Faculty as Learning Scientists: Using D2L and Data to Enhance Student Learning

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Learning Science & Assessment

- Learning science is an interdisciplinary approach to researching the process of learning and the design of innovative learning environments (Digital Promise, 2020).
- Seeks to use and design innovative approaches to learning and assessment.
- Assessments are critical components of learning environments (International Society for Learning Scientists, 2023).
- As you will see from this presentation, KSU is seeking to promote the concept of faculty being learning scientists and that has specific implications for assessment.

Differences & Similarities

Teaching

Learning

Learning Science & Assessment

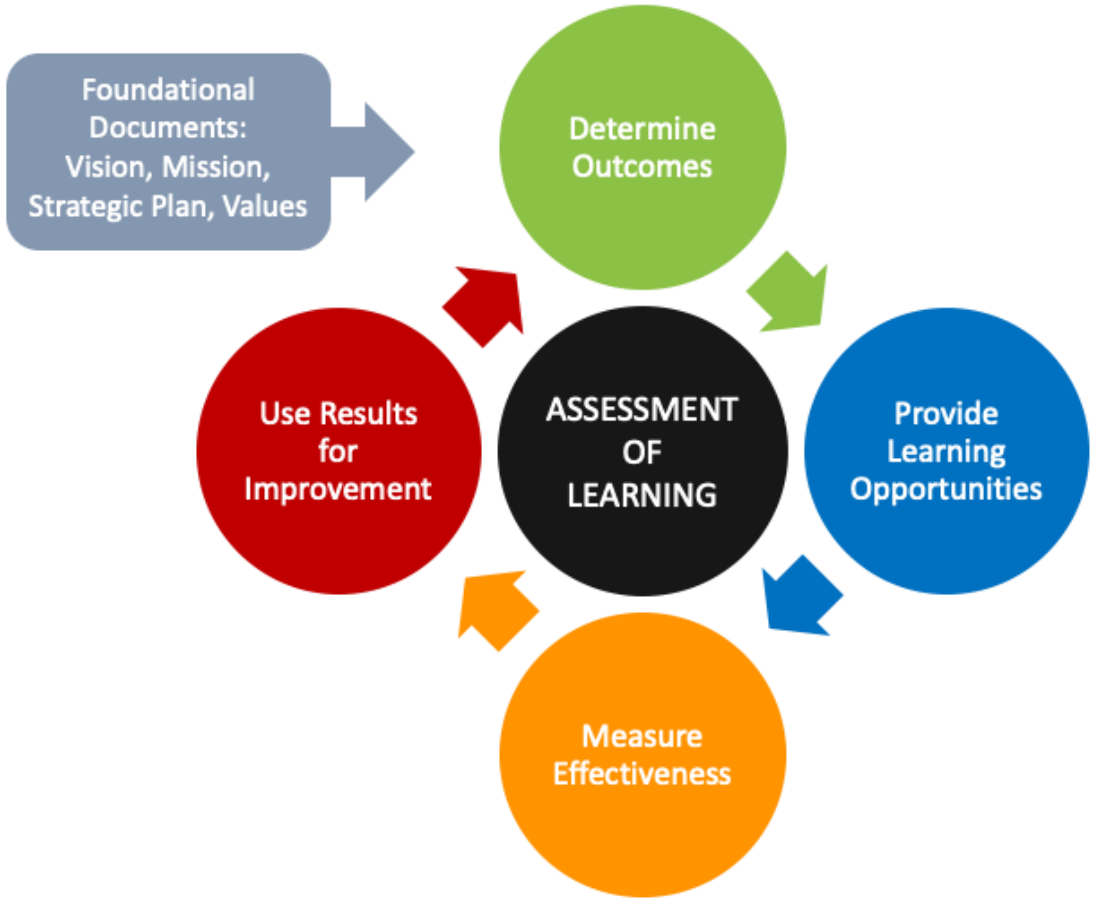
Learning science is an interdisciplinary approach to researching the process of learning and the design of innovative learning environments (Digital Promise, 2020).

Seeks to use and design innovative approaches to learning and assessment

Assessments are critical components of learning environments (International Society for Learning Scientists, 2023).

KSU is promoting Faculty as Learning Scientists

Assessment of Learning (AoL): KSU's Approach to Academic Program Assessment and Continuous Improvement



