



Bachelor of Science in Data Science and Analytics (New International Program) (Academic Year 2018)

Name of Program (Curriculum)

Bachelor of Science in Data Science and Analytics

Name of Degree

Bachelor of Science (Data Science and Analytics)

B.Sc. (Data Science and Analytics)

Program Objectives

The Data Science and Analytic program represents a new breed of multi-disciplinary fields of study, combining the science of statistics and computers with the art of business and visualization, in order to make better informed strategic decisions. Our DSA program aims to produce graduates of the next generation with the knowledge and skill sets that can revolutionize many vital industries, such as manufacturing, finance, services, health care or even agriculture, under the Thailand 4.0 policy. Students of the program will learn best practices that can transform data to insight, discover and harness hidden patterns, and predict or adapt to future trends in order to improve business competitiveness.

Strengths of the Program

1. First of its kind at the undergraduate level
2. Multidisciplinary fields of study combining mathematics, statistics, computer science and business
3. Focus on industries that will be the main engines of our digital economy under Thailand 4.0 policy
4. Study both Japanese and English languages
5. Opportunities for scholarships

Post-Graduation Career Opportunities

1. Data Scientist
2. Data Analyst and Architect
3. Data Analytics Specialist
4. Business System Analyst
5. Business Intelligence Developer



Curriculum Structure

<input checked="" type="checkbox"/> General Education	no less than	36	Credits
Humanities		3	Credits
Social Sciences		3	Credits
Science and mathematics		6	Credits
Languages		24	Credits
<input checked="" type="checkbox"/> Specialized Courses		93	Credits
<input checked="" type="checkbox"/> Core courses		36	Credits
<input checked="" type="checkbox"/> Major courses		35	Credits
<input type="checkbox"/> Minor courses			Credits
Practice Courses			
Cooperative study		7	Credits
Project and practices		4	Credits
Major Elective Courses			
Cooperative study		15	Credits
Project and practices		18	Credits
<input checked="" type="checkbox"/> Free Elective Courses	no less than	6	Credits



1. Study Plan

**Study Plan for Cooperative Students
Year 1 / Semester 1**

Course Number	Course Title	Credits
ENE-101	Listening and Speaking for Specific Purpose	3(3-0-6)
JPE-101	Communicative Japanese 1	3(3-0-6)
DSA-101	Business Mathematics	3(3-0-6)
DSA-103	Object-Oriented Programming	3(3-0-6)
DSA-104	Object-Oriented Programming Laboratory	1(0-3-2)
DSA-105	Introduction to Data Science	3(3-0-6)
DSA-106	Introduction to Business Data Analytics	3(3-0-6)
	Total	19(18-3-38)

Year 1 / Semester 2

Course Number	Course Title	Credits
ENE-102	Critical Reading	3(3-0-6)
JPE-102	Communicative Japanese 2	3(3-0-6)
DSA-302	Content Marketing on Social Media	3(3-0-6)
DSA-208	Web Design and Development	3(3-0-6)
DSA-209	Web Design and Development Laboratory	1(0-3-2)
MSE-112	Science and Technology	3(3-0-6)
DSA-107	Data Structure and Algorithm	3(3-0-6)
	Total	19(18-3-38)



Year 2 / Semester 1

Course Number	Course Title	Credits
ENE-201	Professional Project Based Presentation	3(3-0-6)
JPE-201	Communicative Japanese 3	3(3-0-6)
DSA-102	Discrete Mathematics	3(3-0-6)
DSA-301	Business Data Mining	3(3-0-6)
DSA-410	Data Analysis and Modelling	3(3-0-6)
DSA-305	Database Systems	3(3-0-6)
DSA-306	Database Systems Laboratory	1(0-3-2)
	Total	19(18-3-38)

Year 2 / Semester 2

Course Number	Course Title	Credits
JPE-202	Communicative Japanese 4	3(3-0-6)
DSA-401	Business Database Systems Development	3(3-0-6)
DSA-203	Business Decision Models	3(3-0-6)
DSA-307	Computer Network and Communication System 1	3(3-0-6)
DSA-308	Computer Network and Communication System Laboratory 1	1(0-3-2)
DSA-309	Information System Analysis and Design	3(3-0-6)
MSE-202	Statistics and Probability	3(3-0-6)
	Total	19(18-3-38)



