Stevens Institute of Technology

School of Business

**AACSB
ASSURANCE OF LEARNING**

**Master of Science in Financial Engineering (FE)**

**LEARNING GOAL # 2**

**Our students will interact effectively in teams.**

Responsibility: Pape Ndiaye

**New Team Learning Goal Assessment Process**

**Introduced in Spring 2018**

**Note:** This learning goal booklet contains a description of a new team assessment process that was introduced in the spring 2018.

June 2019

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# 1. INTRODUCTION: LEARNING GOAL #2

*Students will demonstrate an understanding of effective interaction in teams.*

This goal is assessed in *FE 630 Portfolio Theory and Applications*, which is a required core course in the FE curriculum. The assessment process described here applies to students in all School of Business degree programs.

FE630 students complete an assessment to determine their performance in groups.

#  2. LEARNING OBJECTIVES AND TRAITS

|  |
| --- |
| **Objective 1:** *Students will be able to facilitate task accomplishment within the context of project teams.* |
| **Traits** |   |
| Trait 1: | Anticipates problems and develops contingency plans |
| Trait 2: | Recognizes interrelationships among problems and issues |
| Trait 3: | Suggests new approaches to solving problems |
| Trait 4: | Organizes information into meaningful categories |
| Trait 5: | Helps others to draw conclusions from the facts |
| Trait 6: | Defines task priorities for work sessions and or overall projects |
| Trait 7: | Ensures that goals are understood by all |
| Trait 8: | Clarifies roles and responsibilities of others |
| Trait 9: | Reviews progress throughout work sessions/life of a project |
| Trait 10: | Summarizes the team's position on issues |
| **Objective 2:** *Students will be able to facilitate relationship building within the context of project teams.* |
| **Traits** |   |
| Trait 1: | Conveys interest in what others are saying |
| Trait 2: | Encourages ideas and opinions even when they differ from his/her own |
| Trait 3: | Works towards solutions and compromises that are acceptable to all involved |
| Trait 4: | Shares credit for success with others |
| Trait 5: | Cooperates with others |
| Trait 6: | Encourages participation among all participants |
| Trait 7: | Shares information with others |
| Trait 8: | Reinforces the contributions of others |
| Trait 9: | Involves others in decisions that affect them |
| Trait 10: | Encourages others to express their views even when they are contrary to his/her own |

# 2a. LEARNING OBJECTIVES AND TRAITS

Initially this goal was evaluated using this alternate criteria for Spring 2018, the updated criteria was adopted beginning Fall 2018:

*Goal: Students will demonstrate an understanding of effective interaction in teams.*

|  |
| --- |
| **Objective 1:** *Students will be able to facilitate task accomplishment within the context of project teams.* |
| **Traits** |   |
| Trait 1: | Conflict Resolution |
| Trait 2: | Collaborative Problem Solving |
| Trait 3: | Communication/Active Listening |
| Trait 4: | Team Planning and Task Coordination |

# 3. RUBRICS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Trait** | **Poor** | **Good** | **Excellent** |
|   | **Value** | **0** | **5** | **10** |
| Trait 1: | Anticipates problems and develops contingency plans | Fails to suggest a direction and does not clarify responsibilities  | Suggests some form of direction for the team | Identifies ways to proceed or alternatives to pursue and clarifies roles and objectives |
| Trait 2: | Recognizes interrelationships among problems and issues | Fails to request information from the team | Makes an effort to request information from the team | Asks questions, analyzes knowledge gaps, requests opinions, beliefs and perspectives |
| Trait 3: | Suggests new approaches to solving problems | Fails to provide information needed | Provides some necessary information | Provides data, offers factors, and judgments and highlights conclusions  |
| Trait4 | Organizes information into meaningful categories | Does not expand on others ideas | Makes an effort to build on others' suggestions | Builds on ideas expressed by others; provides examples and illustrations |
| Trait5 | Helps others to draw conclusions from the facts | Fails to suggest to the team to stay focused on the team's task | Makes an effort to keep members focused on the task | Urges team members to stay on task and to achieve team goals |
| Trait6 | Defines task priorities for work sessions and or overall projects | Fails to monitor progress | Tries to check progress | Checks on progress, helps maintain accountability of results |
| Trait7 | Ensures that goals are understood by all | Provides no analysis of team processes | Makes an effort to analyze team processes | Analyzes process and procedures used by the team in order to improve efficiency and timeliness.  |
| Trait8 | Clarifies roles and responsibilities of others | Does not ground comments in reality | Makes an attempt to check whether ideas are grounded in reality | Explores whether ideas presented are practical or workable. |
| Trait9 | Reviews progress throughout work sessions/life of a project | Does not reinforce team rules | Tries to reinforce team agreed upon principles | Helps to reinforce team rules, and maintains agreed upon principles |
| Trait10 | Summarizes the team's position on issues | Fails to summarize points and conclusions reached, and does not clarify conclusions reached | Makes an effort to summarize points and clarify conclusions | Combines ideas; sums up points made; Helps members understand the conclusions reached. |