Course Assessments and Program Assessments

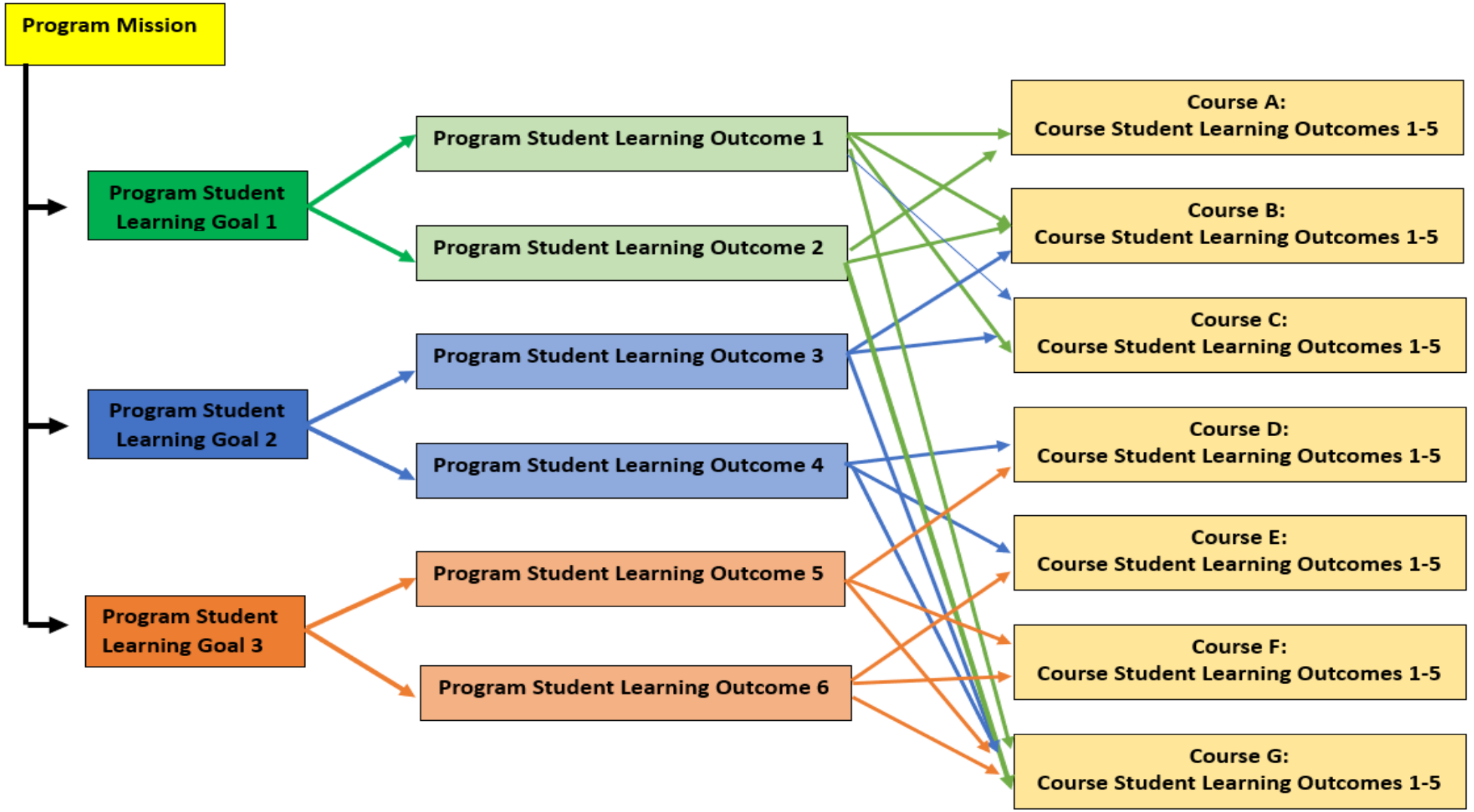
- **Course-Level Assessments:** Collecting, analyzing, and using information about student learning to guide instructional decision-making (formative assessment) and determine the extent to which students have achieved the course learning outcomes (summative assessment).

- **Program-Level Assessments:** Collecting, analyzing, and using information about student learning to determine the extent to which students have achieved the program student learning outcomes (PSLOs) and to determine if any improvements are needed in the program curriculum to improve student achievement of the PSLOs.

- Since courses and their associated student learning outcomes were designed to provide students with sufficient learning opportunities throughout the program to learn, practice, and achieve the PSLOs, programs often use common assessments (specific course assessments administered in all sections of a course) to assess both course student learning outcomes and program student learning outcomes.

- For additional information, see: https://learning.northeastern.edu/explore/assessment/

Know How Your Course and Course Assessments Contribute to the Overall Degree Program



Program Mission, Program Student Learning Goals, Program Student Learning Outcomes, and Core/Required Courses

- **Program Mission**: A brief, general description of the purpose of your program.
- **Program Student Learning Goals**: Broad statements that describe essential learning (the main content knowledge, critical thinking skills, systematic inquiry or research, communication skills, etc.) students are expected to accomplish in your program.
- **Program Student Learning Outcomes (PSLOs)**: Specific, measurable statements about what students should be able to know, do, and/or value by the time they complete the program.
- **Core/Required Courses**: The courses in a degree program that all students must complete to graduate. Certain courses may be designed to introduce or reinforce the program student learning outcomes.
  - **Course student learning outcomes** are established when a course is created by the program. The original set of course learning outcomes must be addressed and assessed every time the course is taught. Faculty can add additional outcomes, but they cannot remove original outcomes.