Year 3 / Semester 1

Course Number	Course Title	Credits
ENE-202	Business Writing	3(3-0-6)
DSA-201	Data Wrangling	3(3-0-6)
DSA-202	Business Strategic and Performance Management	3(3-0-6)
DSA-303	Introduction to Quantitative Methods	3(3-0-6)
xxx-xxx	Major Elective Course (1)	3(3-0-6)
xxx-xxx	Humanities or Social Sciences (1)	3(3-0-6)
	Total	18(18-0-36)

Year 3 / Semester 2

Course Number	Course Title	Credits
DSA-304	Big Data Analytics	3(3-0-6)
DSA-205	A Practical Approach to Data Science	3(3-0-6)
DSA-206	Programming for Data Analysis	3(3-0-6)
DSA-207	Programming for Data Analysis Laboratory	1(0-3-2)
DSA-204	Data Analytic for E-Commerce	3(3-0-6)
xxx-xxx	Major Elective Course (2)	3(3-0-6)
xxx-xxx	Major Elective Course (3)	3(3-0-6)
DSA-491	Pre-cooperative Education	1(1-0-2)
	Total	20(19-3-40)



Year 4 / Semester 1

Course Number	Course Title	Credits
DSA-492	Cooperative Education	6(0-40-10)
	Total	6(0-40-10)

Year 4 / Semester 2

Course Number	Course Title	Credits
xxx-xxx	Humanities or Social Sciences (1)	3(3-0-6)
xxx-xxx	Major Elective Course (4)	3(3-0-6)
xxx-xxx	Major Elective Course (5)	3(3-0-6)
xxx-xxx	Free Elective Course (1)	3(3-0-6)
xxx-xxx	Free Elective Course (2)	3(3-0-6)
	Total	15(15-0-30)



Study Plan for Project and Intern Students

Year 1 / Semester 1

Course Number	Course Title	Credits
ENE-101	Listening and Speaking for Specific Purpose	3(3-0-6)
JPE-101	Communicative Japanese 1	3(3-0-6)
DSA-101	Business Mathematics	3(3-0-6)
DSA-103	Object-Oriented Programming	3(3-0-6)
DSA-104	Object-Oriented Programming Laboratory	1(0-3-2)
DSA-105	Introduction to Data Science	3(3-0-6)
DSA-106	Introduction to Business Data Analytics	3(3-0-6)
	Total	19(18-3-38)

Year 1 / Semester 2

Course Number	Course Title	Credits
ENE-102	Critical Reading	3(3-0-6)
JPE-102	Communicative Japanese 2	3(3-0-6)
DSA-302	Content Marketing on Social Media	3(3-0-6)
DSA-208	Web Design and Development	3(3-0-6)
DSA-209	Web Design and Development Laboratory	1(0-3-2)
MSE-112	Science and Technology	3(3-0-6)
DSA-107	Data Structure and Algorithm	3(3-0-6)
	Total	19(18-3-38)



Year 2 / Semester 1

Course Number	Course Title	Credits
ENE-201	Professional Project Based Presentation	3(3-0-6)
JPE-201	Communicative Japanese 3	3(3-0-6)
DSA-102	Discrete Mathematics	3(3-0-6)
DSA-301	Business Data Mining	3(3-0-6)
DSA-410	Data Analysis and Modelling	3(3-0-6)
DSA-305	Database Systems	3(3-0-6)
DSA-306	Database Systems Laboratory	1(0-3-2)
	Total	19(18-3-38)

Year 2 / Semester 2

Course Number	Course Title	Credits
JPE-202	Communicative Japanese 4	3(3-0-6)
DSA-401	Business Database Systems Development	3(3-0-6)
DSA-203	Business Decision Models	3(3-0-6)
DSA-307	Computer Network and Communication System 1	3(3-0-6)
DSA-308	Computer Network and Communication System Laboratory 1	1(0-3-2)
DSA-309	Information System Analysis and Design	3(3-0-6)
MSE-202	Statistics and Probability	3(3-0-6)
	Total	19(18-3-38)



