Stevens Institute of Technology

School of Business

**AACSB
ASSURANCE OF LEARNING**

**Master of Finance**

**LEARNING GOAL #4**

**Students are able to implement financial solutions to improve the performance of financial or non-financial businesses.**

**Responsibility: Michael Guthammar (FIN 638A Instructor)**

December 2023

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# 1. INTRODUCTION: LEARNING GOAL #4

Goal: Students are able to implement financial solutions to improve the performance of financial or non-financial businesses.

The Master of Finance curriculum prepares students to make sound financial decisions for their personal goals and for businesses or organizations they serve. Students are imparted knowledge and provided opportunities to hone their skills to make these decisions. These decisions are in the form of solutions to financial issues facing businesses and organizations. The yardstick for evaluating these decisions is the impact on the performance of the businesses and organizations regardless of whether the primary industry of these businesses and organizations is financial or not. This aspiration of the Master of Finance program is formalized as Goal #4: Students are able to implement financial solutions to improve the performance of financial or non-financial businesses.

This goal is assessed in FIN 638 Corporate Finance – a required course in the curriculum for Master of Finance. The course familiarizes students with the tools they need to implement financial solutions and discusses how these tools can be used to improve the performance of public corporations or other businesses.

# 2. LEARNING OBJECTIVES AND TRAITS

The goal is composed of the following objectives and traits.

|  |  |
| --- | --- |
| **Goal** | Students are able to implement financial solutions to improve the performance of financial or non-financial businesses. |
| **Objective 1** | Students understand and can solve standard business financial problems. |
|  **Trait 1** | Solving time value of money problems |
|  **Trait 2** | Solving investment problems |
|  **Trait 3** | Solving financing problems |
| **Objective 2** | Students can model business financial problems and translate solution to business actions. |
|  **Trait 1** | Modeling financial condition and problem facing a business |
|  **Trait 2** | Translating knowledge and model solutions into recommended solutions for businesses |

# 3. RUBRICS

The rubrics describe the criteria for evaluation of students on various traits and objectives.

**Rubric for Objective 1: Students understand and can solve standard business financial problems.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Poor | Good | Excellent |
| Trait 1: Solving time value of money problems | Combines cash flows across time | Proficient at future value and present value calculations with a fixed interest rate | Proficient at time value of money problems with multiple cash flows and variable interest rates |
| Trait 2: Solving investment problems | Fails to identify incremental cash flows or fails to consider tax implications | Determines incremental after-tax cash flows for revenues and costs but misses opportunity costs, sunk costs, side effects, etc. | Accurately determines incremental cash flows and discount rate, and values investments with at least six types of cash flows |
| Trait 3: Solving financing problems | Fails to apply irrelevance theorems to financing problems without financial frictions | Solves quantitative problems about capital structure, payout policy, and corporate control without financial frictions, and qualitatively but not quantitatively with financial frictions | Solves quantitative problems about capital structure, payout policy, and corporate control, applying irrelevance theorems and impact of frictions including taxes and agency costs |

**Criteria for Objective 1**: A student does not meet expectations for Objective 1 if his/her performance is poor in more than one trait. Otherwise, a student exceeds expectations for Objective 1 if his/her performance is excellent in more than one trait. A student that does not meet the previous two criteria meets expectations for Objective 1.

**Rubric for Objective 2: Students can model business financial problems and translate solution to business actions.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Poor | Good | Excellent |
| Trait 1: Modeling financial condition and problem facing a business | Fails to comprehend and communicate qualitatively the financial choices and trade-offs inherent in business financial problems | Identifies financial trade-offs and links to standard business financial problems, and most relevant data | Precisely understands financial trade-offs, simplifies data and information to a structured format, and translates problem to standard business financial problems |
| Trait 2: Translating knowledge and model solutions into recommended solutions for businesses | Does not offer coherent advice or solution | Offers reasonable coherent advice based on a model of the problem  | Offers well-reasoned actionable advice based on a model of the problem |

**Criteria for objective 2**: A student does not meet expectations for Objective 2 if his/her performance is poor in any trait. A student exceeds expectations for Objective 2 if his/her performance is not poor in any trait and is excellent in at least one trait. A student that does not meet the previous two criteria meets expectations for Objective 2.