Program Curriculum Map Example: Connecting Course Assessments to Program Assessment

Program Overview		Curriculum Map										Program Assessment Information		
Mission	**Program Student Learning Goals**	**Program Student Learning Outcomes (PSLOs)**	**SOCI 1101**	**SOCI 2210**	**SOCI 2251**	**SOCI 3300**	**SOCI 3305**	**SOCI 3314, 3324, 3350, or 3354**	**SOCI 3304 or 3333**	**SOCI 3396, 3398, or 4490**	**SOCI 4499**	**Assessment Schedule**	**Assessment Tools (Direct Measures)**	**Assessment Tools (Indirect Measures)**
The B.S. in Sociology prepares students to understand and deal with diversity, modernization, and social change ranging from the local to global scale. The core competencies of the program prepare students to enter careers requiring technological facility, communication skills, data gathering and analysis skills, community awareness and involvement, problem-solving, critical thinking, an understanding of the structure and functioning of groups and organizations, greater awareness of their environment, critical self-reflection, and interpersonal and intercultural skills. Besides career preparation, specific concentrations in the major also provide background for graduate study in sociology and other related disciplines.	**Program Goal 1:** Students will be able to summarize basic questions, issues, and current research, and theory relative to cultural diversity, modernization, and social change ranging from a local to a global scale.	**Outcome 1:** Students will be able to define and give examples of basic concepts such as: culture, social change, stratification, social structure, institutions, socialization, differentiation by race, ethnicity, gender, age, class, etc.	I		R			R			R, A	2023-2025	Exit Exam	Exit Survey, Item 1
		Outcome 2: Students will be able to explain sociological theories and apply theories to at least one area of social reality.	I			R					R, A	2023-2025	Senior Seminar Paper, Rubric Item 1	Exit Survey, Item 2
		Outcome 3: Students will be able to think critically about social issues, for example, being able to present opposing viewpoints and alternative hypotheses.			I		R	R			R, A	2023-2025	Senior Seminar Paper, Rubric Item 2	Exit Survey, Item 3
		Outcome 4: Students will be able to exhibit international and cross-cultural awareness, focusing in particular on diversity (race, class, gender, age, and religion) in society.			I			R			R, A	2023-2025	Senior Seminar Paper, Rubric Items 3	Exit Survey, Item 4
	Program Goal 2: Students will be able to demonstrate competence in research.	**Outcome 5:** Students will be able to design a research study in an area of choice and explain why various decisions were made.					I, A					2026-2028	Research Methods Paper, Rubric Item 1	Exit Survey, Item 5
		Outcome 6: Students will be able to critically assess a published research report and explain how the study could have been improved.		I			R, A				R	2026-2028	Research Methods Paper, Rubric Item 2	Exit Survey, Item 6
		Outcome 7: Students will be able to exhibit specific marketable skills, including posing social, cultural and spatial questions, finding data to answer questions, use of the internet and other technologies, evaluation research, analysis of data, and dealing with diversity.		I			R, A			R		2026-2028	Research Methods Paper, Rubric Item 3	Exit Survey, Item 7
	Program Goal 3: Students will be able to demonstrate communication skills, including spoken and written communication.	**Outcome 8:** Students will be able to demonstrate a facility in speaking before groups.		I						R	R, A	2023-2025	Senior Seminar Paper, Rubric Item 4	Exit Survey, Item 8
		Outcome 9: Students will be able to write correctly and document properly according to proper social science format.		I		R	R			R	R,A	2023-2025	Senior Seminar Paper, Rubric Item 5	Exit Survey, Item 9

I=Intoduced R=Reinforced A=Assessed for Program Assessment

If you are teaching a core/required course in your program, we recommend asking your program coordinator the following questions:

- *What is the official course description and the established course student learning outcomes?*
- *Which program student learning outcomes (PSLOs) should be addressed and assessed in the course.*
- *Is there a common assessment that is used in this course to assess one or more of the program student learning outcomes (PSLOs)?*
- *May I review sample syllabi for the course?*