Year 3 / Semester 1

Course Number	Course Title	Credits
ENE-202	Business Writing	3(3-0-6)
DSA-201	Data Wrangling	3(3-0-6)
DSA-202	Business Strategic and Performance Management	3(3-0-6)
DSA-303	Introduction to Quantitative Methods	3(3-0-6)
xxx-xxx	Major Elective Course (1)	3(3-0-6)
xxx-xxx	Humanities or Social Sciences (1)	3(3-0-6)
	Total	18(18-0-36)

Year 3 / Semester 2

Course Number	Course Title	Credits
DSA-304	Big Data Analytics	3(3-0-6)
DSA-205	A Practical Approach to Data Science	3(3-0-6)
DSA-206	Programming for Data Analysis	3(3-0-6)
DSA-207	Programming for Data Analysis Laboratory	1(0-3-2)
DSA-204	Data Analytic for E-Commerce	3(3-0-6)
xxx-xxx	Major Elective Course (2)	3(3-0-6)
xxx-xxx	Major Elective Course (3)	3(3-0-6)
	Total	19(18-3-38)

Year 3 / Semester Summer

Course Number	Course Title	Credits
DSA-493	Practice on Data Science and Analytics	1(0-40-10)
	Total	1(0-40-10)



Year 4 / Semester 1

Course Number	Course Title	Credits
DSA-494	Data Science and Analytics Project 1	1(0-3-2)
xxx-xxx	Major Elective Course (4)	3(3-0-6)
xxx-xxx	Major Elective Course (5)	3(3-0-6)
xxx-xxx	Major Elective Course (6)	3(3-0-6)
	Total	10(9-3-20)

Year 4 / Semester 2

Course Number	Course Title	Credits
DSA-495	Data Science and Analytics Project 2	2(0-6-3)
xxx-xxx	Humanities or Social Sciences (2)	3(3-0-6)
xxx-xxx	Free Elective Course (1)	3(3-0-6)
xxx-xxx	Free Elective Course (2)	3(3-0-6)
	Total	11(9-6-21)



Thai-Nichi Institute of Technology

Tuition Fees for Bachelor's Degree (International Program)

Bachelor of Science Program in Data Science and Analytics

Total Credit Requirement 135 Credits

List	First Year		Second Year		Third Year		Fourth Year	
	Semester I	Semester II	Semester I	Semester II	Semester I	Semester II	Semester I	Semester II
1) Matriculation Fee / ค่าขึ้นทะเบียนนักศึกษา	10,000	-	-	-	-	-	-	-
2) Education Fee / ค่าบำรุงการศึกษา	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
3) Registration Fee / ค่าหน่วยกิตลงทะเบียน								
- Lecture / รายวิชาทฤษฎี	50,400	50,400	50,400	50,400	50,400	53,200	-	42,000
- Lab / Co-operative Education / Internship	5,000	5,000	5,000	5,000	-	5,000	30,000	-
Estimates / Semester	72,400	62,400	62,400	62,400	57,400	65,200	37,000	49,000
Estimates / Year	134,800		124,800		122,600		86,000	
Estimates / Total Tuition Fee	468,200							

Remark 1. These estimates are subject to be changed without prior notice. / ข้อมูลดังกล่าว เป็นเพียงการประมาณค่าใช้จ่ายเท่านั้น ทั้งนี้ขอสงวนสิทธิ์ในการเปลี่ยนแปลงข้อมูลตามประกาศและนโยบายของสถาบัน โดยไม่แจ้งให้ทราบล่วงหน้า

2. Further details can be found in the student manual. / รายละเอียดวิชาการลงทะเบียน แผนการศึกษา ค่าใช้จ่ายต่างๆ สามารถตรวจสอบจากคู่มือนักศึกษา ของปีการศึกษาที่เข้าศึกษา