**Objective 1:** *Students will be able to facilitate task accomplishment within the context of project teams*

**Objective 2:** *Students will be able to facilitate relationship building within the context of project teams.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Trait** | **Poor** | **Good** | **Excellent** |
|   | **Value** | **0** | **5** | **10** |
| Trait 1: | Conveys interest in what others are saying | Fails to praise the contributions of others | Makes an effort to commend the ideas of others  | Praises the ideas of others, shows friendliness, and points out others' contributions |
| Trait 2: | Encourages ideas and opinions even when they differ from his/her own | Does not attempt to find common ground in conflicting points of view.  | Makes an effort to find common ground in disputes | Mediates differences between others and finds a common ground in disputes  |
| Trait 3: | Works towards solutions and compromises that are acceptable to all involved | Fails to motivate team members | Makes an attempt to energize team members | Motivates others towards greater effort |
| Trait4 | Shares credit for success with others | Fails to challenge disruptive behaviors  | Makes an effort to challenge uproductive behaviors | Challenges unproductive behaviors  |
| Trait5 | Cooperates with others | Fails to encourage solidarity  | Makes an effort to ensure proper team behavior | Encourages agreement and helps smooth interactions |
| Trait6 | Encourages participation among all participants | Fails to express empathy for team members  | Attempts to reflect group feelings | Expresses empathy and support for team members |
| Trait7 | Shares information with others | Reluctant to share information with team members | Occasionally disseminates information  | Regularly Shares information willingly with team members |
| Trait8 | Reinforces the contributions of others | Fails to reinforce other team members’ help  | Makes an effort to provide positive feedback following others’ assistance  | Reinforces the contributions of others |
| Trait9 | Involves others in decisions that affect them | Fails to include team members in decisions that will affect them | Makes an effort to involve other team members in decisions that will affect them | Gets team members involvement in decisions that will affect them |
| Trait10 | Encourages others to express their views even when they are contrary to his/her own | Discourages others’ constructive dissent. | Attempts to encourage others’ constructive disagreement. | Urges others’ to express contrary views. |

# 3a. RUBRIC

This is again the previous rubric used in Spring 2018 before adopting the new one for Fall 2018.

|  |
| --- |
| **FE - 2: RUBRIC #1**   |
| **FE - 2** | **Students can interact effectively in teams** |
| **Objective 1** | *Students will demonstrate competency in interacting in teams.* |
|  | **Trait** | **Poor** | **Good** | **Excellent**  |  |
|  | **Value** | **0** | **5** | **10** |  |
| Trait 1 | Conflict Resolution | * Does not acknowledge/avoids conflict.
* Forces their view on others.
* Discounts or marginalizes others ideas.
 | * Encourages diverse perspectives.
* Protects all views -- those of the majority and those of the minority.
* Ensures that differing perspectives are understood by all.
 | * Helps team evaluate differing alternatives against agreed upon “criteria for a good solution”.
* Works to resolve conflict by identifying where differing solutions are in agreement and where they diverge.
* Helps team synthesize ideas such that synergy is achieved – i.e. new ideas surface that are superior to what has come before.
 |  |
| Trait 2 | Collaborative Problem Solving | * Team members withhold information.
* Team members protect self-interests.
* Team members operate as individuals, each responsible for a discreet set of tasks.
 | * Team members share knowledge, information, and expertise freely.
* Team members demonstrate a willingness to influence others as well as be influenced by others.
* Team members reinforce the team’s understanding of itself as working together toward a common goal.
 | * Team members facilitate the teams’ feeling “collectively accountable” for outcomes.
* Team members operate such that the collective goal of the team is more important than self-interest.

