

**AACSB
ASSURANCE OF LEARNING**

**Doctor of Philosophy in Data Science**

**(Ph.D.)**

**LEARNING GOAL # 3**

**Ph.D. students demonstrate capacity to identify and develop a research project for their dissertation in a timely fashion.**

**Responsibility: Feng Mai (or the Student’s Advisor)**

May 6, 2024

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# 1. Introduction: Learning Goal #3

**Goal: Ph.D. students demonstrate capacity to identify and develop a research project for their dissertation in a timely fashion.**

*Objective 1: Students will defend their dissertation proposal within 4.5 years but at latest in their fifth year of studies.*

The goal is to ensure that students will have the skills necessary to complete high-quality, original dissertations within 5 years of full-time study (the maximum allowed time span to finish a dissertation is 6 years). There is not a specific timeline when the students should finish their proposal but a delay of a proposal correlates highly with a delay of the dissertation defense and extends the doctoral studies.

# 2. Learning Objectives and Traits

|  |  |
| --- | --- |
| **PhD - 3** | **Learning Goal, Objectives and Traits** |
| **GOAL** | **Students will defend their dissertation proposal within 4.5 years but at latest in their fifth year of studies.**  |
| **Learning Objectives** |  |
| **Objective 1:** | *Students will defend their dissertation proposal within 4.5 years but at latest in their fifth year of studies.*  |
| **Traits** |   |
| Trait 1: | Elapsed time to proposal defense |

# 3. Rubrics

|  |
| --- |
|  **PhD - 3: RUBRIC 1**  |
| **GOAL** | Ph.D. students demonstrate capacity to identify and develop a research project for their dissertation in a timely fashion.  |
| **Objective 1** | *Students will defend their dissertation proposal within 4.5 years but at latest in their fifth year of studies.*  |
|   | **Trait** | **Poor** | **Good** | **Excellent** |
|   | **Value** | 0 | 1 | 2 |
| Trait 1: | Elapsed time to proposal defense |  |  |  -- |

**Criterion:** **Does not** **meet expectations (Poor): >4.5** **years; Meets (Good): 4.5 years; Exceeds (Excellent): < 4.5 years**

# 4.  Assessment Process

|  |  |  |
| --- | --- | --- |
| **Where & when measured?** | **How measured?** | **Criterion** |
| By the end of the ninth semester (4.5 years) of the program, almost all students should try to successfully defend their dissertation proposal. | Dissertation proposal defense before the end of 4.5 semester of full-time study. Dissertation proposal will be evaluated by dissertation committee.Sampling: All PhD students | Proposal should be accepted by dissertation committee.By the end of the ninth semester (4.5 years) of the program, almost all students should try to successfully defend their dissertation proposal. |

# 5. Results of Learning Goal Assessment – Introduction

The results of the initial learning goal assessments carried out to date are included below.

**Explanation**

Each learning goal has a number of learning objectives and performance on each objective is measured using a rubric that in turn contains a number of desired “traits”. Students are scored individually on each trait.

The grading sheets for each student are used to develop a Summary Results Sheet for each learning goal objective. A selection of these Summaries is included below.

The first table in the Summary Results Sheet for a learning objective and trait gives the counts of students falling in each of the three categories:

- Does not meet expectations
- Meets expectations
- Exceeds expectations

The right-hand column in the table is used to record the average score of the students on each trait. This table provides an indication of the relative performance of students on each trait.

The second table on each sheet provides the counts of students who fall in each of the above three categories for the overall learning objective.

