

**Program: Master of Financial Engineering Program**
**1. Learning goals and rubrics**

Learning Goal	Learning Objectives	Where to measure?	How to Measure?
<b>L1. Analytical Thinking: Our graduates will command analytical thinking in solving complex financial decision problems.</b>	L11. Graduate will have basic quantitative skills for research.	Course-embedded test	Test evaluation
	L12. Graduate will use appropriate quantitative analytical techniques to identify problems in finance and develop a solution.	Course-embedded assignment and test	Test evaluation and assignment evaluation
<b>L2. Research Qualification: Our graduates will have skills (or ability) to conduct quality research</b>	L21. Graduate will engage in management research and present the findings of such research effectively.	Course-embedded test	Test evaluation
	L22. Graduate will have basic theory, analytical research tools, and background about their research areas.	Course-embedded test	Test evaluation
<b>L3. Communication: our graduates will be effective communicators.</b>	L31. Graduate will produce professional business documents.	Course-embedded assignment	Term paper evaluation
	L32. Graduate will deliver effective presentation accompanied with proper media technology.	Course-embedded presentation	Class presentation evaluation
	L33. Graduate will demonstrate effective interpersonal communication in a team setting.	Course-embedded team project	Class presentation evaluation
<b>L4. Global Perspective: Our graduates will have a global perspective.</b>	L41. Graduate will understand global business issues and relate current issues to emerging business opportunities.	Course-embedded assignment	Test evaluation

	L42. Graduate will have command of business English or other language of global financial markets.	Class participation and Test (OPI) evaluation	Class participation evaluation and Test (OPI) evaluation
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**2. Rubric to assess achievements of learning objectives**

<b>L1. Analytical Thinking: Our graduates will command analytical thinking in solving complex financial decision problems.</b>			
<b>L11. Graduate will have basic quantitative skills for research.</b>			
<b>Traits</b>	<b>Performance Level</b>		
	<b>1 (Fails to meet expectations)</b>	<b>2 (Meets expectations)</b>	<b>3 (Exceeds expectations)</b>
1. Logic and organization	Arguments are poorly organized, do not flow well, and are hard to follow.	Most but not all of the arguments are well organized, flow logically, and are easy to follow.	All arguments are well organized, flow logically, and are easy to follow.
2. Identification of research problems	Neglects to identify case issues; recounts facts of case with little analysis	Clearly identifies the key issues in the case and demonstrates understanding of the research issues	Develops a well-integrated statement of the complex research issues
3 Effective literature search skills	No literature or used of inappropriate web-based sources; sources are not come from professional literature; sources are not current and/or relevant.	Uses more than one research source but demonstrates no attempt to incorporate current information; most sources are authoritative or come from professional literature; sources are generally current and relevant.	Uses multiple research sources and makes effective use of current and reliable information; sources are authoritative or come from the professional literature; includes current relevant sources.

4. Application of quantitative tools	Misuses quantitative analysis tools, concepts, and techniques	Appropriately quantitative analysis tools, concepts, and techniques	Shows strong understanding and application of quantitative analysis tools, concepts, and techniques
5. Consistent conclusions	No or very weak connection between analysis and conclusions	Reasonable connection between analysis and conclusions; there may be minor inconsistencies	Very strong connection between analysis and conclusions; there are no inconsistencies.

<b>L1. Analytical Thinking: Our graduates will command analytical thinking in solving complex financial decision problems.</b>	
<b>L12. Graduate will use appropriate quantitative analytical techniques to identify problems in finance and develop a solution.</b>	
<b>Traits</b>	<b>Performance Level</b>

	<b>1 (Fails to meet expectations)</b>	<b>2 (Meets expectations)</b>	<b>3 (Exceeds expectations)</b>
1 Quantitative knowledge	Shows little understanding of quantitative knowledge	Shows solid understanding of quantitative knowledge	Shows through grasp of quantitative knowledge
2. Application of quantitative analytical Tools	Misuses quantitative analysis tools, concepts, and techniques	Appropriately quantitative analysis tools, concepts, and techniques	Shows strong understanding and application of quantitative analysis tools, concepts, and techniques
3. Application of financial analysis	Fails to incorporate financials into case analysis or shows only limited attempts to understand financials	Shows knowledge of ratios and trend analysis; demonstrates understanding of firm's financial standing	Applies ratios and trend analysis to develop sound judgments about company situation and prospects; presents financial analysis professionally
4. Identification of case problems/issues	Neglects to identify case issues; recounts facts of case with little analysis	Clearly identifies the key issues in the case and demonstrates understanding of company's decision situation	Develops a well-integrated statement of the complex issues of the case and demonstrates understanding of situation
5. Generation of alternatives	Identifies weak or infeasible alternatives with little attention to case issues	Generates 2 or 3 feasible alternatives for resolving the key issues of the case	Develops 2 or 3 insightful alternatives for resolving the issues; offers specificity and originality
6. Recommendations	Offers weak recommendations or pays little attention to addressing case issues	Provides well-reasoned recommendations that follow from the preceding analysis and clearly address case issues; no surprises	Integrates alternatives into a well-developed action plan; offers specificity, priorities, and sequencing of actions
7. Solutions	Shows little attention to presenting sound arguments or backing up ideas with analysis; offers "I think" statements	Provides good arguments backed up with quantitative knowledge, analysis, and persuasive rationale	Provides strong rationale and convincing arguments backed up with quantitative knowledge, analysis, and persuasive rationale