. |  |
| Trait 3 | Communication/Active Listening | * Communication is abrasive, insensitive.
* Individual(s) feel threatened or attacked as a result of the communication.
* Aggression, anger, competitiveness, and/or avoidance result from the communication
 | * Communication is characterized by the use of clarifying, probing, and reflective statements.
* You see the expressed idea and attitude from the other person’s point of view.
* You can sense how it feels to the other person.
* You achieve the other person’s frame of reference about the subject being discussed
 | * Others feel understood and respected as a result of the communication.
* Differences become more rational and understandable.
* Defensiveness decreases.
* Statements become less exaggerated. Members come closer to seeing the objective truth of the situation.
* Attitudes become more positive and oriented toward effective problem-solving.
 |  |
| Trait 4 | Team Planning and Task Coordination | * No attempt is made to clarify roles or responsibilities.
* No attempt is made to organize a process by which the team will work
* Deliverables and critical dates are not identified.
 | * Facilitates a discussion of how the team will complete the task.
* Facilitates the team’s understanding of roles, responsibilities, deliverables, and due dates.
* Periodically reviews progress and due dates.
 | * Helps team achieve a common understanding of the task and how the team will achieve its collective goal.
* Helps surface problems and generate solutions when needed.
* Helps define priorities and contingency plans as needed
 |  |

# 4. ASSESSMENT PROCESS

|  |  |  |
| --- | --- | --- |
| **Where & When Measured?** | **How Measured?** | **Criterion** |
| Student groups in *FE 630 Portfolio Theory and Applications* will be assessed for effective team interaction by the professor and by their fellow team members. | *Assessment:* Students learn the fundamentals of what makes for an effective team. Students work in teams, the assignment is based on their peers' ratings of their team skills and contributions. |  |

FE 630 students complete assessments.

Students receive a feedback report representing the average scores provided by their teammates, as well as (anonymized) comments after completing the assessments.

# Instructors calculate relevant metrics given the students’ responses on the surveys using traditional analytic tools. These include individual as well as section-wide aggregations of the peer ratings.

# 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.

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.

# 6. RESULTS OF ASSESSMENT - Spring 2019

**LEARNING GOAL FE 2: Our students will interact effectively in teams.**

**LEARNING OBJECTIVE # 1:** Students will be able to facilitate task accomplishment within the context of project teams.

**ASSESSMENT DATE: May 2019 ASSESSOR: Pape Ndiaye**

**NO. OF STUDENTS TESTED: 53 COURSE: FE 630**

|  |  |  |  |
| --- | --- | --- | --- |
| **Learning Goal Traits** | Failed to Meet | Met Expectations | Exceeded Expectations |
| **Objective 1: Team Leadership** | Score (0-3) | Score (3.1-4) | Score (4.1-5) |
| 1.   Anticipates problems and develops contingency plans | **2** | **9** | **42** |
| 2.   Recognizes interrelationships among problems and issues | **3** | **6** | **44** |
| 3.   Suggests new approaches to solving problems | **2** | **5** | **46** |
| 4.   Organizes information into meaningful categories | **1** | **7** | **45** |
| 5.   Helps others to draw conclusions from the facts | **1** | **9** | **43** |
| 6.   Defines task priorities for work sessions and or overall projects | **1** | **9** | **43** |
| 7.   Ensures that goals are understood by all | **2** | **7** | **44** |
| 8.   Clarifies roles and responsibilities of others | **3** | **4** | **46** |
| 9.   Reviews progress throughout work sessions/life of a project | **1** | **9** | **43** |
| 10.   Summarizes the team's position on issues | **2** | **7** | **44** |
| **Objective 1 average** |  |  | **4.85** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Learning Goal Traits** | Failed to Meet | Met Expectations | Exceeded Expectations |
| **Objective 2: Team Facilitation**  | Score (0-3) | Score (3.1-4) | Score (4.1-5) |
| 11.   Conveys interest in what others are saying | **2** | **8** | **43** |
| 12.   Encourages ideas and opinions even when they differ from his/her own | **1** | **9** | **43** |
| 13.   Works towards solutions and compromises that are acceptable to all involved | **2** | **7** | **44** |
| 14.   Shares credit for success with others | **2** | **8** | **43** |
| 15.   Cooperates with others | **1** | **7** | **45** |
| 16.   Encourages participation among all participants | **2** | **6** | **45** |
| 17.   Shares information with others | **1** | **7** | **45** |
| 18.   Reinforces the contributions of others | **1** | **8** | **44** |
| 19.  Involves others in decisions that affect them | **2** | **6** | **45** |
| 20.   Encourages others to express their views even when they are contrary to his/her own | **2** | **6** | **45** |
| **Objective 2 average** |  |  | **4.86** |

**Overall Summary:**

Total Count

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** | **74** |
| **Learning Goal Traits** | Not Meet Expectations  | Meet Expectations  | Exceed Expectations  | Avg. Grade on Trait |
| **1:** Team Leadership | 0 | 7 | 46 | 4.85 |
| **2:** Team Facilitation | 1 | 7 | 45 | 4.86 |
| **Average Grade (Maximum 5)** | **4.855** |

