

## **Business Analytics**

### **Introduction**

The Bachelor in Business Analytics program is aimed at analytical driven individuals who possess strong critical thinking abilities and wish to harness the power of data to transform the world. This revolutionary degree, designed with the expertise of the School of Information Systems to prepare the next generation of global pioneers who can collect, manage and analyze data to solve the most pressing challenges of businesses and institutions. Through an applied learning methodology and a hands-on approach, students learn to manage the most innovative technologies and tools to exploit the true power of data to create value for companies and societies. This bachelor is aimed at individuals who are ready to drive performance within businesses, make the smartest management decisions and make a positive impact in the corporate world.

### **Vision**

A world class study program that excels in providing high-level Information system education is specialized in business-IT, recognized internationally, and champions innovation.

### **Mission**

The missions of Business Analytics are:

1. Nurturing students and lecturers with creative and value-adding talents in Information System by creating a suitable environment;
2. Educating students in information systems, covering knowledge and skills in analyzing, designing and implementing information systems for improving business processes and to be able to create an innovative and valuable information system solution, through intensive learning process, research activities and collaboration with global industries;
3. Providing integrated knowledge to pursue further studies and create outstanding professionals, entrepreneurs, and leaders for a global community;
4. Providing professional services in Information System with an emphasis on the application of knowledge to society;
5. Fostering the quality of life of Indonesians and the international community through leveraging Information system solutions.

### **Program Objective**

The objectives of the program are to:

1. Equip students with the expertise and solid basic knowledge about system development that will be needed as a professional in the field of information systems, as well as increasing the skills and knowledge of educators in the information systems field;
2. Prepare students with proficiency and in-depth knowledge of innovative information systems related to IT-Business Innovation;
3. Equip students with the ability to use knowledge of applied business applications for specific industrial purposes;
4. Equip the community with expertise and knowledge through the use of information system solutions;
5. Provide education to the public regarding the use and application of information systems.

## Student Outcomes

After completing the study, graduates are:

1. Able to analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solution;
2. Able to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline;
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 the program's discipline;
6. Able to support the delivery, use, and management of information systems within an information systems environment;

## Prospective Career of the Graduates

Graduates will have the necessary skills to work as:

- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| 1. Data Business Analyst            | 11. Application Architect         |
| 2. Data Analytics Consultant        | 12. Market Research Analyst       |
| 3. Decision Science Consultant      | 13. Business/Analytics Translator |
| 4. Executive Data Management        | 14. Web Analytics                 |
| 5. Data Analytics Quality Executive | 15. Social Media Data Analyst     |
| 6. Customer Analytics               | 16. Supply Chain Analytics        |
| 7. Quantitative Analytcs/Modeler    | 17. Human Resource Analytics      |
| 8. Data Architect                   | 18. Marketing Analytics           |
| 9. Machine Learning Engineer        | 19. Risk Analytics                |
| 10. Chief Data Officer              |                                   |

## Curriculum

The Business Analytics curriculum is designed by referring to the curriculum recommended by Association for Computing Machinery (ACM) and Association for Information Systems (AIS) for model curriculum and guidelines for undergraduate degree programs in Business Analytics area. In addition, the curriculum has been influenced by foreign universities with the reputation of qualified Business Analytics Programs. The students will learn how to use their data analysis skills to solve business problems, applying them to specific areas in marketing, finance, and economics. In addition, they will learn by using tools that are being used by global industry to get insight through analytics. This programme enables students to attain strong knowledge of data analytics foundations and fundamentals, including: familiarity with data analytics and programming principles, and high and broad understanding of the application of analytics in various industrial domains. The student will have the ability to function effectively in teams to accomplish a common goal and the understanding of professional, ethical, legal, security, and social issues and responsibilities of analytics professionals. They will have the capabilities to analyse the local and global impact of data analytics on individuals, organisations and society.