# 4. ASSESSMENT PROCESS

|  |  |  |
| --- | --- | --- |
| **Where and when measured?** | **How measured?** | **Criterion** |
| Course-embedded analysis in course FIN 638. A direct measurement –Assessment will be done in the fall semester each year.Indirect measurements will be taken periodically.  | FIN 638A students.Homework and Midterm Exam. | 90% of students get a grade of meets or exceeds expectation on the assessment assignment as measured by the rubric for this learning goal. |

# 5. RESULTS OF LEARNING GOAL ASSESSMENT - INTRODUCTION

The results of the learning goal assessments carried will be included below.

**Explanation for direct measurements:**

The learning goal has a learning objective which is measured using a rubric that in turn contains a number of desired “traits”. Students are scored 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.

The person doing the assessment provides explanatory comments and recommendations on the bottom of the Results Summary Sheet. The recommendations improve content or pedagogy changes for the next time the course is given.

**Explanation for indirect measurements:**

Indirect measurements will be taken at periodic intervals. Depending on the measurement chosen a diagnostic tool will be selected for analysis.

# 6. RESULTS OF PREVIOUS ASSESSMENTS

## **ASSESSMENT FALL 2021**

The following results are from the first assessment of the learning goals, carried out in Fall 2021.

Number of Students Assessed: 40

**Summary Results for Objective 1: Students understand and can solve standard business financial problems.**

|  |  |
| --- | --- |
|  | Number of Students |
|  | Poor | Good | Excellent |
| Trait 1: Solving time value of money problems | 1 | 11 | 28 |
| Trait 2: Solving investment problems | 6 | 16 | 18 |
| Trait 3: Solving financing problems | 5 | 24 | 11 |

**Summary Results for Objective 2: Students can model business financial problems and translate solution to business actions.**

|  |  |
| --- | --- |
|  | Number of Students |
|  | Poor | Good | Excellent |
| Trait 1: Modeling financial condition and problem facing a business | 4 | 16 | 20 |
| Trait 2: Translating knowledge and model solutions into recommended solutions for businesses | 4 | 28 | 8 |

**Summary Results for Learning Goal 4: Students are able to implement financial solutions to improve the performance of financial or non-financial businesses.**

|  |  |
| --- | --- |
|  | Number of Students |
|  | Do Not Meet Expectations | Meet Expectations | Exceed Expectations |
| Objective 1: Students understand and can solve standard business financial problems | 3 | 19 | 18 |
| Objective 2: Students can model business financial problems and translate solution to business actions | 4 | 16 | 20 |

**Percent of Students who Meet or Exceed Expectations**

|  |  |
| --- | --- |
| Objective | Percent of Students who Meet or Exceed Expectations |
| Objective 1: Students understand and can solve standard business financial problems | 92.5 |
| Objective 2: Students can model business financial problems and translate solution to business actions | 90 |

**Comments**:

1. Most of the students meet or exceed expectations for both objectives of Learning Goal 4.
2. Students performed better in trait 1 than in traits 2 and 3 of objective 1. This may be because students have been exposed to time value of money concepts covered in trait 1 in previous classes whereas concepts covered in traits 2 and 3 are most likely completely new to most students.
3. Objective 2 is evaluated through group assignments. Some students may not deliver to their full potential because (1) they are not used to solving complicated business problems, (2) are not used to business writing to communicate their work, or (3) do not work as hard as they would in an individual assignment.