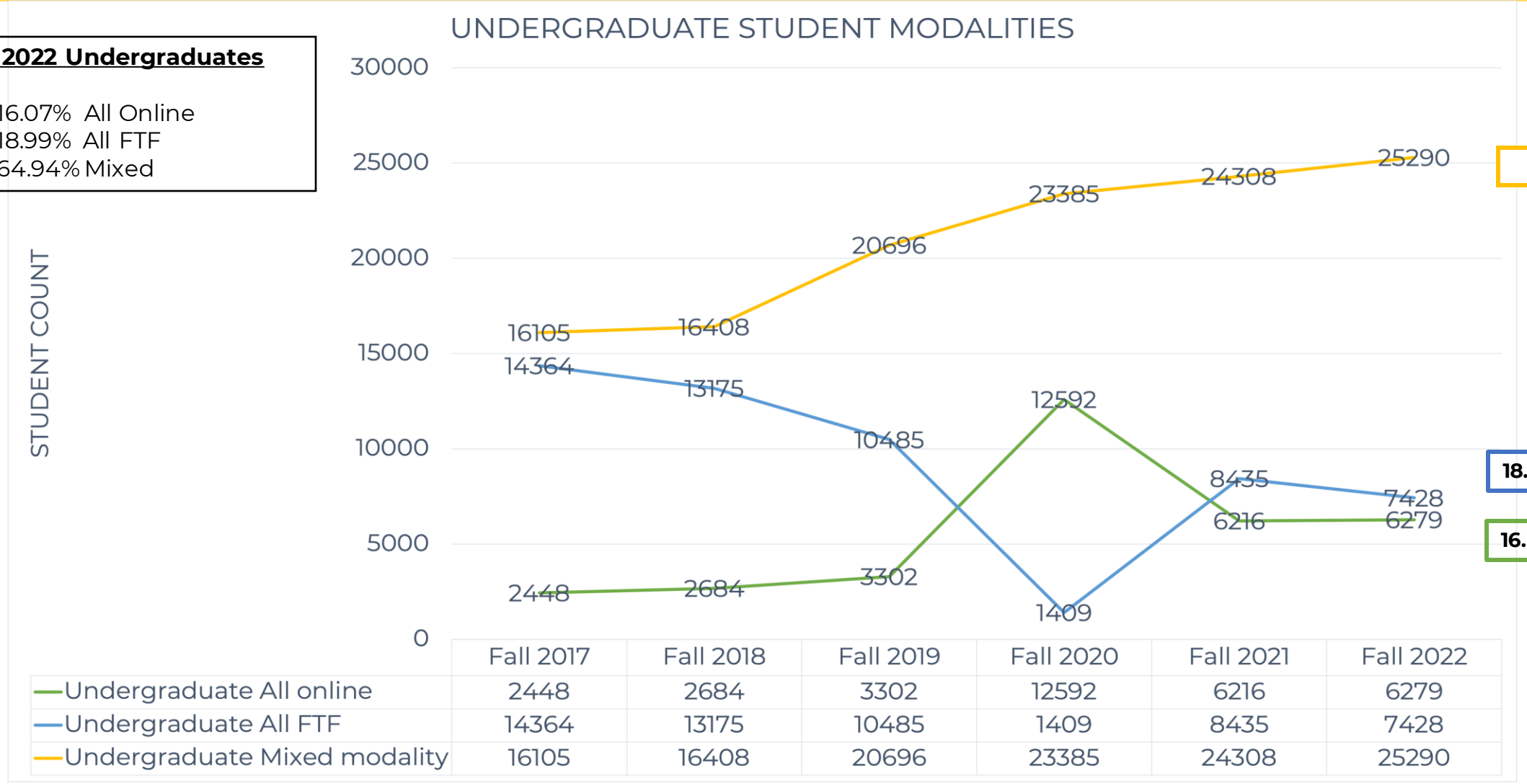
Minimum D2L uses

- D2L Uses as KSU Faculty
  - **Gradebook**: Data preserved by the institution and accessible in case anything happens to you. Students can get an idea of their success as the semester progresses and as you enter grades.
  - **Announcements**: Students who enroll late get all historical messages; accidental FERPA violations are avoided by mistyped email addresses.
  - **Syllabus Posting**: House the syllabus in the D2L course shell provides a permanent record and ensures all students have the latest draft.
  - **Assignment Submission**: Clocked record of student submission or lack of submission; prevents accusations of lost work.
  - **Attendance Record**: Data preserved by the institution and accessible in case anything happens to you.

