**MEMORANDUM OF UNDERSTANDING**
**BETWEEN**
**ASIA UNIVERSITY, TAIWAN**
**AND**
**UNIVERSITAS MUHAMMADIYAH BENGKULU, INDONESIA**

**ASIA UNIVERSITY, located at No. 500, Lioufeng Rd., Wufeng, Taichung City 41354, Taiwan (hereinafter referred to as "AU") , and UNIVERSITAS MUHAMMADIYAH BENGKULU, located at Jl Bali, Kp. Bali, Teluk Segara, Bengkulu Indonesia (hereinafter referred to as "UM BENGKULU"), conclude this Agreement by recognizing the benefits to their respective institutions from establishing international links.**

1. This Agreement aims to develop academic and educational cooperation and promote mutual understanding between the two institutes.

2. Both institutes agree to develop broad collaborative activities in academic areas of mutual interest on the basis of equality and reciprocity.
   (1) Exchange of faculty and researchers,
   (2) Exchange of students, other research and administrative staff,
   (3) Conduct of collaborative research projects,
   (4) Conduct of lectures and organization of symposia,
   (5) Exchange of academic information and materials,
   (6) Participation in exhibitions hosted by each organization,
   (7) Promotion of other academic cooperation as mutually agreed.

3. Both institutes agree to develop specific collaborative activities to establish and strengthen research capacity in the following areas:
   (1) Upgrading competitiveness to economic sectors for commercialization of innovations and medical products (medicines, diagnostics, vaccines and medical devices) to international standards that meet societal needs and improve the quality of life of the people.
   (2) Supporting and upgrading good practices in the discovery and development of medical products to international standards.
   (3) Forging collaboration in comprehensive research and development by taking advantage of shared resource utilization and enhancing the skills of entrepreneurs in science, technology and innovation.

4. The development and implementation of specific activities based on this Agreement will be separately negotiated and agreed upon between the institutes that carry out the specific projects. Both institutes agree to carry out these activities in accordance with the laws and regulations of the respective countries after full consultation and approval.

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5. It is understood that the implementation of any of the types of cooperation stated in clause 3 shall depend upon the availability of resources and financial support at the institutes concerned.

6. Should any collaborative research activities under this Agreement result in any potential for intellectual property, both institutes shall seek an equitable and fair share as to ownership and other intellectual property interests that may arise therefrom.

7. This Agreement may be amended or modified by a written agreement signed by the authorities of both institutes

8. This Agreement is valid for five (5) years from the date of signing by the representatives of both institutes. This Agreement shall be renewed after being reviewed and renegotiated by both institutes.

9. This Memorandum of Understanding is prepared in two authentic copies, both in the English language. Each Party has read and agreed on the terms of this agreement and signed as in the presence of witness and each institution can retain one authentic copy.

| | |
|---|---|
| **Asia University** | **Universitas Muhammadiyah Bengkulu** |
| **Prof. Jeffrey J. P. Tsai, Ph.D.** | **Dr. Susiyanto, M.Si.** |
| **President** | **Rector** |
| Date: _____ | Date: 13th February 2024 |

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ASIA UNIVERSITY

International College, Asia University
Phone: +886-4-23323456 ext.6273▪ Fax: +886-4-23394140
No. 500, Liufeng Road, Wufeng District, Taichung City 41354, Taiwan
Email: ausummerproject@gmail.com ▪URL: http://ci.asia.edu.tw/

# Letter of Acceptance

May 15, 2023

| | |
|---|---|
| Name | Fitri Zahrotul Jannah |
| Home University/Institution | Universitas Muhammadiyah Bengkulu |
| Country | Indonesia |
| Program to Attend | (8) Economy Investment and Taiwan Culture |
| Program Duration | July 17 – August 7, 2023 |
| AU Student ID | AUSP230002 |

Dear Student,

Congratulations! We are pleased to inform you that you have been admitted to Asia University (AU) for our 2023 Summer Program for the aforementioned time period.

According to the formal agreement on academic cooperation between Asia University and Universitas Muhammadiyah Bengkulu, the tuition fee for this summer program will be waived, but US$25 will be charged to you for the production and handling of attendance certificate and academic transcript by AU at the end of the program. Meanwhile, you need to confirm with us if you need to stay in our campus residence hall. The residence hall rate for a quadruple-occupancy room is NT$150 (around US$5) per student per day, and as an international student, you have the priority to reserve a room in the school dormitory.

