

## 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

# BINUS UNIVERSITY

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	
	CPEN6250004	Computer Networks	2/1	

Sem	Code	Course Name	SCU	Total
	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> </ul>
	SCIE6068004	Computational Biology	2/1	<ul style="list-style-type: none"> <li>▪ Total SCU of Streaming Game Technology, Network Security, Mobile, Data Science, &amp; Cloud Technology: 19</li> </ul>
	COMP6855004	Software Engineering <sup>2)</sup>	4	<ul style="list-style-type: none"> <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> </ul>
	COMP6955004	Database Design	2	<ul style="list-style-type: none"> <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> </ul>
	<b>Streaming: Digital Creative Technology <sup>4)</sup></b>			<ul style="list-style-type: none"> <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> </ul>
	COMP6679004	Web Programming <sup>2)</sup>	4	<ul style="list-style-type: none"> <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> </ul>
	COSC6109004	Popular Programming Technology <sup>1)</sup>	4	<ul style="list-style-type: none"> <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> </ul>
	COSC6001004	User Experience	2	<ul style="list-style-type: none"> <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> </ul>
	<b>Streaming: Immersive Technology <sup>4)</sup></b>			<ul style="list-style-type: none"> <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> </ul>
	COSC6002004	User Experience for Digital Immersive Technology	2	<ul style="list-style-type: none"> <li>▪ Total SCU of Minor Program Malang: 19</li> </ul>
	COSC6003004	Multimedia and 3D Modelling	2/2	<ul style="list-style-type: none"> <li>▪ Total SCU of Minor Program Jakarta, Bandung, Semarang Free Electives<sup>5,6)</sup> :17</li> </ul>
	COSC6004004	3D Web Programming	2/2	<ul style="list-style-type: none"> <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> </ul>
	<b>Streaming: Internet Of Things <sup>5)</sup></b>			<ul style="list-style-type: none"> <li>▪ Cummulative SCU of Streaming Mobile Technology: 79</li> </ul>
	COMP6849031	Embedded System	2/2	<ul style="list-style-type: none"> <li>▪ Cummulative SCU of Streaming Mobile Technology: 79</li> </ul>
	COMP6850031	Multimedia & Mixed Reality	2/1	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Game Technology, Network Security, Data Science, Cloud Technology: 80</li> </ul>
	MOBI6072031	Mobile Programming	2/1	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Game Technology, Network Security, Data Science, Cloud Technology: 80</li> </ul>
	COMP6655031	Cyber Security in IoT	2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Game Technology, Network Security, Data Science, Cloud Technology: 80</li> </ul>
	<b>Streaming: Cloud Technology <sup>5)</sup></b>			<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COMP6988031	Introduction to Cloud Computing	2/2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COMP6989031	Web Based Programming	2/2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COMP6990031	Introduction to Cloud security	2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	<b>Streaming: Intelligent System <sup>6)</sup></b>			<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COMP6885001	Natural Language Processing <sup>1), 2)</sup>	2/2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COMP6577001	Machine Learning	4	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COMP7116001	Computer Vision <sup>1)</sup>	2/2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	<b>Streaming: Database Technology <sup>6)</sup></b>			<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COSC6097001	Data Engineering	2/1	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COMP6579001	Big Data Processing <sup>1), 2)</sup>	2/2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COSC6098001	Data Visualization	2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	COMP6099001	Data Analytics	2/1	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Streaming Digital Creative Technology, Immersive Technology, Internet of Things, Intelligent System, Database technology, Interactive Multimedia, Network Technology, Software Engineering, &amp; Game Technology: 82</li> </ul>
	<b>Streaming: Interactive Multimedia<sup>6)</sup></b>			<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Minor Program Malang: 80</li> </ul>
	COMP8129001	User Experience <sup>1), 2)</sup>	2/2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Minor Program Malang: 80</li> </ul>
	COSC6095001	Multimedia System and Programming Foundation	2/2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Minor Program Jakarta, Bandung, Semarang, Free Electives: 78</li> </ul>
	COSC6096001	Extended Reality	2	<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Minor Program Jakarta, Bandung, Semarang, Free Electives: 78</li> </ul>
	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>			<ul style="list-style-type: none"> <li>▪ Cumulative SCU of Minor Program Jakarta, Bandung, Semarang, Free Electives: 78</li> </ul>