Undergraduate Student Modalities

Fall 2022 Undergraduates

- 16.07% All Online
- 18.99% All FTF
- 64.94% Mixed

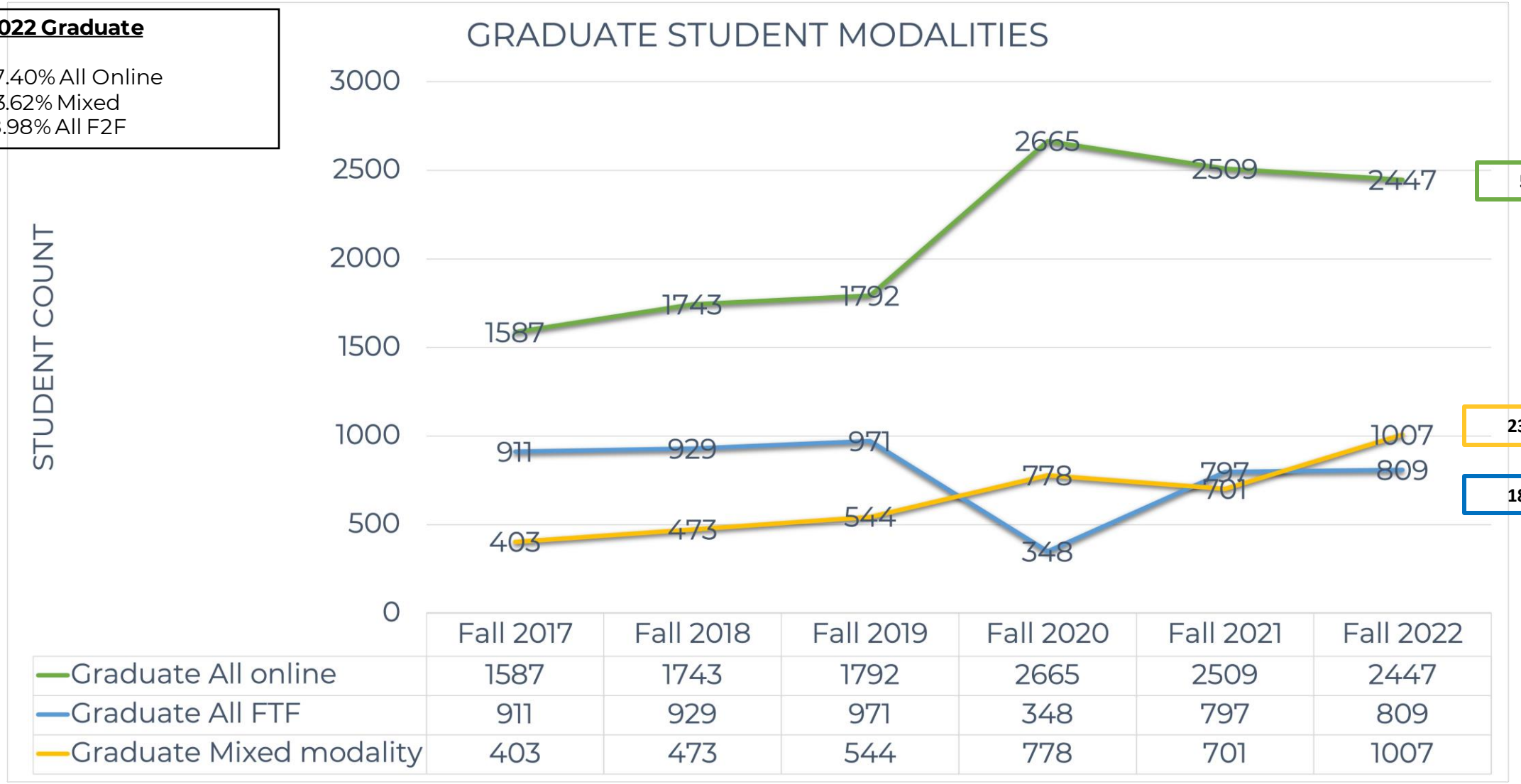


	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022
Undergraduate All online	2448	2684	3302	12592	6216	6279
Undergraduate All FTF	14364	13175	10485	1409	8435	7428
Undergraduate Mixed modality	16105	16408	20696	23385	24308	25290