#

# 6. Results of Assessment: Spring 2022

**LEARNING GOAL PHD 3: Ph.D. students demonstrate capacity to identify and develop a research project for their dissertation in a timely fashion.**

*Objective 1: Students will defend their dissertation proposal within 4.5 years but at latest in their fifth year of studies.*

**ASSESSMENT DATE: 2022-03-19 ASSESSOR: Feng Mai**

**NO. OF STUDENTS TESTED: 7**

|  |  |  |  |
| --- | --- | --- | --- |
| Student Name |  |  |  |
|  |  | Proposal Defense Semesters | Number of Years |
| **2018F** |  |  |  |
| Mingsong | Ye | 2022 Spring | 4 |
| Shiyan | Zhang | 2021 Fall | 3.5 |
| Lei | Zheng | 2022 Spring | 4 |
| **2019F** |  |  |  |
| Yangyang | Yu | 2023 Fall | 4.5 |
| Lun | Li | 2023 Spring | 4 |
| **2020F** |  |  |  |
| Mengfang | Sun | 2022 Spring | 2 |
| Francesco | Fabozzi | -- | -- |
| Di | Zhu | 2022 Spring | 2 |

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** |  |
| **Learning Goal Traits** | **Not Meet Expectations**  | **Meet Expectations**  | **Exceed Expectations**  | **Avg. Grade on Trait** |
| 1. Elapsed time to proposal defense | 0 | 1 | 6 | 1.857 |
| **Average Grade (max = 2)** | **1.857** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category** | **0** | **1** | **6** |
| **Students meeting or exceeding expectations:** | **7** |

**COMMENTS:** All students meet or exceed expectations.

**REMEDIAL ACTIONS:** None.

# 7. Results of Assessment: Fall 2024

**LEARNING GOAL** **PHD 3: Ph.D. students demonstrate capacity to identify and develop a research project for their dissertation in a timely fashion.**

*Objective 1: Students will defend their dissertation proposal within 4.5 years but at latest in their fifth year of studies.*

**ASSESSMENT DATE:** **2024-05-06 ASSESSOR: Feng Mai**

**NO. OF STUDENTS TESTED: 7**

|  |  |  |  |
| --- | --- | --- | --- |
| **First Name** | **Last Name** | **Proposal Defense Semesters** | **Number of Years** |
| **2018F** |  |  |  |
| Mingsong | Ye | -- | -- |
| Shiyan | Zhang | 2021 Fall | 3.5 |
| **2019F** |  |  |  |
| Yangyang | Yu | 2023 Fall | 4.5 |
| Lun | Li | 2023 Fall | 4.5 |
| Zihan  | Chen | 2023 Fall | 4.5 |
| **2020F** |  |  |  |
| Francesco | Fabozzi | 2023 Fall | 3.5 |
| Jacob | Erickson | 2022 Fall | 2.5 |

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** |  |
| **Learning Goal Traits** | **Not Meet Expectations**  | **Meet Expectations**  | **Exceed Expectations**  | **Avg. Grade on Trait** |
| 1. Elapsed time to proposal defense | 1 | 3 | 3 | 1.285 |
| **Average Grade (max = 2)** | **1.285** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category** | **1** | **3** | **3** |
| **Students meeting or exceeding expectations:** | **6** |

**COMMENTS:** Most students meet or exceed expectations.

**REMEDIAL ACTIONS:** The DS Committee is revising the DS Structure and Qualifying Exam document to ensure a structured approach and to provide a clear roadmap from coursework to dissertation defense.

# 8. Outcomes from Previous Assessments

In the 2022 assessment, the average grade for the elapsed time to proposal defense was 1.857, with 6 out of 7 students exceeding expectations and 1 meeting expectations. By comparison, the 2024 assessment had an average grade of 1.285, with 3 out of 7 students exceeding expectations, 3 meeting expectations, and 1 not meeting expectations. This comparison reveals a slight decline in average grade from 2022 to 2024. While the majority of students still meet or exceed expectations.

|  |  |
| --- | --- |
|  | Objective 1 |
| Spring 2024 | 1.857 |
| Spring 2024 | 1.285 |

# 9. Close Loop Process – Continuous Improvement Record

The 2024 assessment shows one student did not meet expectations for the elapsed time to proposal defense, this reflects an identified need for enhanced guidance and support in progressing students toward timely completion. The DS committee is actively addressing the identified gaps by working on a draft of the DS Structure and Qualifying Exam Document. This document aims to provide a clear and comprehensive framework to guide students through the doctoral journey. The framework outlines steps for coursework, exam preparation, research, and dissertation defense to ensure timely progress and completion of research projects.