**Recommended Remedial Actions**:

1. Provide extra practice opportunities for investment problems and encourage weaker students to attempt them to clarify their doubts.
2. Consider allowing students to revisit their case submissions to improve their writeup to earn extra credit or recover a fraction of the lost points.
3. Suggest students resources to get feedback on their writing of case reports.

## **ASSESSMENT FALL 2022**

The following results are from the second assessment of the learning goals, carried out in Fall 2022.

**ASSESSMENT DATE: December 2022**

**ASSESSOR: Michael Guthammar, Instructor**

**NO. OF STUDENTS TESTED: 47**

**COURSES: FIN638A**

|  |  |
| --- | --- |
|  | Number of Students |
| Learning Goal Traits | Not Meet Expectations | Meet Expectations | Exceed Expectations |
| Trait 1: Solving time value of money problems | 7 | 18 | 17 |
| Trait 2: Solving investment problems | 7 | 22 | 16 |
| Trait 3: Solving financing problems | 8 | 8 | 32 |
| Trait 4: Modeling financial condition and problem facing a business | 6 | 32 | 7 |
| Trait 5: Translating knowledge and model solutions into recommended solutions for businesses | 3 | 15 | 23 |

**Summary Results for Learning Goal 4: Students are able to implement financial solutions to improve the performance of financial or non-financial businesses.**

|  |  |
| --- | --- |
|  | Number of Students |
| Learning Objective | Not Meet Expectations | Meet Expectations | Exceed Expectations | Meeting or Exceeding Expectations |
| Objective 1: Students understand and can solve standard business financial problems | 3 | 20 | 22 | 93.3% |
| Objective 2: Students can model business financial problems and translate solution to business actions | 8 | 14 | 23 | 82.2% |

**The target for students meeting or exceeding expectations is 90%.**

**Comments:**

1. Students performed well solving financing problems but additional emphasis on solving complex time value of money problems may be helpful
2. Financial analysis on a full business level and thereafter deriving recommendations from the analysis was challenging for some students. The lower performance with respect to these traits may be due in part to insufficient English skills.

**Recommended Remedial Actions**:

1. Increased homework focus on time-value of money problems
2. Increased time spent in classroom on case study examples

# 7. ASSESSMENT FALL 2023

**RESULTS OF ASSESSMENT**

**LEARNING GOAL #4: Students are able to implement financial solutions to improve the performance of financial or non-financial businesses**

**LEARNING OBJECTIVE # 1: Students understand and can solve standard business financial problems**

**LEARNING OBJECTIVE # 2: Students can model business financial problems and translate solution to business actions**

**ASSESSMENT DATE: December 2023**

**ASSESSOR: Michael Guthammar, Instructor**

**NO. OF STUDENTS TESTED: 47**

**COURSES: FIN638A**

|  |  |
| --- | --- |
|  | Number of Students |
| Learning Goal Traits | Not Meet Expectations | Meet Expectations | Exceed Expectations |
| Trait 1: Solving time value of money problems | 4 | 15 | 28 |
| Trait 2: Solving investment problems | 9 | 12 | 26 |
| Trait 3: Solving financing problems | 7 | 28 | 12 |
| Trait 4: Modeling financial condition and problem facing a business | 3 | 6 | 38 |
| Trait 5: Translating knowledge and model solutions into recommended solutions for businesses | 0 | 3 | 44 |

**Summary Results for Learning Goal 4: Students are able to implement financial solutions to improve the performance of financial or non-financial businesses.**

|  |  |
| --- | --- |
|  | Number of Students |
| Learning Objective | Not Meet Expectations | Meet Expectations | Exceed Expectations | Meeting or Exceeding Expectations |
| Objective 1: Students understand and can solve standard business financial problems | 5 | 18 | 24 | 89.4% |
| Objective 2: Students can model business financial problems and translate solution to business actions | 3 | 1 | 43 | 93.6% |

**The target for students meeting or exceeding expectations is 90%.**

**Comments:**

1. Some students appear not to be well prepared for the course and struggle with homework in the beginning of the semester.

