

Self-Check / Evaluation of “APU Data Science Program (Basic)” in the AY 2024 Fall Semester

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 2024 Fall Semester Classes Information Literacy EB Information Literacy EC Information Literacy JD
Field	Common Liberal Arts (Societal Needs / Fundamental Skills)
Grade Level	100 Level
Targets	All 1 st Semester 2023 Curriculum students
Course Registration Method	Automatically registered by the university in the 1st semester. 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)	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. (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.
Instructor in Charge of Grading	AY 2024 Fall Semester Instructors in Charge of Grading NISHANTHA Giguruwa ST Professor THELIJAGODA S. EDLSC Part-time lecturer
TA	2 TAs

(2) Course Registration Information

① No. of Enrolled Students and Course Registration Rate

Semester	2023FA			2024SP			2024FA		
	Target Students	Registrants	Enrollment rate	Target Students	Registrants	Enrollment rate	Target Students	Registrants	Enrollment rate
Domestic	35	24	68.6%	741	584	78.8%	36	23	63.9%
International	555	367	66.1%	340	284	83.5%	441	302	68.5%
Targets	590	391	66.3%	1,081	868	80.3%	477	325	68.1%

② No. of Registered Students and Credit Completion Rate

2023FA			2024SP			2024FA		
Registrants	Passed	credit completion rate	Registrants	Passed	credit completion rate	Registrants	Passed	credit completion rate
391	349	89.3%	868	751	86.5%	325	306	94.2%

③ Summary of Registration Information

The course enrollment rate was 66.3% in the AY 2023 fall semester, 80.3% in the AY 2024 spring semester, and 68.1% in the AY 2024 fall semester. This time the course registration rate was lower than in the AY 2024 spring semester, but 1.8% higher than in the AY 2023 fall semester. The registration rate of students who enroll in the fall semester is lower than that of those who enroll in the spring, so to help improve the registration rate going forward we would like to consider implementing a survey for target students to find out the reasons why students choose not to remain registered in the course.

In addition, the credit completion rate has been increasing every semester, from 89.7% in the AY 2023 fall semester to 86.5% in the AY 2024 spring semester to the highest rate so far, 94.2% in the AY 2024 fall semester.

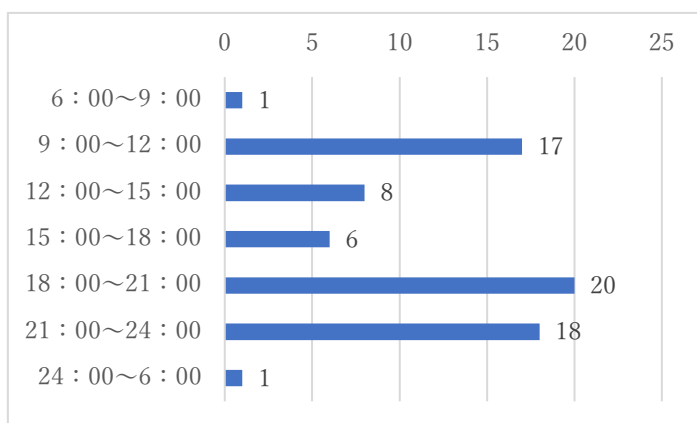
(3) Original Survey for “Information Literacy”

As this course is held On Demand, and the course is registered for all 1st semester students by the university, in addition to the regular Class Evaluation Survey we also implemented an original survey for the Information Literacy course.

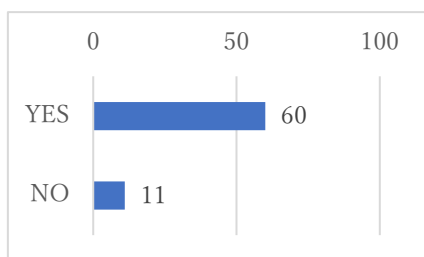
71 students responded to the survey, for a 21.8% response rate.