### Course Structure

Sem	Code	Course Name	SCU	Total	
1	ACCT6133003	Introduction to Financial Accounting	4	20	
	ISYS6186003	Business Process Fundamental*&**	4		
	ISYS6093003	Information System Concept*&**	4		
	COMP6178003	Introduction to Programming	2/2		
	LANG6027003	Indonesian	2		
	<b>English University Courses I</b>				
	ENGL6128003	English in Focus	2		
ENGL6130003	English for Business Presentation	2			
2	ISYS6123003	Introduction to Database Systems*&**	2/2	20	
	ISYS6126003	Enterprise System*&**	4		
	ISYS6338003	Testing and System Implementation*&**	2		
	ENTR6509001	Entrepreneurship: Ideation	2		
	ISYS6596003	User Experience Research and Design**	4/2		
	<b>English University Courses II</b>				
	ENGL6129003	English Savvy	2		
ENGL6131003	English for Written Business Communication	2			
3	CHAR6013003	Character Building: <i>Pancasila</i>	2	22	
	ISYS6535003	Information Systems Analysis and Design**&***	4/2		
	ISYS6197003	Business Application Development	2/2		
	ISYS6256003	Information Systems Project Management*&**	4		
	ISYS6478003	Research Methods in Information Systems	2		
	ISYS6198003	Data and Information Management**	4		
4	CHAR6014003	Character Building: <i>Kewarganegaraan</i>	2	20	
	ISYS6542003	Advanced Information System Analysis and Design**&***	4/2		
	ISYS6620003	Business Analytics**	4/2		
	ISYS6621003	Business Intelligence and Data Warehousing	2		
	ISYS6622003	Social Media Analytics and Data Driven Innovation*	2		
	ISYS6624003	Information Security, Governance and the Cloud*&**	2		
5	ENTR6511001	Entrepreneurship: Market Validation	2	18	
	CHAR6015003	Character Building: <i>Agama</i>	2		
	ISYS6538003	Advanced in Business Application Development	4/2		
	ISYS6623003	Predictive Analytics	2/2		
	ISYS6679003	Decision Analytics	2/2		
6	<b>Enrichment Program I</b>		20	20	
7	<b>Enrichment Program II</b>		20	20	
8	ISYS6625003	Pre-Thesis	2	6	
	ISYS6626003	Thesis	4		
	ISYS6117003	Thesis	6		
			<b>Total Credits 146 SCU</b>		

- \*) This course is delivered in English
- \*\*) Global Learning System Course
- \*\*\*) Entrepreneurship Embedded

**English University Courses:**

- ) For 1st Semester: English University Courses I, students with Binus University English Proficiency Test score less than 500 will take English in Focus, and student with test score greater than or equal to 500 will take English for Business Presentation.
- ) For 2nd Semester: English University Courses II, students with Binus University English Proficiency Test score less than 500 will take English Savvy, and students with test score greater than or equal to 500 will take English for Written Business Communication.
- ) Students must pass English Savvy with a minimum Grade of C.

**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

**Enrichment Program I (6<sup>th</sup> Semester) & Enrichment Program II (7<sup>th</sup> Semester):**

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

**Enrichment Track Scheme**

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	
20				v										v	
21					v									v	
22	v												v		
23		v											v		
24				v									v		
25					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 Certified Internship, Certified Research, Certified Community Development, and Certified Study Abroad track on Enrichment Program II, can retake with the same track or change into another track. However students who take **Certified Entrepreneurship** track on Enrichment Program II, should **retake with another track**.

### Certified Internship Track

Code	Course Name	SCU	Total
<b>Enrichment Program I</b>			20
ISYS6215003	Experience in Industry	8	
ISYS6844003	Requirement and Solution for Information Systems	8	
COMM6703003	Business & Professional Communication	4	20
<b>Enrichment Program II</b>			
ISYS6347003	Professional Program in Industry	8	
ISYS6845003	Design and Evaluation for Information Systems	8	
BUSS6249003	Business Ethic and Social Responsibility	4	

