SLO 1: Critical Thinking Skills
Students are able to explain the importance of time value of money and its relation to the world of economics. Students are able to analyze the cash flows, tax rates, discount rates and depreciation rates, and by using cost-benefit analysis, evaluate the economic benefit of engineering project.

Relevant Associations:

Standard Associations
- New Core Component Areas
  7. Social & Behavioral Science (SOC & BS)
- New Core Objectives
  1. Critical Thinking (CT)
  3. Empirical & Quantitative Skills (EQS)

Related Measures

M 1: Standard test
Test containing quantitative questions, open ended questions and multiple choice questions will be prepared in blackboard for all students to complete. The tests will be facilitated in blackboard, will not be graded, and will administered twice over the semester, each time containing different situations. Rubrics pertaining solutions given to the test will be developed for assessment of the group. No individual grades will be generated.

The topics of the questions in first test are:
- Critical thinking:
  Students will be able to explain the importance of time value of money.
  Students will be able to understand that models simplify the computations.
  Students will be able to compute and apply economic performance measures to compare projects.
  Students will be able to compute and apply financial ratios to compare publicly traded companies.

- Empirical and Quantitative Skills:
  Students will be able to use empirical compounded interest models to compute balances of cash flows in real life.
  Students make extensive use of mathematical modeling of economic activities of firms.
  Students make extensive use of mathematical modeling planning horizons.
  Students will be able to understand how price of bonds are computed.

- Social Responsibility Skills:
  Students will be able to consider non quantitative factors in the proper comparison of projects, including ethical rationale.
  Students will understand how loans can be deceiving and the proper use and give of credit lines.

The topics of the questions for the second test are:
- Critical Thinking Skills:
  Students are able to analyze mathematical models by means of sensitivity analysis to draw conclusions.
  Students are able to synthesize best strategies in capital investment for profitability of corporations considering the different components of project valuation including tax rates, depreciation, cost of capital and planning horizons.
  Students will explain current affairs and trends in global economics and the place of USA in the economics of the future.
  Students will explain how markets create efficient means to create and distribute wealth in society, as well as the draw backs given markets are not perfect.

- Empirical and Quantitative Skills:
  Students make use of mathematical modeling for the computation of the valuation of fixed assets as they are used in

- Social responsibilities Skills:
  Students discuss the need for considering the risk associated to investments and the proper role of investors and investment managers.
  Students will understand the importance of having access to markets in order to create a fair society, with access to opportunities.
  Students will understand the importance their impact in economics at the local, national and international level

Source of Evidence: Standardized test of subject matter knowledge

Target:
- At least 75% of the students should have an evaluation of 2.5 or better in a scale from 0 to 4 in the critical thinking evaluations.

SLO 2: Communication skills
Students write an extensive technical report, an executive summary and make an oral presentation or video production describing the economic performance of an organization.

Relevant Associations:
M 2: Final project report and presentation
The final project for this course has three deliverables. An extensive report, an executive summary and an oral presentation. Other faculty and peer students will be invited to listen the oral presentation and faculty will evaluate the report and presentation by means of a rubric that will evaluate the Communication skills of the students.

Source of Evidence: Project, either individual or group

Target:
At least 75% of the students should have an evaluation of 2.5 or better in a scale from 0 to 4 in the communication skills evaluations.

Oral communication rubric

Organization
4. Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.
3. Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.
2. Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.
1. Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.

Language
4. Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.
3. Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.
2. Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.
1. Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.

Delivery
4. Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.
3. Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.
2. Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.
1. Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.

Supporting Material
4. A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter’s credibility/authority on the topic.
3. Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter’s credibility/authority on the topic.
2. Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter’s credibility/authority on the topic.
1. Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter’s credibility/authority on the topic.

Central Message
4: Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)
3: Central message is clear and consistent with the supporting material.
2: Central message is basically understandable but is not often repeated and is not memorable.
1: Central message can be deduced, but is not explicitly stated in the presentation.