Graduate Student Modalities

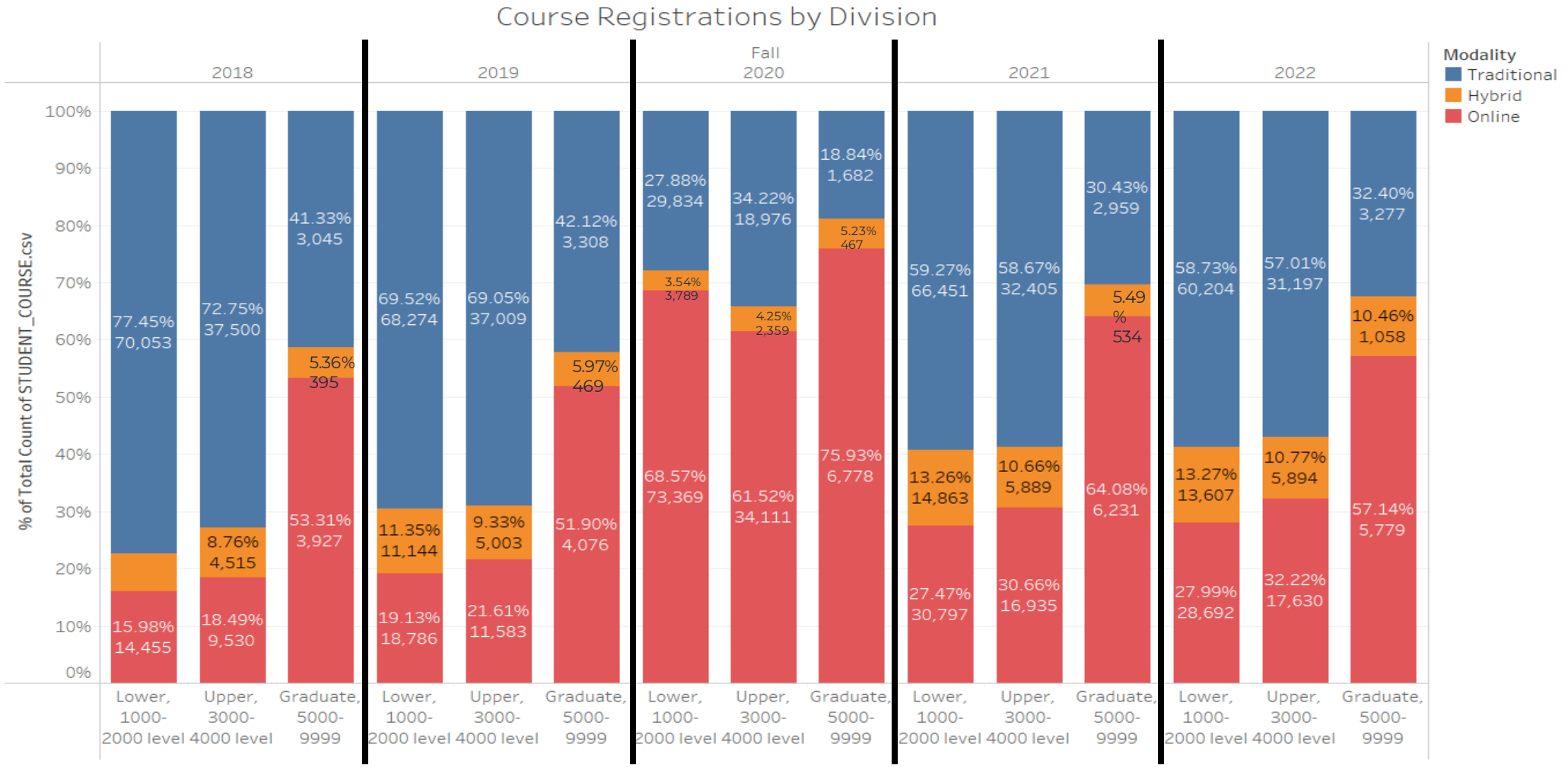
Fall 2022 Graduate

- 57.40% All Online
- 23.62% Mixed
- 18.98% All F2F



	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022
Graduate All online	1587	1743	1792	2665	2509	2447
Graduate All FTF	911	929	971	348	797	809
Graduate Mixed modality	403	473	544	778	701	1007

Course Registrations by Level of Instruction



% of Total Count of STUDENT_COURSE.csv for each Course Division broken down by SemesterandYear. Colour shows details about Modality. The marks are labelled by % of Total Count of STUDENT_COURSE.csvandcount of STUDENT_COURSE.csv.The data is filtered on Student ClassandFull- or Part-Time Status.The Student Class filter keeps 7 of 7 members.The Full- or Part-Time Status filter keeps Full-TimeandPart-Time.The view is filtered on SemesterandCourse Division.The Semester filter keeps Fall.The Course Division filter keeps Graduate, 5000-9999,Lower, 1000-2000 levelandUpper, 3000-4000 level.