Sem	Code	Course Name	SCU	Total	
	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>					
<b>Minor Program</b>					
<b>Free Electives <sup>4), 6)</sup></b>					
5	COMP6390004	Compilation Techniques	4		
	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		
	COSC6005004	Agile Software Development	2		
<b>Streaming: Immersive Technology <sup>4)</sup></b>					
	COSC6006004	Augmented Reality Application Programming	2/2		
	COSC6007004	Virtual Reality Application Programming	2/2		
	COSC6008004	Immersive Technology Capstone Project	2		
<b>Streaming: Internet Of Things <sup>5)</sup></b>					
	COMP6757031	Computer vision in IoT	2/2		

- Total SCU of Streaming Mobile Technology: 21
- Total SCU of Streaming : Cloud Technology, Game Technology, Data Science, Network Security: 20
- 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

Sem	Code	Course Name	SCU	Total	
	COMP6882031	IoT Development and Architecture	2/2	<ul style="list-style-type: none"> <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>	
	Elective Course		2		
	<b>Streaming: Cloud Technology<sup>5)</sup></b>				
	COMP6991031	Cloud Services	2/2		
	COMP6992031	Software Development Operations in Cloud Environments	2		
	COMP6993031	Application Development in Cloud	2/2		
	Elective Course		2		
	<b>Streaming: Intelligent System<sup>6)</sup></b>				
	COMP6822001	Speech Recognition	2/2		
	COMP6826001	Deep Learning	2/2		
	Elective Course		2		
	<b>Streaming: Database Technology<sup>6)</sup></b>				
	COMP6590001	Geographical Information System <sup>1)</sup>	2/2		
	COMP6140001	Data Mining	2/2		
	Elective Course		2		
	<b>Streaming: Interactive Multimedia<sup>6)</sup></b>				
	COMP6583001	Computer Graphics	2/2		
	COMP7139001	Game Programming	4		
	Elective Course		2		
	<b>Streaming: Network Technology<sup>6)</sup></b>				
	COSC6104001	Cloud Interfacing with Virtualization	2/2		
	COSC6105001	Cloud Native Applications	2/2		
	Elective Course		2		
	<b>Streaming: Software Engineering<sup>6)</sup></b>				
	COSC6102001	Software Metrics and Quality assurance	2/2		
	COSC6103001	Mobile Technology Solution <sup>2)</sup>	2/2		
	Elective Course		2		
	<b>Streaming: Game Technology<sup>6)</sup></b>				
	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		
	<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		

Sem	Code	Course Name	SCU	Total
	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	Nework 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 Cumulative SCU: 120
7	Enrichment Program II		20	Total SCU: 20 Cumulative SCU: 140
8	COMP6747004	Pre-Thesis	2	Total SCU: 6
	COMP6748004	Thesis	4	
	COMP6872004	Thesis	6	
<b>Total Credits 146 SCU</b>				

- 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**

<b>Minor Program</b>	<b>Semester 4</b>	<b>Semester 5</b>
<b>Minor @ Binus Kemanggisan</b>		
Digital Ecosystem	V	V
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
Chinese for Career Pathways	V	V
<b>Minor @ Binus Bandung</b>		
DesignPreneur	V	V
<b>Minor @ Binus Semarang</b>		
Metaverse in Business	V	V
Immersive Journey to Japanese Language and Culture	V	V
Content Creation	V	V
Data Analytics	V	V
<b>Minor @ Binus Medan</b>		
Global Creative Business and Technology	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 : Digital Ecosystem

#### Fundamental Courses

Course		SCU
COSC6196001	Immersive Technology	2
GAME6002001	Game Design	2
ISYS6549003	Digital Innovation	4
COMP6937001	Current Trends in Technology	2
	<b>Total SCU</b>	<b>10</b>