**Recommended Remedial Actions**:

1. Increased time spent in classroom on problem solving and reviews

# 8. OUTCOMES FROM PREVIOUS ASSESSMENTS

**OUTCOMES: MFIN LEARNING GOAL # 4**

**After the Review Fall 2023**

**Competencies (knowledge, skills, abilities) addressed in this course:**

* **Trait 1 – Solving time value of money problems**
* **Trait 2 – Solving investment problems – some students may be insufficiently prepared and require additional help**
* **Trait 3 – Solving financing problems**
* **Trait 4 – Modeling financial condition and problem facing a business**
* **Trait 5 – Translating knowledge and model solutions into recommended solutions for businesses**

**After the Review Fall 2022**

**Competencies (knowledge, skills, abilities) addressed in this course:**

* **Trait 1 – Solving time value of money problems – well understood except for problems with complex language formulations**
* **Trait 2 – Solving investment problems - students performed better in trait 1 than in traits 2 and 3 of objective 1**
* **Trait 3 – Solving financing problems**
* **Trait 4 – Modeling financial condition and problem facing a business**
* **Trait 5 – Translating knowledge and model solutions into recommended solutions for businesses**

**After the Review Fall 2021**

**Competencies (knowledge, skills, abilities) addressed in this course:**

* **Trait 1 – Solving time value of money problems**
* **Trait 2 – Solving investment problems**
* **Trait 3 – Solving financing problems**
* **Trait 4 – Modeling financial condition and problem facing a business - Some students may not deliver to their full potential because (1) they are not used to solving complicated business problems, (2) are not used to business writing to communicate their work, or (3) do not work as hard as they would in an individual assignment.**
* **Trait 5 – Translating knowledge and model solutions into recommended solutions for businesses**

The following tables shows the average scores on each goal objective over time – the percentage of students who meets or exceeds expectations.

|  |  |
| --- | --- |
|  | Objective 1 – Students understand and can solve standard business financial problems |
| Fall 2021 | 92.5% |
| Fall 2022 | 93.3% |
| Fall 2023 | 89.4% |

The following table shows the average scores on each goal objective over time – the percentage of students who meets or exceeds expectations.

|  |  |
| --- | --- |
|  | Objective 2 – Students can model business financial problems and translate solution to business actions |
| Fall 2021 | 90.0% |
| Fall 2022 | 82.2% |
| Fall 2023 | 93.6% |

# 9. CLOSE LOOP PROCESS – CONTINUOUS IMPROVEMENT RECORD

**Assurance of Learning**

**Assessment/Outcome Analysis**

**Close Loop Process - Continuous Improvement Record**

**Program:** Master of Finance

**Goal 4:** Students are able to implement financial solutions to improve the performance of financial or non-financial businesses

**Goal Owner:** Michael Guthammar

**Where Measured:** Course-embedded analysis in Course FIN638*.* Assessed in the fall semester each year.

**How Measured:**  Homework assignments and midterm exam.

**Closing the Loop: Actions taken on specific objectives**

|  |
| --- |
| Objective 1: Students understand and can solve standard business financial problems |
| When Assessed | Fall 2023 |
| Recommended Remedial Actions | Increased time spent in classroom on problem solving and reviews. |
| Previous Assessment | Fall 2022 |
| Recommended Remedial Actions from Previous Assessment | Increased homework focus on time-value of money problems. |
| Outcome From Previous Assessment | Student performance improved with respect to time-value of money problems, but not with respect to more complex investment problems. |
|  |
| Objective 2: Students can model business financial problems and translate solution to business actions |
| When Assessed | Fall 2023 |
| Recommended Remedial Actions | None |
| Previous Assessment | Fall 2022 |
| Recommended Remedial Actions from Previous Assessment | Increased time spent in classroom on case study examples. |
| Outcome From Previous Assessment | Students were able to develop stronger case study reports. |