Total Average

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations**  | **Meet Expectations**  | **Exceed Expectations**  |
| **Total Students by Category** (Based on Average score across all traits) | **0** | **6** | **47** |

**COMMENTS:**

* **Results are coming from an automated team skill questionnaire filled by group members.**
* **Some students did their final project individually. They have not been asked to take the survey.**

**REMEDIAL ACTIONS:** Something missing in this evaluation is the ability to build, follow and update a project schedule which is an important component of successful teamwork. One potential roadblock to add that is that it seems that most the students have little to no exposure to project management. Usually, I spend quite some time to help with that, but we should think of having all students exposed to basics off project management in their first semester. By experience, most of first and second semester students start projects too late and are late to clarify the respective roles of team members.

# 6a. RESULTS OF ASSESSMENT - Fall 2018

**LEARNING GOAL FE 2: Our students will interact effectively in teams.**

**LEARNING OBJECTIVE # 1:** Students will be able to facilitate task accomplishment within the context of project teams.

**ASSESSMENT DATE: ASSESSOR: Pape Ndiaye**

**NO. OF STUDENTS TESTED: 23 COURSE: FE 630**

|  |  |
| --- | --- |
|  | Number of students per Category |
| **Learning Goal Traits** | Failed to Meet | Met Expectations | Exceeded Expectations |
| **Objective 1: Team Leadership** | Score (0-3) | Score(3.1-4) | Score(4.1-5) |
| 1.   Anticipates problems and develops contingency plans | 4 | 4 | 15 |
| 2.   Recognizes interrelationships among problems and issues | 3 | 4 | 16 |
| 3.   Suggests new approaches to solving problems | 4 | 4 | 15 |
| 4.   Organizes information into meaningful categories | 4 | 4 | 15 |
| 5.   Helps others to draw conclusions from the facts | 3 | 5 | 15 |
| 6.   Defines task priorities for work sessions and or overall projects | 4 | 4 | 15 |
| 7.   Ensures that goals are understood by all | 4 | 4 | 15 |
| 8.   Clarifies roles and responsibilities of others | 4 | 5 | 14 |
| 9.   Reviews progress throughout work sessions/life of a project | 3 | 4 | 16 |
| 10.   Summarizes the team's position on issues | 3 | 6 | 14 |

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  | Number of students per Category |
| **Learning Goal Traits** | Failed to Meet | Met Expectations | Exceeded Expectations |
| **Objective 2: Team Facilitation** | Score (0-3) | Score(3.1-4) | Score(4.1-5) |
| 11.   Conveys interest in what others are saying | 3 | 3 | 17 |
| 12.   Encourages ideas and opinions even when they differ from his/her own | 3 | 2 | 18 |
| 13.   Works towards solutions and compromises that are acceptable to all involved | 3 | 2 | 18 |
| 14.   Shares credit for success with others | 3 | 3 | 17 |
| 15.   Cooperates with others | 3 | 4 | 16 |
| 16.   Encourages participation among all participants | 3 | 1 | 19 |
| 17.   Shares information with others | 3 | 1 | 19 |
| 18.   Reinforces the contributions of others | 3 | 2 | 18 |
| 19.  Involves others in decisions that affect them | 4 | 4 | 15 |
| 20.   Encourages others to express their views even when they are contrary to his/her own | 3 | 5 | 15 |

**Overall Summary:**

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** | **23** |
| **Learning Goal Traits** | Not Meet Expectations  | Meet Expectations  | Exceed Expectations  | Avg. Grade on Trait |
| **1:** Team Leadership | 3 | 3 | 18 | 4.35 |
| **2:** Team Facilitation | 3 | 0 | 20 | 4.49 |
| **Average Grade (Maximum 5)** | **4.42** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations**  | **Meet Expectations**  | **Exceed Expectations**  |
| **Total Students by Category** (Based on Average score across all traits) | **3** | **1** | **19** |

**COMMENTS:**

* **Results are coming from an automated team skill questionnaire filled by group members.**
* **Some students did their final project individually. They have not been asked to take the survey.**

**REMEDIAL ACTIONS:** Reach out to the next professor using team projects to stress areas that could show improvement especially for students that failed to meet expectations.