#### Supporting Courses

Course		SCU
COMM6501019	Narrative Development	4
DSGN6834007	Visual Identity	4
COMP6685001	Cyber Security for Business	2
	<b>Total SCU</b>	<b>10</b>

### 2. 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>

### 3. 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>

#### 4. 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>

#### 5. 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>

#### 6. 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>

## 7. 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>

## 8. 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>

## 9. 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>

## 10. 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>

## 11. 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>

## 12. 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>

### 13. 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

### 14. 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>

### 15. 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>

### 16. 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>

**17. 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>

**18. 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>

**19. 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>

**20. 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>

**21. 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>

**22. Minor Program: Immersive Journey to Japanese Language and Culture**
**Fundamental Courses**

Course	SCU
JAPN6221025 Essential Japanese Grammar ( <i>Yoku Tsukaeru Bunpou</i> )	4
JAPN6222025 Survival Japanese in Various Situations ( <i>Nihon E Ikou, Yasashii Kaiwa De</i> )	4
JAPN6223025 Ideas and Images of Japan ( <i>Nihon Jijou</i> )	2
<b>Total SCU</b>	<b>10</b>

**Supporting Courses**

Course	SCU
JAPN6224025 Japanese Reading Comprehension ( <i>Tanoshiku Yomou</i> )	4
JAPN6225025 Understanding Native Japanese Speakers ( <i>Tanoshiku Kikou</i> )	2
JAPN6226025 Japanese N5 Level Certification Preparation ( <i>Nihongo Charenji N5</i> )	4
<b>Total SCU</b>	<b>10</b>

**23. Minor Program: Chinese for Career Pathways**
**Fundamental Courses**

Course		SCU
CHIN6196026	Mandarin for Future Career	4
CHIN6197026	Easy Way to HSK 2 Preparation	4
CHIN6198026	Exploring Modern Chinese Culture	2
<b>Total SCU</b>		<b>10</b>

**Supporting Courses**

Course		SCU
CHIN6199026	Chinese Digital Technology	2
CHIN6200026	Traveling to China	2
CHIN6201026	Special Topics in Chinese Business	2
CHIN6202026	Global Strategic Marketing: Chinese Perspective	4
<b>Total SCU</b>		<b>10</b>

**Appendix: Free Electives**

No	Course Owner Department	Course Code	Course Name	SCU	Semester
1	Management	BUSS6109005	Business Development	4	4
2	Chinese Literature	CHIN6157026	Chinese Business for Etiquette (Beginner)	4	4
3	Civil Engineering	CIVL6080013	Construction Methods & Heavy Equipment	2	4
4	Communication	COMM6276012	Intercultural Communication	4	4
5	Public Relations	COMM6480018	Consumer and Audience Analytics	4	4
6	Communication	COMM6575012	Current Issues in Communication	4	4
7	Public Relations	COMM6671018	Global Branding Strategy	4	4
8	Public Relations	COMM6673018	Event Management	2/2	4
9	Visual Communication Design	DSGN6671007	Creative Writing for Commercials	4	4
10	Visual Communication Design	DSGN6828006	Intellectual Property Design	4	4
11	Visual Communication Design	DSIN6014006	Ethics and Lawsuit in Photography	4	4
12	English Literature	ENGL6169024	English for Professionals	2	4
13	English Literature	ENGL6244024	Social Media Broadcasting	4	4
14	Business Creation	ENPR6175002	Business Process Management for Innovation	4	4
15	Business Creation	ENPR6176002	Negotiation and Competitive Decision Making	2	4
16	Business Creation	ENTR6664002	Consumer Insights: Behavioural Fundamentals	4	4
17	Business Creation	ENTR6668002	Innovation in Omni Channel	2	4
18	Business Creation	ENTR6669002	Innovation and Knowledge Management	4	4
19	International Relations	INTR6162029	Multiculturalism and Digital Society	2	4
20	Industrial Engineering	ISYE6041011	Engineering Economy	2	4
21	Industrial Engineering	ISYE6113011	Leadership & Organizational Behavior	2	4
22	Industrial Engineering	ISYE6181011	System Engineering & Analysis	2	4
23	Information Systems	ISYS6574003	Information Retrieval	4	4
24	Information Systems	ISYS6606003	Smart Application	2	4
25	Management	MGMT6365005	Current Issue in Service Business and Technology	2	4
26	English Literature	SOCS6021024	Social and Digital Media Writing	2	4
27	Interior Design	ARTS6035023	Design History Studies	2	5
28	Management	BUSS6109005	Business Development	4	5