### Certified Entrepreneurship Track

Code	Course Name	SCU	Total
<b>Enrichment Program I</b>			20
ENTR6949003	New Venture Initiation in Information Systems	8	
ENTR6596003	Product Development Process for Information Technology Business	8	
ENTR6950003	EES in New Information Systems Business I	4	20
<b>Enrichment Program II</b>			
ENTR6951003	Product Launching in Information Systems	8	
ENTR6597003	Business Development for Information Technology Business	8	
ENTR6952003	EES in New Information Systems Business II	4	

### Certified Research Track

Code	Course Name	SCU	Total
<b>Enrichment Program I</b>			20
RSCH6275003	Research Experience	8	
RSCH6510003	Scientific Writing in Information Systems Research	8	
RSCH6460003	EES in Information Systems Research	4	20
<b>Enrichment Program II</b>			
RSCH6412003	Information Systems Research Experience	8	
RSCH6511003	Scientific Writing in Information Systems	8	
RSCH6414003	Global Employability and Entrepreneurial Skills in Information Systems Research	4	

### Certified Community Development Track

Code	Course Name	SCU	Total
<b>Enrichment Program I</b>			
CMDV6156003	Community Outreach Project Implementation	8	20
CMDV6289003	Community Outreach Project Design in Information Systems	8	
CMDV6259003	Employability and Entrepreneurial Skills in Information Systems Community	4	
<b>Enrichment Program II</b>			
CMDV6260003	Community Development Project Implementation	8	20
CMDV6290003	Community Development Project Design in Information Systems	8	
CMDV6262003	Employability and Entrepreneurial Skills in Information Systems Community Development	4	

### Certified Study Abroad Track

Code	Course Name	SCU	Total
<b>Elective courses list for study abroad*</b>			
<b>Enrichment Program I/II</b>			
GLOB6005003	Elective Course for Study Abroad 1	4	20
GLOB6006003	Elective Course for Study Abroad 2	4	
GLOB6007003	Elective Course for Study Abroad 3	4	
GLOB6008003	Elective Course for Study Abroad 4	4	
GLOB6009003	Elective Course for Study Abroad 5	2	
GLOB6010003	Elective Course for Study Abroad 6	2	
GLOB6011003	Elective Course for Study Abroad 7	2	
GLOB6012003	Elective Course for Study Abroad 8	2	
GLOB6013003	Elective Course for Study Abroad 9	2	
GLOB6014003	Elective Course for Study Abroad 10	2	
GLOB6015003	Elective Course for Study Abroad 11	2	
GLOB6016003	Elective Course for Study Abroad 12	2	
GLOB6251003	Elective Course for Study Abroad 29	4	

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

### Certified Specific Independent Study

Code	Course Name	SCU	Total
<b>Elective courses list for certified specific independent study*</b>			
<b>Enrichment Program I</b>			
MICR6033003	Course Certification I	3	20
MICR6034003	Technical Skill Enrichment I	4	
MICR6035003	Industrial Project I	9	
MICR6036003	Soft Skill Enrichment I	4	
MICR6001003	Elective Course for Micro Credential Course 1	8	
MICR6002003	Elective Course for Micro Credential Course 2	8	
MICR6003003	Elective Course for Micro Credential Course 3	6	