As an international exchange student entering Taiwan to study in the summer, you must apply for a visitor visa which is valid for 180 days. This letter of acceptance issued to you is one of the documents required for your visa application. You might want to visit the Taiwan government's website at http://www.roc-taiwan.org/ for more detailed information.

All exchange students must show proof of insurance and are strongly advised to purchase insurance in their home countries prior to arrival in Taiwan. You can also purchase Taiwan insurance upon your arrival at Asia University, and the International College of Asia University will render help in this matter, if such a need arises.

Should you have any inquiries prior to your program, please also visit our Inbound Summer Program homepage for further information (the link shown above). You may also contact us at +886-4-23323456 ext. 6273 or email us at ausummerproject@gmail.com .

We look forward to seeing you on campus this summer.

Sincerely,

Yinghuei Chen, PhD
Chair Professor in Language & Literature
Dean, International College &
Dean, College of Humanities & Social Sciences
Asia University, Taiwan

亞洲大學 國際學院 國際學術交流中心 ASIA UNIVERSITY

# ASIA UNIVERSITY SUMMER PROGRAM 2023 REPORT

# ARTIFICIAL INTELLIGENCE (OFFLINE)

**Fitri Zahrotul Jannah (2084202011)**

**Mathematic Education Departement**

**AUSP230002**

**MUHAMMADIYAH UNIVERSITY OF BENGKULU**

**BENGKULU**

**2023**

# CHAPTER 1

# INTRODUCTION

## 1.1 Background

Established in 2001, Asia University (AU) is an innovative and rapidly expanding institution with a mission to create an outstanding and globally competitive university. Nestled in the scenic landscapes of Taiwan, Asia University offers a distinctive and diverse learning experience during the summer months.

The Asia University Summer Programme (AUSP), an 8-week international summer programme, is the focal point of our efforts. This programme is designed to delve into topics relevant to Asia and aims to nurture future leaders who possess a profound understanding of Asian cultures, a broad and innovative perspective, and the ability to collaborate on an international scale. AUSP provides a friendly and multicultural learning environment, often bringing together students from various universities across Asia.

During their participation, students have the opportunity to choose two courses each day: one in the morning (prior to lunch) and another in the afternoon (after lunch). Most of these courses encompass subjects in the liberal arts and humanities, with some introductory-level offerings in other disciplines. All courses are conducted entirely in English and are taught by distinguished instructors representing participating universities.

Typically, each course corresponds to 2 or 3 academic credits, which can be applied towards the students' academic transcript to fulfil graduation requirements at their respective home universities. However, it is advisable for students to discuss matters related to academic credits with the AUSP representative at their home university and possibly with their academic advisor, as policies may vary among participating institutions.

There 13 courses are available in 2023:

1. Health Aging & Anti-Aging
2. Mental health and wellness
3. Interdisciplinary Global Health
4. Artificial Intelligence
5. Web Design and digital storytelling
6. AI Application in Management
7. Sustainable asset management
8. Economy Investment and Taiwan Culture
9. Innovation & Decision
10. Creative and cultural industry
11. Community care practice / work in Taiwan
12. Children with special needs in Taiwan (online)
13. Language & Culture

**1.2 Student Information**

Asia University Summer Programme 2023 with the course Artificial Intelligence (offline), followed by one person from Muhammadiyah University of Bengkulu with the following data:

Name : Fitri Zahrotul Jannah
Birth Date : December 27, 2002
AUSP ID : AUSP230002
Major : Mathematic Education
Course : Artificial Intelligence (offline)

# CHAPTER II

# COURSE IMPLEMENTATION

## 2.1 Artificial Intelligence (offline)

Start here to learn cutting-edge Artificial Intelligence (Al) technologies at Asia University (AU), one of the world's best institutions of higher education. This program is for those who want to become high-valued data scientists in the future. Come to enhance your career competence and give yourself an opportunity to meet and interact with international students around the world. Artificial Intelligence is not only the media portrayal of this subject but also the leading edge of software solutions. This field of computer science is useful for data managers, engineers, researchers, and machine learning developers.

You will learn programming skills, machine learning, deep learning methods, and how to successfully use Al technology to start projects. You will learn to program using the TensorFlow framework. You will not only learn Al's software stack, but also the application of AI in real situations. After completing the course, you will have a data product to show to potential employers or educational institutions, indicating your expertise in artificial intelligence.

During these two-week of intensive study, you will attend classes for six hours a day and participate in problem-based AI projects. A group of TAs from AU will accompany you in the planned activities and throughout the entire learning process to provide you with adequate assistance.