No	Course Owner Department	Course Code	Course Name	SCU	Semester
29	Chinese Literature	CHIN6157026	Chinese Business for Etiquette (Beginner)	4	5
30	Civil Engineering	CIVL6080013	Construction Methods & Heavy Equipment	2	5
31	Interior Design	CIVL6127023	Material Knowledge in Interior Design	2	5
32	Communication	COMM6313012	Public Speaking	4	5
33	Communication	COMM6541019	Digital Corporate Communication	2/2	5
34	Public Relations	COMM6566018	Integrated Marketing Communications	2	5
35	Public Relations	COMM6650018	Image and Reputation Management	4	5
36	Public Relations	COMM6651018	Professional Communication in Business Setting	4	5
37	Public Relations	COMM6671018	Global Branding Strategy	4	5
38	Public Relations	COMM6673018	Event Management	2/2	5
39	Business Creation	COMM6677012	Society and Digital Culture	2	5
40	Civil Engineering	COMP6046013	Computer Applications in Construction Management	2	5
41	Computer Science	COMP6586001	Embedded Systems	2	5
42	Computer Science	COMP6590001	Geographical Information System	2/2	5
43	Computer Science	COMP6821001	Web Programming	2	5
44	Computer Engineering	CPEN6126010	Cross Platform Application Development	4	5
45	Computer Engineering	CPEN6232010	Cloud Technology Practice	2	5
46	Interior Design	DSGN6497023	Interior Drawing	4	5
47	Visual Communication Design	DSGN6689007	Concept Art & Production Design	2	5
48	Visual Communication Design	DSGN6743007	Digital Graphic Reproduction	4	5
49	Interior Design	DSGN6747023	Ergonomic and Anthropometry	2	5
50	Visual Communication Design	DSGN6822006	Photography	4	5
51	Visual Communication Design	DSGN6828006	Intellectual Property Design	4	5
52	Visual Communication Design	DSIN6014006	Ethics and Lawsuit in Photography	4	5
53	English Literature	ENGL6169024	English for Professionals	2	5
54	English Literature	ENGL6244024	Social Media Broadcasting	4	5
55	Business Creation	ENPR6177002	Financing Innovative Ventures	4	5
56	Business Creation	ENPR6178002	Customer Engagement Strategy	4	5
57	Business Creation	ENPR6179002	Franchise Business	4	5
58	Business Creation	ENPR6180002	Disruptive Strategy & Innovation	4	5
59	Computer Science	GAME6085001	Object Oriented Game Programming	2	5
60	Information Systems	ISYS6579003	Knowledge-Based AI: Cognitive Systems	4	5
61	Law	LAWS6017028	Intellectual Property Rights	4	5
62	Law	LAWS6052028	Bankruptcy Law	2	5
63	Law	LAWS6110028	Cyber Law	2	5
64	Law	LAWS6167028	Legal Philosophy & Professional Ethics	2	5
65	Law	LAWS6171028	Business Competition & Consumer Protection Law	2	5
66	Law	LAWS6176028	Tax Law	2	5
67	Psychology	PSYC6124027	Psychology of Early Childhood Education	4	5
68	Psychology	PSYC6125027	Psychology of Special Needs Education	4	5
69	English Literature	SOCS6021024	Social and Digital Media Writing	2	5

**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
	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>		
	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

Group	Course	SCU
MKB	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
<b>Elective courses list for certified specific independent study*</b>		
MKB	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
	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

Group	Course	SCU
	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