<b>Code</b>	<b>Course Name</b>	<b>SCU</b>	<b>Total</b>
MICR6004003	Elective Course for Micro Credential Course 4	6	
MICR6005003	Elective Course for Micro Credential Course 5	6	
MICR6006003	Elective Course for Micro Credential Course 6	5	
MICR6007003	Elective Course for Micro Credential Course 7	5	
MICR6008003	Elective Course for Micro Credential Course 8	5	
MICR6009003	Elective Course for Micro Credential Course 9	5	
MICR6010003	Elective Course for Micro Credential Course 10	4	
MICR6011003	Elective Course for Micro Credential Course 11	4	
MICR6012003	Elective Course for Micro Credential Course 12	4	
MICR6013003	Elective Course for Micro Credential Course 13	4	
MICR6014003	Elective Course for Micro Credential Course 14	4	
MICR6015003	Elective Course for Micro Credential Course 15	3	
MICR6016003	Elective Course for Micro Credential Course 16	3	
MICR6017003	Elective Course for Micro Credential Course 17	3	
MICR6018003	Elective Course for Micro Credential Course 18	3	
MICR6019003	Elective Course for Micro Credential Course 19	3	
MICR6020003	Elective Course for Micro Credential Course 20	3	
MICR6021003	Elective Course for Micro Credential Course 21	2	
MICR6022003	Elective Course for Micro Credential Course 22	2	
MICR6023003	Elective Course for Micro Credential Course 23	2	
MICR6024003	Elective Course for Micro Credential Course 24	2	
MICR6025003	Elective Course for Micro Credential Course 25	2	
MICR6026003	Elective Course for Micro Credential Course 26	2	
MICR6027003	Elective Course for Micro Credential Course 27	2	
MICR6028003	Elective Course for Micro Credential Course 28	2	
MICR6029003	Elective Course for Micro Credential Course 29	1	
MICR6030003	Elective Course for Micro Credential Course 30	1	
MICR6031003	Elective Course for Micro Credential Course 31	1	
MICR6032003	Elective Course for Micro Credential Course 32	1	

*\*) 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

Code	Course Name	SCU	Total
<b>Enrichment Program II (Master of Management Information Systems: Information Systems Strategic Management Stream)</b>			20
ISYS6829003	Digital Technology and Transformation	4	
ISYS6830003	Data Analytics for Business	6	
ISYS6831003	Applied Technology in Information Systems*	4	
ISYS6849003	Strategic Planning for Information Systems	6	
<b>Enrichment Program II (Master of Management Information Systems: Digitalpreneurship Stream)</b>			
ISYS6829003	Digital Technology and Transformation	4	
ISYS6830003	Data Analytics for Business	6	
ISYS6831003	Applied Technology in Information Systems*	4	
ISYS6848003	New Media Ventures and Innovation	6	
<b>Enrichment Program II (Master of Computer Science: Data Science Stream)</b>			20
COMP6816003	Wireless and Cloud Computing Technologies	4	
COMP6997003	IT Disaster Recovery	6	
COMP6981003	Applied Technology in Computer Science*	4	
COMP6998003	Knowledge Engineering	6	
<b>Enrichment Program II (Master of Computer Science: Information Security Management)</b>			
COMP6816003	Wireless and Cloud Computing Technologies	4	
COMP6997003	IT Disaster Recovery	6	
COMP6981003	Applied Technology in Computer Science*	4	
COMP6980003	Networking and Security Concepts	6	
<b>Enrichment Program II (Master of Industrial Engineering)</b>			20
ISYE6316003	Advanced Supply Chain Management and Operations	4	
ISYE6317003	System Simulation and Analytics	6	
ISYE6319003	Applied Business Engineering Project*	4	
ISYE6318003	Industrial Product Design and Production	6	
<b>Enrichment Program II (Master of Accounting)</b>			20
ACCT6511003	COSO Framework Internal Control & Fraud Prevention	4	
ACCT6503003	Risk Assessment Analytics	6	
FINC6220003	Financial Reporting Decisions	6	
ACCT6505003	Applied Technology in Accounting*	4	

\*) Students are required to obtain certification no later than the end of the first semester of the master's (S2) program, as outlined in the university's official guidelines. This certification will be transferred as an undergraduate (S1) course and reported in the seventh semester of the undergraduate program.



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

No	Course Code	Course Name	Minimal Grade
1.	CHAR6013003	Character Building: <i>Pancasila</i>	B
2.	ENTR6511001	Entrepreneurship: Market Validation	C
3.	ISYS6126003	Enterprise System	C
4.	ISYS6535003	Information Systems Analysis and Design*	C
5.	ISYS6198003	Data and Information Management*	C
6.	ISYS6256003	Information Systems Project Management	C
7.	ISYS6186003	Business Process Fundamental	C
8.	ISYS6123003	Introduction to Database Systems	C

\*) Tutorial & Multipaper