DLI Faculty Development

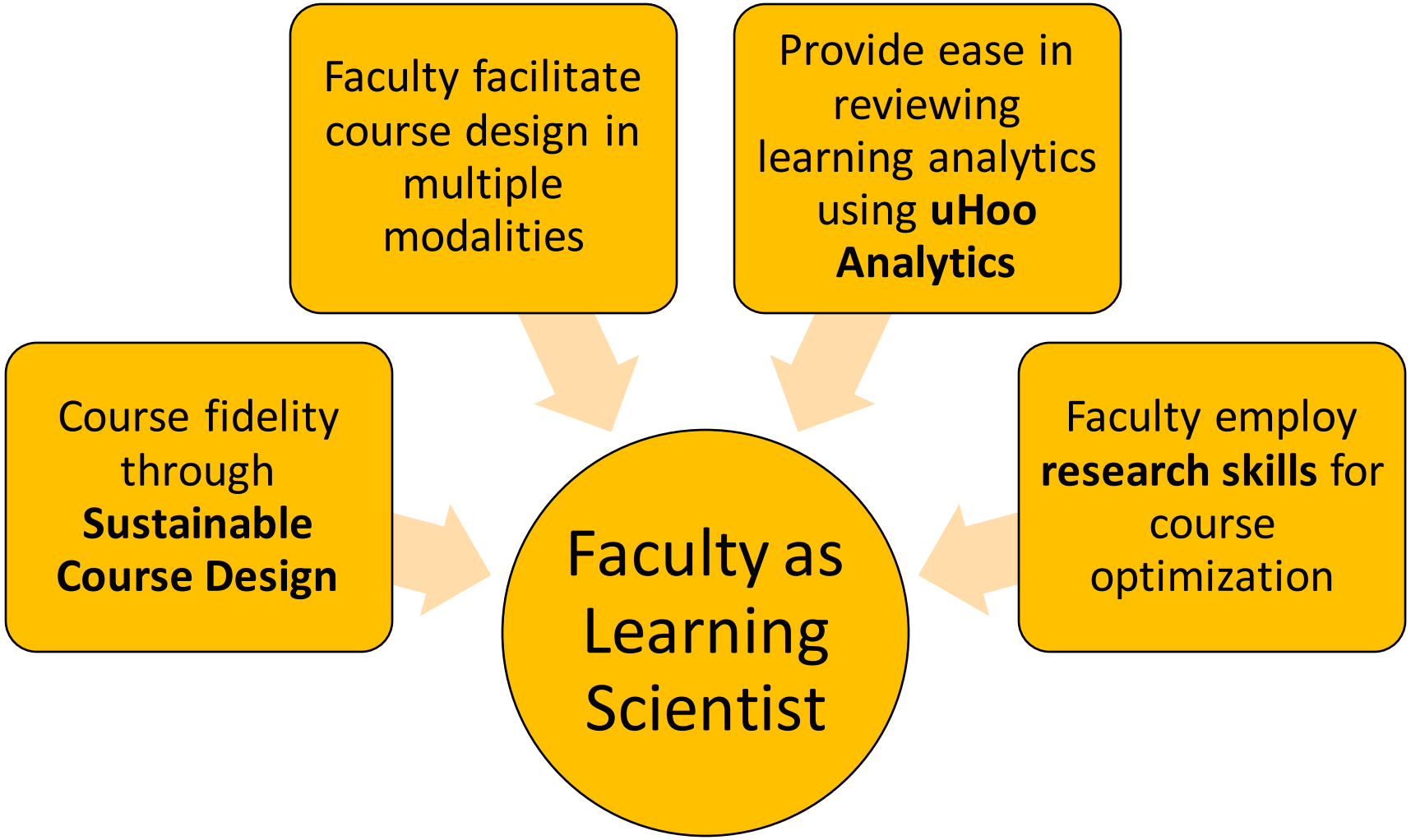
Not Sustainable

- Training on:
  - Asynchronous online teaching
  - Synchronous online teaching
  - 66% Hybrid
  - 33% Hybrid
  - Flipped Hybrid
  - Synchronous Hybrid
  - Emporium Lab
  - Technology Enhanced F2F
  - …

Sustainable

- Training on:
  - Designing
  - Facilitating
  - Responding to Instructional Data

The Approach: Faculty as Learning Scientist



Faculty Training

Sustainable Course Design Workshop (SCD)

The SCD workshop is a 3-week, online, asynchronous course designed to provide participants with technical and pedagogical skills for designing and

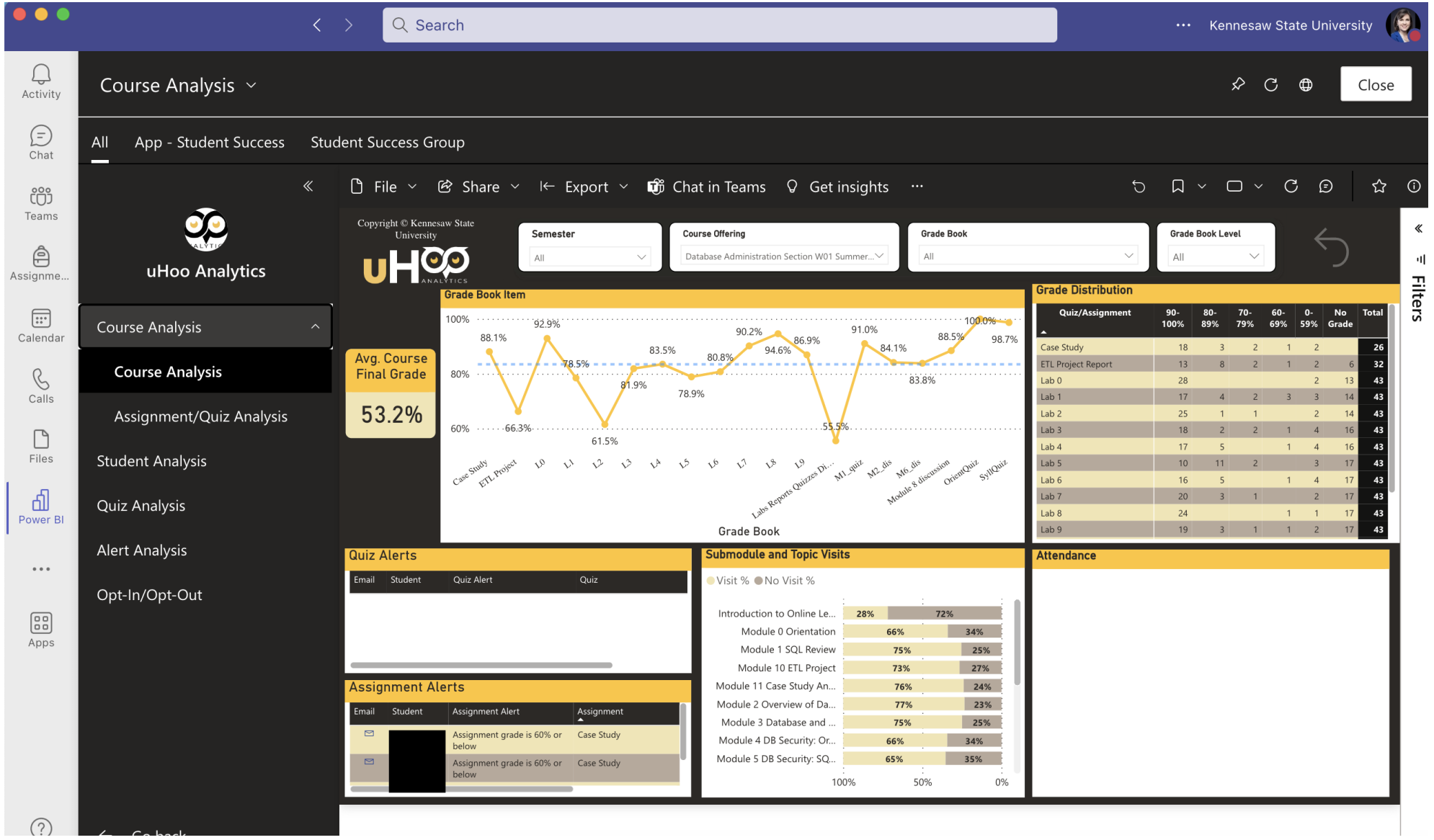
Essential Course Facilitation Strategies (ECFS)

