Elective Course for Specific Independent Study 13 | 4         |
|                  | MICR6162004 Elective Course for Specific Independent Study 14 | 4         |
|                  | MICR6163004 Elective Course for Specific Independent Study 15 | 3         |
|                  | MICR6164004 Elective Course for Specific Independent Study 16 | 3         |
|                  | MICR6165004 Elective Course for Specific Independent Study 17 | 3         |
|                  | MICR6166004 Elective Course for Specific Independent Study 18 | 3         |
|                  | MICR6167004 Elective Course for Specific Independent Study 19 | 3         |
|                  | MICR6168004 Elective Course for Specific Independent Study 20 | 3         |
|                  | MICR6169004 Elective Course for Specific Independent Study 21 | 2         |
|                  | MICR6170004 Elective Course for Specific Independent Study 22 | 2         |
|                  | MICR6171004 Elective Course for Specific Independent Study 23 | 2         |
|                  | MICR6172004 Elective Course for Specific Independent Study 24 | 2         |
|                  | MICR6173004 Elective Course for Specific Independent Study 25 | 2         |
|                  | MICR6174004 Elective Course for Specific Independent Study 26 | 2         |
|                  | MICR6175004 Elective Course for Specific Independent Study 27 | 2         |
|                  | MICR6176004 Elective Course for Specific Independent Study 28 | 2         |
|                  | MICR6177004 Elective Course for Specific Independent Study 29 | 1         |
|                  | MICR6178004 Elective Course for Specific Independent Study 30 | 1         |
|                  | MICR6179004 Elective Course for Specific Independent Study 31 | 1         |
|                  | MICR6180004 Elective Course for Specific Independent Study 32 | 1         |
| <b>Total SCU</b> |                                                               | <b>20</b> |

\*) For students who take BINUS certified specific independent study courses, they should take the first 4 courses on the list above (20 credits). Meanwhile, electives courses 1 to 32 are transferred courses for students who take certified specific independent study outside BINUS University. Transferred courses will be transferred based on credit transfer policies on study program with total of 20 credits.

## FURTHER STUDY TRACK

### Enrichment Program II Fast track M.MSI

| Group            | Course                                              | SCU       |
|------------------|-----------------------------------------------------|-----------|
| MKB              | ISYS6654003 Service Oriented Analysis and Design    | 4         |
|                  | ISYS6655003 Change Management for Enterprise        | 4         |
|                  | ISYS6656003 Digital Transformation Management       | 4         |
|                  | ISYS6657003 Data Analytics for Research             | 4         |
|                  | ISYS6660003 Visualization and Descriptive Analytics | 4         |
| <b>Total SCU</b> |                                                     | <b>20</b> |

**Fast track M.TI**

| Group | Course                                                | SCU       |
|-------|-------------------------------------------------------|-----------|
| MKB   | COMP6815001 IT Disaster Recovery                      | 4         |
|       | COMP6816001 Wireless and Cloud Computing Technologies | 4         |
|       | COMP6817001 Internet Tools and Services               | 4         |
|       | COMP6818001 Cyber Risk Management                     | 4         |
|       | COMP6819001 Knowledge Engineering                     | 4         |
|       | <b>Total SCU</b>                                      | <b>20</b> |

**Student should pass all of these quality controlled courses as listed below:**

| No. | Course Code | Course Name                   | Minimal Grade |
|-----|-------------|-------------------------------|---------------|
| 1.  | CHAR603004  | Character Building: Pancasila | B             |
| 2.  | ENPR6316002 | Venture Creation              | C             |
| 3.  | COMP6360004 | Algorithm and Programming     | C             |
| 4.  | COMP6362004 | Data Structures               | C             |
| 5.  | COMP6840004 | Program Design Methods        | C             |
| 6.  | COMP6855004 | Software Engineering          | C             |
| 7.  | COMP6852004 | Database Technology           | C             |
| 8.  | COMP6716004 | Operating System              | C             |