Written communication rubric

Context of and Purpose for Writing Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).

4: Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.
3: Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).
2: Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience’s perceptions and assumptions).
1: Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).

Content Development

4: Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer’s understanding, and shaping the whole work.
3: Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.
2: Uses appropriate and relevant content to develop and explore ideas through most of the work.
1: Uses appropriate and relevant content to develop simple ideas in some parts of the work.

Genre and Disciplinary Conventions

Formal and informal rules inherent in the expectations for writing in particular forms and/or academic fields (please see glossary).

4: Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task(s) including organization, content, presentation, formatting, and stylistic choices.
3: Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, and stylistic choices.
2: Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation.
1: Attempts to use a consistent system for basic organization and presentation.

Sources and Evidence

4: Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing.
3: Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.
2: Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.
1: Demonstrates an attempt to use sources to support ideas in the writing.

Control of Syntax and Mechanics

4: Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.
3: Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.
2: Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.
1: Uses language that sometimes impedes meaning because of errors in usage.

SLO 3: Empirical and Quantitative skills

Students make extensive use of mathematical modeling for the economic evaluation of projects, which include the time value of model formulation, sensitivity analysis, data manipulation, analysis and presentation with spreadsheets.

Relevant Associations:

Standard Associations

New Core Component Areas
7 Social & Behavioral Science (SOC & BS)

New Core Objectives
3 Empirical & Quantitative Skills (EQS)
M 1: Standard test
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The topics of the questions in first test are:
Critical thinking:
Students will be able to explain the importance of time value of money.
Students will be able to understand that models simplify the computations.
Students will be able to compute and apply economic performance measures to compare projects.
Students will be able to compute and apply financial ratios to compare publicly traded companies.

Empirical and Quantitative Skills:
Students will be able to use empirical compounded interest models to compute balances of cash flows in real life.
Students make extensive use of mathematical modeling of economic activities of firms.
Students make extensive use of mathematical modeling planning horizons.
Students will be able to understand how price of bonds are computed.

Social Responsibility Skills:
Students will be able to consider non quantitative factors in the proper comparison of projects, including ethical rationale.
Students will understand how loans can be deceiving and the proper use and give of credit lines.

The topics of the questions for the second test are:
Critical Thinking Skills:
Students are able to analyze mathematical models by means of sensitivity analysis to draw conclusions.
Students are able to synthesize best strategies in capital investment for profitability of corporations considering the different components of project valuation including tax rates, depreciation, cost of capital and planning horizons.
Students will explain current affairs and trends in global economics and the place of USA in the economics of the future.
Students will explain how markets create efficient means to create and distribute wealth in society, as well as the drawbacks given markets are not perfect.

Empirical and Quantitative Skills:
Students make use of mathematical modeling for the computation of the valuation of fixed assets as they are used in

Social responsibilities Skills:
Students discuss the need for considering the risk associated to investments and the proper role of investors and investment managers.
Students will understand the importance of having access to markets in order to create a fair society, with access to opportunities
Students will understand the importance their impact in economics at the local, national and international level

Source of Evidence: Standardized test of subject matter knowledge
Target:
At least 75% of the students should have an evaluation of 2.5 or better in a scale from 0 to 4 in the empirical and quantitative skills evaluations.

SLO 4: Social Responsibility
Students discuss the need for non-financial evaluation of alternative projects in the light of ethical responsibility towards society, individuals and the environment

Relevant Associations:
Standard Associations
New Core Component Areas
7 Social & Behavioral Science (SOC & BS)
New Core Objectives
5 Social Responsibility (SR)

Related Measures
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Students will understand the importance their impact in economics at the local, national and international level.

Source of Evidence: Standardized test of subject matter knowledge

**Target:**
At least 75% of the students should have an evaluation of 2.5 or better in a scale from 0 to 4 in the Social responsibility evaluations.