(*Below, partial excerpt)

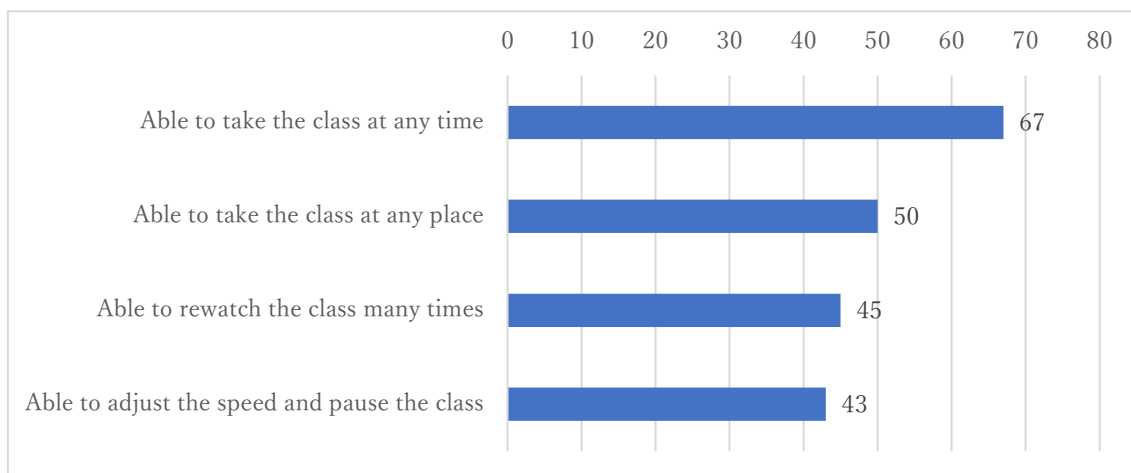
Please tell us the main times when you watched this course.



Did you pause, fast forward, or rewind the videos?



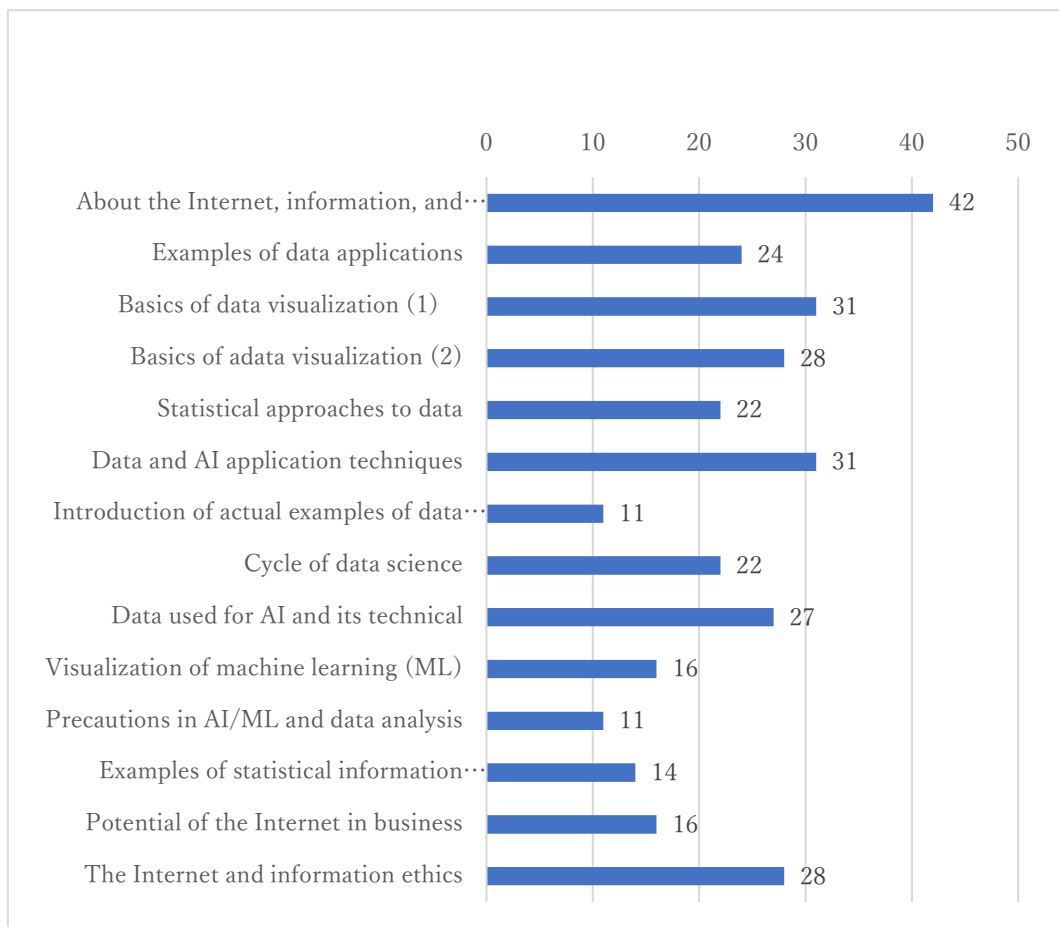
Please tell us the good points of on-demand courses. (Multiple answers accepted)



