

Self-Check / Evaluation of “APU Data Science Program (Basic)” in AY 2025

**1. Background to the Self-Check / Evaluation**

The government’s “AI Strategy 2019 ~ AI for all People / Industries / Regions / Government (Resolved 2019.06.11, Integrated Innovation Strategy Promotion Council) set as a major goal “basic knowledge required for a digital society (reading, writing, and abacus) as well as knowledge and skills related to mathematics, data science, and AI, basic skills necessary to design new ways of society and products and services for a sustainable society, and for human resources to play an active role in all fields of society.”

In response to this, as part of our “APU Data Science Program (Basic),” we began offering on-demand courses: “Special Lecture (Liberal Arts Course)” in the AY 2022 fall semester, and “Information Literacy” in the AY 2023 fall semester. On August 25, 2023 this program was certified by the Ministry of Education, Culture, Sports, Science and Technology as a Mathematics, Data Science, and AI Education Program (Literacy Level) (“Accreditation as a Mathematics, Data Science, and AI Education Program (Literacy Level)” 2023.09.20, APU Executives’ Meeting).

To ensure the quality of this educational program, and to make further improvements, we herein report and analyze the results of the class evaluation surveys and course-original surveys for these courses, and carry out self-check and self-evaluation as shown below.

**2. Self-Check / Self Evaluation of “APU Data Science Program (Basic)”**

(1) Course Overview

Subject Name	AY 2025 Classes [Spring Semester] Information Literacy EB Information Literacy JA Information Literacy JB Information Literacy JD  [Fall Semester] Information Literacy EA Information Literacy EC Information Literacy JC
Field	Common Liberal Arts (Societal Needs / Fundamental Skills)
Grade Level	100 Level
Targets	All 1 <sup>st</sup> Semester 2023 Curriculum students
Course Registration Method	Automatically registered by the university for 1 <sup>st</sup> semester students. If students decide they do not need to register the course, they can drop it themselves during course registration period B or Course Correction period 1. Can also re-register the course themselves after dropping it. Students in their 2nd semester or higher, or transfer students in their 2nd year or above, cannot register the course.

Language	J/E
Class Size	300 Students
Course Format	On Demand
Grading	P/F
Semester	Spring / Fall
Course Description (from syllabus)	<p>This course will discuss introductory topics of internet and data science in terms of basic concepts, data processing skills, entry level knowledge to data science, and awareness on business applications and information ethics, in real-world context.</p> <p>(1) Internet, information and changes happening in society (2) collecting, reading, processing and utilizing data (3) technology trends in AI in data science (4) state of the art business trends in AI and data science applications and information ethics.</p>

(2) Course Registration Information

As shown in Table 1 below, the registration rate was 77% in AY 2024 and 79% in AY 2025. There was no significant difference in the registration rates between international students and domestic students. The registration rate for international students increased by 5% in AY 2025.

Table 1: Number of Target Students (1<sup>st</sup> semester students) and Registration Rate

	AY 2024			AY 2025		
	No. of Targets	Registrants	Rate	No. of Targets	Registrants	Rate
Domestic	777	607	78%	820	641	78%
International	781	586	75%	758	604	80%
All Target	1,558	1,193	77%	1,578	1,245	79%

(3) Original Survey for “Information Literacy”

Below are excerpts from the results of the original Information Literacy Survey implemented in all 7 Information Literacy courses that were held in AY 2025.

<b>設問1：授業方法は効果的であった /</b>		
<b><u>The instructor used effective teaching methods.</u></b>		
<b>項目</b>	<b>件数</b>	<b>割合%</b>
そう思う/Agree	152	44.2
強くそう思う / Strongly agree	103	29.9
どちらとも言えない / Neutral	68	19.8
そう思わない / Disagree	16	4.7
全くそう思わない / Strongly Disagree	5	1.5
<b>設問2：学生はお互いに考え方や知識を共有することができた /</b>		
<b><u>Students could exchange their ideas and knowledge with one another.</u></b>		
<b>項目</b>	<b>件数</b>	<b>割合%</b>
そう思う/Agree	90	26.2
全くそう思わない / Strongly Disagree	67	19.5
どちらとも言えない / Neutral	66	19.2
強くそう思う / Strongly agree	65	18.9
そう思わない / Disagree	56	16.3
<b>設問3：オンライン授業が行われた場合、テクノロジーの使用は学習的効果があった /</b>		
<b><u>If online class is offered, technologies were effectively used for learning.</u></b>		
<b>項目</b>	<b>件数</b>	<b>割合%</b>
そう思う/Agree	143	41.6
強くそう思う / Strongly agree	111	32.3
どちらとも言えない / Neutral	56	16.3
そう思わない / Disagree	14	4.1
全くそう思わない / Strongly Disagree	3	0.9
<b>設問4：この授業の内容は、実社会に応用できるものであった。 /</b>		
<b><u>I found the course practically applicable to societal issues. /</u></b>		
<b>項目</b>	<b>件数</b>	<b>割合%</b>
そう思う/Agree	54	52.9
強くそう思う / Strongly agree	31	30.4
どちらとも言えない / Neutral	16	15.7
全くそう思わない / Strongly Disagree	1	1
<b>設問5：この授業は学生がお互いに協働する機会を与えた。 /</b>		
<b><u>This course provided students with opportunities to collaborate with one another.</u></b>		
<b>項目</b>	<b>件数</b>	<b>割合%</b>
どちらとも言えない / Neutral	31	30.4
そう思う/Agree	25	24.5
全くそう思わない / Strongly Disagree	20	19.6
そう思わない / Disagree	16	15.7
強くそう思う / Strongly agree	10	9.8

#### (4) Self Check / Self Evaluation

From the results of this year's surveys, we can see that many students positively evaluated the course implementation method and the use of technology in the online classes. A combined 74.1% of students either "Strongly agreed" or "Agreed" with the statement in Question 1, "The instructor used effective teaching methods," so it can be said that the course design and the way that teaching materials were shared were generally highly evaluated. In addition, 73.9% of students responded positively to Question 3, "If online class is offered, technologies were

effectively used for learning,” so it can be said that the use of digital materials, including on-demand style teaching, was useful for students learning.

On the other hand, the responses to Question 2, “Students could exchange their ideas and knowledge with each other,” and Question 5, “This course provided students with opportunities to collaborate with one another” were only 45.1% and 34.3% positive respectively. In particular, around 35% of students responded “Disagree” or “Strongly Disagree,” so it can be said that due to the characteristics of on-demand style classes, a number of students feel that they have limited opportunities to interact or work together with other students in the course.

For the course contents, 83.3% of students responded positively to Question 4, “I found the course practically applicable to societal issues,” a high number that reflects that many students understood how the course content closely related to daily life or societal issues. Just as last year, the course focused on familiar and practical topics such as the internet, data usage, and AI which likely made the topics easier for students to understand and motivated them to learn.

Overall, this course was highly evaluated on the points that students “can study at their own pace” and “is clearly related to current society,” demonstrating the continued strong points of on-demand learning. On the other hand, points related to student interactions and cooperation were rated lower comparatively, so going forward we will need to create systems that will enable students to interact with each other online and introduce measures to encourage interaction between course students.

From the AY 2026 fall semester we plan to offer a new course to support our application for the Applied Basics Level of the MEXT’s Mathematics, Data Science, and AI Smart Higher Education (MDASH) Program, with the actual application planned for AY 2027. We would like to use the information received through the survey about learning needs, course evaluations, and issues with the courses to improve the courses as we proceed with implementation of an even higher level of Mathematics, Data Science, and AI Education.

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