**Curriculum for Artificial Intelligence**

| Course Title | Hours | Module Components |
|---|---|---|
| Opening Ceremony & Course Introduction | 3 | Lecture |
| Introduction to AIdea / Kaggle Platforms / Projects | 3 | Lecture |

| | | |
|---|---|---|
| Colab and Python Basics | 6 | Hands-on Tutorial |
| Data Science Basics with Numpy, Pandas and Matplotlib | 6 | Hands-on Tutorial |
| Machine Learning Basics with Scikit-Learn | 6 | Hands-on Tutorial |
| Natural Language Processing Basics | 6 | Lecture |
| AWS Academy Cloud Foundations and Big Data Analysis | 6 | Hands-on Tutorial |
| Deep Learning Basics | 9 | Hands-on Tutorial |
| Panel Discussion | 3 | Discussion/Meeting |
| Final Project Representation | 6 | Discussion/Meeting |
| Summary & Closing Ceremony | 2 | Discussion/Meeting |
| **Total** | **56** | |

| **Module Components** | **Teaching hours** | **Remarks** |
|---|---|---|
| Lecture | 12 | - |
| Hands-on Tutorial | 33 | - |
| Discussion/Meeting | 11 | - |
| **Assignment Method** | **Percentage** | **Remarks** |
| Assignments | 30% | - |
| Final Project | 40% | - |
| Participation | 30% | - |

**2.2 Course Activities**

The Asia University Summer Programme (AUSP) 2023, "Artificial Intelligence (Offline)," commenced on August 7, 2023, and concluded on August 18, 2023. The programme included sessions on Monday through Friday during the first week and second week. Here is the 10-day activity schedule:

| Week 1 | 8/7（Mon） | 8/8（Tue） | 8/9（Wed） | 8/10（Thu） | 8/11（Fri） |
|---|---|---|---|---|---|
| 09:10 \| 12:00 | Opening Ceremony & Course Introduction<br>Dean Ching-Hsien Hsu<br>Prof. Wei-Fu Lu<br>I628 | Python Basics (1)<br>Prof. Ching-Tai Chen<br>I628 | Data Science Basics with Numpy and Pandas (1)<br>Prof. Ching-Tai Chen<br>I628 | Machine Learning Basics with Scikit-Learn (1)<br>Prof. Wei-Fu Lu<br>I628 | Smart Factory<br>Dr. Yi-Ji Chen<br>Prof. Wei-Fu Lu<br>New Yu Ming Machinery Co. |
| 12:10 - 13:10 | LUNCH BREAK | | | | |
| 13:10 \| 16:00 | Introduction to AIdea / Kaggle Platforms / Projects<br>Prof. Hsueh-Ting Chu<br>I628 | Python Basics (2)<br>Prof. Ching-Tai Chen<br>I628 | Data Science Basics with Numpy and Pandas (2)<br>Prof. Ching-Tai Chen<br>I628 | Machine Learning Basics with Scikit-Learn (2)<br>Prof. Wei-Fu Lu<br>I628 | Culture Tour<br>Sun Moon Lake<br>Prof. Wei-Fu Lu |
| Week 2 | 8/14（Mon） | 8/15（Tue） | 8/16（Wed） | 8/17（Thu） | 8/18（Fri） |

| | | | | | |
|---|---|---|---|---|---|
| 09:10<br>\|<br>12:00 | AWS Academy Cloud Foundations (1) - Statistics Web Site<br>Prof. Jing-Doo Wang<br>I628 | Deep Learning Basics with Scikit-learn and TensorFlow (1)<br>Prof. Hsueh-Ting Chu<br>I628 | Deep Learning Basics with Scikit-learn and TensorFlow (3)<br>Prof. Hsueh-Ting Chu<br>I628 | Final Project Representation (1)<br>Prof. Wei-Fu Lu<br>I628 | Summary & Closing Ceremony<br>Dean Ching-Hsien Hsu<br>Prof. Wei-Fu Lu<br>I628 |
| 12:10 - 13:10 | LUNCH BREAK | | | | |
| 13:10<br>\|<br>16:00 | AWS Academy Cloud Foundations (2) - EC2<br>Prof. Jing-Doo Wang<br>I628 | Deep Learning Basics with Scikit-learn and TensorFlow (2)<br>Prof. Hsueh-Ting Chu<br>I628 | Group / Panel Discussion for Final Project<br>Prof. Hsueh-Ting Chu<br>I628 | Final Project Representation (2)<br>Prof. Wei-Fu Lu<br>I628 | |

# CHAPTER III

# COURSE DOCUMENTATION