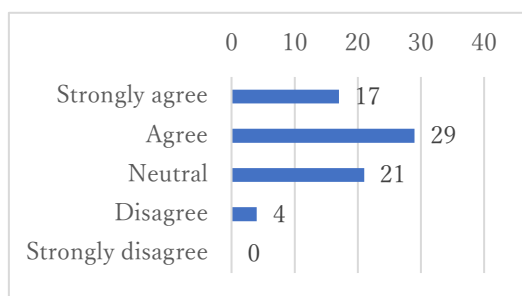
Please tell us any negative points about your on-demand classes. (Free response) (Copied as-is, excerpted from student responses)

- Can't discuss with other students
- Wi-Fi connection is bad, the video sometimes stops suddenly and I can't watch it
- Online classes are more tiring than regular classes, and it's hard to maintain my concentration
- Not interactive so the class seems monotonous
- Can't ask instructor questions like we can in regular classes

Please choose the 3 most useful (helped you practice knowledge or skills, etc.) topics from the list of on-demand course class topics.



Would you recommend this course to your juniors?



(4) Class Evaluation Survey

See Attachment 1

(5) Self Check / Self Evaluation

Looking at the times students viewed the videos, just as last semester many students responded that they watched the classes during their free periods or late at night, and in Question 6 when asked about the advantages of on-demand courses the most common answer was “being able to take class anytime I like.” In addition, over 80% of students responded that they paused or rewound the videos, so we can see that students took advantage of the strengths of on-demand courses in being able to absorb information at their own pace. On the other hand, when asked about the problems they had when taking on-demand courses (Q7), some students answered that, “It’s not interactive so the class seems monotonous,” and “We can’t ask the instructor questions like we can in regular classes.” These could be seen as disadvantages of on-demand courses, so going forward we will have to consider ways to improve these issues.

In addition, when asked about the course content, specifically the best topics (Q9), many students responded, “internet, information, society,” “basics of data visualization (1),” and “techniques for using data with AI.” From this we can see that many students are interested in the internet and the use of data for AI, because they are very familiar with them in daily life. On the other hand, when asked which topics were too difficult or too easy, the most popular response was “basics of data visualization (1).” This topic was also listed among the best course topics so it is difficult to draw conclusions here, but we can see that a number of students thought the content was either too difficult or too easy.

This course is a foundational course necessary for students to develop knowledge and skills related to mathematics, data science, and AI, as well as the basic skills necessary to design new social structures, products, and services. From the results of the class evaluation survey, about 80% of students responded that they were able to acquire a lot of useful or helpful knowledge and/or skills from this course. From AY 2027 we plan to apply for the Applied Basic level of this system, so we would like to make use of these survey results as we proceed with implementation of an even higher level of Mathematics, Data Science, and AI Education.

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