Essential Course Facilitation Strategies (ECFS) is a three-week workshop designed to introduce faculty to course facilitation strategies needed to teach a course in any modality, such as hybrid, online synchronous, asynchronous, or face-to face.

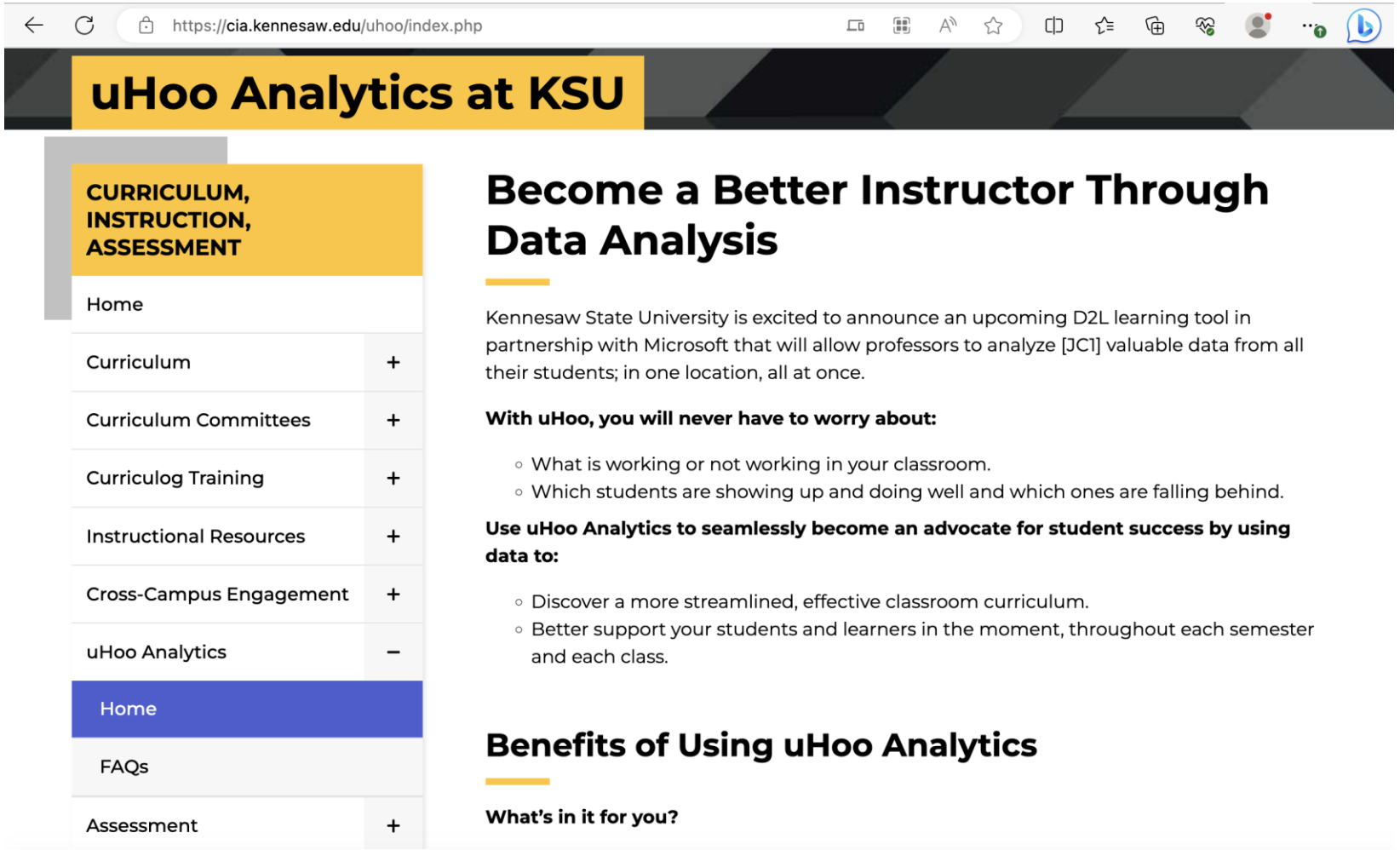
Continue Reading... +

Session Duration: 3 weeks.

uHoo Analytics for Student Success



uHoo Analytics Resources and Access Request



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