

**AACSB  
ASSURANCE OF LEARNING**

**Doctor of Philosophy in Data Science**

**(Ph.D.)**

**LEARNING GOAL # 1**

**Our PhD students will communicate effectively in writing and oral presentations.**

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

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# 1. Introduction: Learning Goal #1

**Goal: Our doctoral students will communicate effectively in written and oral presentations.**

*Objective 1: Students will be able to pass written component of the qualifying exam by the end of the fifth semester.*

*Objective 2: Students will be able to pass oral component of the qualifying exam by the end of the fifth semester.*

A major educational objective of the School of Business at Stevens is to ensure that all of our graduates have effective written and oral communications skills.

While many of our doctoral students have strong communications skills, other students, especially foreign students, need special training in this area. In the past, all academic programs and individual instructors have made an effort to assess and improve the communications skills of their students. An advantage of the AACSB assessment process is that it helps us take a more organized and uniform approach to achieving this crucial educational objective.

This goal is assessed via qualifying exam offered in the first semester of third year at the latest.

# 2. Learning Objectives and Traits

|  |  |
| --- | --- |
| **PhD - 1** | **Learning Goal, Objectives and Traits** |
| **GOAL** | **Our PhD students will communicate effectively in writing and oral presentations.** |
| **Learning Objectives** |  |
| **Objective 1:** | *Students will be able to pass written component of the qualifying exam by the end of the fifth semester.* |
| **Traits** |  |
| Trait 1: | Satisfactory written report as evaluated by the examining committee submitted as part of the qualifying examinations |
| **Objective 2:** | *Students will be able to pass oral component of the qualifying exam by the end of the fifth semester.* |
| **Traits** |  |
| Trait 1: | Satisfactory oral presentation as evaluated by the examining committee as part of the qualifying examinations |

# 3. Rubrics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PhD - 1: RUBRIC 1** | | | | |
| **GOAL** | **Our PhD students will communicate effectively in writing and oral presentations.** | | | |
| **Objective 1** | *Students will be able to pass written component of the qualifying exam by the end of the fifth semester.* | | | |
|  | **Trait** | **No Pass** | **Pass** | **Score** |
|  | **Value** | **0** | **1** | **--** |
| Trait 1: | Satisfactory written report as evaluated by the examining committee submitted as part of the qualifying examinations | Written report is not satisfactory as evaluated by the examining committee | Written report is satisfactory as evaluated by the examining committee | -- |

**Criterion: Does not meet expectations: 0;** **Meets or Exceeds Expectations: 1.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PhD - 1: RUBRIC 2** | | | | |
| **GOAL** | **Our PhD students will communicate effectively in writing and oral presentations.** | | | |
| **Objective 2** | *Students will be able to pass oral component of the qualifying exam by the end of the fifth semester.* | | | |
|  | **Trait** | **No Pass** | **Pass** | **Score** |
|  | **Value** | 0 | 1 | **--** |
| Trait 1: | Satisfactory oral presentation as evaluated by the examining committee as part of the qualifying examinations | Oral presentation is not satisfactory as evaluated by the examining committee | Oral presentation is satisfactory as evaluated by the examining committee | -- |
| **Criterion: Does not meet expectations: 0; Meets or Exceeds Expectations: 1.** | | | | |

# 4. Assessment Process

|  |  |  |
| --- | --- | --- |
| **Where & when measured?** | **How measured?** | **Criterion** |
| The qualifying exam at the beginning of 3rd year. | Written: The examination committee sets the written exam, which could be composed of questions from classes the student has taken, or, alternatively, the student could be asked to analyze a dataset and suggest further research based on their analysis. The written examination will be in the form of a 7-day take-home exam.  Oral: The student presents one of three possible options: (1) their own research paper(s), (2) an assessment of a set of assigned papers, (3) the student’s written component of the examination.  Sampling: All PhD students | Written: Based on the submitted written report from the student, the exam committee will provide one of three outcomes:  (1) pass the student, (2) fail the student, (3) pose questions for the student to answer.  In the third case, where there are questions from the exam committee, the student has 7 days to submit their answers. The exam committee will then decide if they pass OR fail the student’s written component of the exam.  Oral: The exam committee will attend the presentation and ask questions to be answered by the student. Based on the student’s presentation and the interaction with the student, the exam committee will provide one of three outcomes: (1) pass the student, (2) fail the student, (3) re-examination. |

# 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 1: Goal: Our doctoral students will communicate effectively in written and oral presentations.**

*Objective 1: Students will be able to pass written component of the qualifying exam by the end of the fifth semester.*

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

**NO. OF STUDENTS TESTED: 8**

|  |  |  |
| --- | --- | --- |
| **First Name** | **Last Name** | **Trait 1** |
| **2018F** |  |  |
| Mingsong | Ye | 1 |
| Shiyan | Zhang | 1 |
| Lei | Zheng | 1 |
| **2019F** |  |  |
| Yangyang | Yu | 1 |
| Lun | Li | 1 |
| **2020F** |  |  |
| Mengfang | Sun | 1 |
| Francesco | Fabozzi | 1 |
| Di | Zhu | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Number of Students** | | |  |
| **Learning Goal Traits** | **Not Meet Expectations** | **Meet Expectations** | **Exceed Expectations** | **Avg. Grade on Trait** |
| 1. Satisfactory written report as evaluated by the examining committee submitted as part of the qualifying examinations | 0 | 8 | -- | 1 |
| **Average Grade (max = 1)** | | | | **1** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category** | **0** | **8** | **--** |
| **Students meeting or exceeding expectations:** | | **8** | |

**COMMENTS:** All students meet expectations and are able to pass written components of the qualifying exam by the end of the 5th semester.

**REMEDIAL ACTIONS:** None

*Objective 2: Students will be able to pass oral component of the qualifying exam by the end of the fifth semester.*

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

**NO. OF STUDENTS TESTED: 8**

|  |  |  |
| --- | --- | --- |
| **First Name** | **Last Name** | **Trait 1** |
| **2018F** |  |  |
| Mingsong | Ye | 1 |
| Shiyan | Zhang | 1 |
| Lei | Zheng | 1 |
| **2019F** |  |  |
| Yangyang | Yu | 1 |
| Lun | Li | 1 |
| **2020F** |  |  |
| Mengfang | Sun | 1 |
| Francesco | Fabozzi | 1 |
| Di | Zhu | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Number of Students** | | |  |
| **Learning Goal Traits** | **Not Meet Expectations** | **Meet Expectations** | **Exceed Expectations** | **Avg. Grade on Trait** |
| 1. Satisfactory oral presentation as evaluated by the examining committee as part of the qualifying examinations | 0 | 8 | -- | 1 |
| **Average Grade (max 1)** | | | | **1** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category** | **0** | **8** | **--** |
| **Students meeting or exceeding expectations:** | | **8** | |

**COMMENTS:** All students meet expectations and are able to pass oral components of the qualifying exam by the end of the 5th semester.

**REMEDIAL ACTIONS:** None

# 7. Outcomes from Previous Assessments

N/A; Spring 2022 is the first time that the DS PhD program is assessed.

# 8. Close Loop Process – Continuous Improvement Record

N/A; Spring 2022 is the first time that the DS PhD program is assessed.