# 6b. RESULTS OF ASSESSMENT

# Spring 2018

**LEARNING GOAL FE 2: Our students will interact effectively in teams.**

**LEARNING OBJECTIVE # 1:** Students will be able to facilitate task accomplishment within the context of project teams.

**ASSESSMENT DATE: Spring 2018 ASSESSOR: Pape Ndiaye**

**NO. OF STUDENTS TESTED: 74 COURSE: FE 630**

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** | **74** |
| **Learning Goal Traits** | **Not Meet Expectat-ions**  | **Meet Expectat-ions**  | **Exceed Expectat-ions**  | **Avg. Grade on Trait** |
| **1: Conflict Resolution**  | **0** | **0** | **74** | **9.86** |
| **2: Collaborative Problem Solving**  | **0** | **0** | **74** | **9.91** |
| **3: Communication/Active Listening**  | **0** | **0** | **74** | **9.90** |
| **4: Team Planning and Task Coordination** | **0** | **0** | **74** | **9.93** |
| **Average Grade (Maximum 10)** | **9.9** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations**  | **Meet Expectations**  | **Exceed Expectations**  |
| **Total Students by Category (Based on Average score across all traits)** | **0** | **0** | **74** |

**COMMENTS: Results are coming from questionnaire filled by group members.**

**REMEDIAL ACTIONS: None**

# 7. SPECIFIC STEPS TAKEN

# SPRING 2018

Decided to adopt a new rubric that would provide more meaningful results.

#

# 8. OUTCOMES: FE LEARNING GOAL # 2 AFTER 1 ROUND OF ASSESSMENT

The following table shows the average scores on each goal objective.

|  |  |
| --- | --- |
|  | Objective 1*Students will be able to facilitate task accomplishment within the context of project teams.* |
| Spring 2018 | 9.9/10 |
| Fall 2018 | 4.35/5 |
| Spring 2019 | 4.85 |

|  |  |
| --- | --- |
|  | Objective 2*Team Facilitation.* |
| Spring 2018 | NA |
| Fall 2018 | 4.49/5 |
| Spring 2019 | 4.86 |

# 9. CLOSE LOOP PROCESS – CONTINUOUS IMPROVEMENT RECORD

**Assurance of Learning**

**Assessment/Outcome Analysis**

**Close Loop Process - Continuous Improvement Record**

**Program:** Master of Science in Financial Engineering

**Goal 2:** Students will demonstrate an understanding of effective interaction in teams.

**Goal Owner:** Pape Ndiaye

**Where Measured:** Student groups in **FE 630** Portfolio Theory and Applications will be assessed for effective team interaction by the professor and by their fellow team members.

**How Measured:** Assessment: Students learn the fundamentals of what makes for an effective team. Students work in teams in the semester on a group project, that make up a total of 30% of the grade. Students complete an assessment after the completion of the project. The ratings of a student’s teammates are used (as a multiplier on the team’s overall grade on the project) in the computation of her final grade.

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

|  |  |
| --- | --- |
| **Objective 1** | Students will be able to facilitate task accomplishment within the context of project teams. |
| **When Assessed:** | *Spring 2019* |
| **Remedial****Action** | Something missing in this evaluation is the ability to build, follow and update a project schedule which is an important component of successful teamwork. One potential roadblock to add that is that it seems that most the students have little to no exposure to project management. Usually, I spend quite some time to help with that, but we should think of having all students exposed to basics off project management in their first semester. By experience, most of first and second semester students start projects too late and are late to clarify the respective roles of team members. |
| **Outcomes from Previous Assessment** | *20 students exceeded the expectations but 3 students (13% of the surveyed group) fail to meet the expectations*  |
| **When Assessed:** | *Fall 2018* |
| **Remedial****Action** | Reach out to the next professor using team projects to stress areas that could show improvement especially for students that failed to meet expectations. For next semester, Professor will invest to raise awareness on important rubrics for successful team work as a preventive action to help reduce the number of failing students. |
| **When Assessed:** | *Spring 2018* |
| **Remedial****Action** | *None, but decided to adopt a new rubric to provide more meaningful results* |

|  |  |
| --- | --- |
| **Objective 2** | Team Facilitation |
| **When Assessed:** | *Spring 2019* |
| **Remedial****Action** | *None* |
| **Outcomes from Previous Assessment** | *20 students exceeded the expectations but 3 students (13% of the surveyed group) fail to meet the expectations* |
| **When Assessed:** | *Fall 2018* |
| **Remedial****Action** | Reach out to the next professor using team projects to stress areas that could show improvement especially for students that failed to meet expectations. For next semester, Professor will invest to raise awareness on important rubrics for successful team work as a preventive action to help reduce the number of failing students. |