<b>L2. Research Qualification: Our graduates will have skills (or ability) to conduct quality research</b>			
<b>L21. Graduate will engage in management research and present the findings of such research effectively.</b>			
<b>Traits</b>	<b>Performance Level</b>		
	<b>1 (Fails to meet expectations)</b>	<b>2 (Meets expectations)</b>	<b>3 (Exceeds expectations)</b>
1. Preparation: “fact finding”	No significant research	At least 3 sources of relevant research	Research that goes beyond “literal” categories into “lateral” for points of comparison
2. Preparation: “problem/objective finding”	No clear cut problem or objective identified	A problem identified but no or only vague objectives	All problems clearly stated and multiple objectives prioritized toward solution opportunities
3. Incubation: “idea finding”	Not many ideas generated with little novelty or diversity	Good number of ideas but not overly novel or diverse	Many ideas of a diverse nature
4. Illumination: “solution finding”	Selection fails to meet objective(s)	Selection solves problem stated in main objective	Selection meets all objectives/maximizes solutions to all problems
5. Verification: “acceptance finding” (idea is proven)	Not a successful solution	Minimally successful (modification or improvement)	Highly successful solution (uniquely creative)

**L2. Research Qualification: Our graduates will have skills (or ability) to conduct quality research**

**L22. Graduate will have basic theory, analytical research tools, and background about their research areas.**

Traits	Performance Level		
	1 (Fails to meet expectations)	2 (Meets expectations)	3 (Exceeds expectations)
1. Understanding Theory.	Misunderstands or superficially understands assumptions, motivations, justifications and implications of basic theory.	Understands most but not all aspects of basic theory.	Correctly understands all aspects of basic theory.
2. Application of Theory	Derivation or application of theory is not strong enough to support research arguments.	Derivation or application of theory supports research arguments, but with some logical gap or unnatural assumptions.	Derivation or application of theory strongly supports research arguments.
3. Proper use of effective research tools.	Methods and tools used for research is irrelevant with research arguments.	Methods and tools used for research is relevant with research arguments. But there is a room for improvement.	Methods and tools used for research is perfectly adequate to address a research arguments.
4. Understanding currently important issues on research area.	Has no knowledge of currently important or actively discussed topics in their research area.	Has some knowledge of currently important or actively discussed topics in their research area.	Fully aware of currently important or actively discussed topics in their research area.

**L3. Communication: our graduates will be effective communicators.**

<b>L31. Graduate will produce professional business documents.</b>			
<b>Traits</b>	<b>Performance Level</b>		
	<b>1 (Fails to meet expectations)</b>	<b>2 (Meets expectations)</b>	<b>3 (Exceeds expectations)</b>
1. Clear introduction and background	No or unclear introduction, and absence of background information.	Provides an introduction, present some but not all of the key background information.	Provides a coherent introduction and addresses key background issues effectively.
2. Discipline-related concepts and issues	Discipline-specific concepts and issues are not identified or they are identified inappropriately.	Appropriately addresses most of the key discipline-specific concepts and issues but omits or identifies a few of the minor ones.	Appropriately addresses all key discipline-specific concepts and issues and most of the minor ones.
3. Internally consistent arguments	Arguments are inconsistent, different parts of the paper do not relate well to each other and are inconsistent.	Most arguments are consistent, and most parts of the paper are integrated and consistent.	Arguments presented in the paper are consistent and the different parts of the paper are well integrated and consistent.
4. Logic and organization	Arguments are poorly organized, do not flow well, and are hard to follow.	Most but not all of the arguments are well organized, flow logically, and are easy to follow.	All arguments are well organized, flow logically, and are easy to follow.
5 Consistent conclusions	No or very weak connection between analysis and conclusions	Reasonable connection between analysis and conclusions; there may be minor inconsistencies	Very strong connection between analysis and conclusions; there are no inconsistencies.
6. Style and grammar	Numerous spelling errors; inappropriate grammar, sentence structure, and paragraphing used throughout the document.	Few spelling errors, generally appropriate grammar, sentence structure, and paragraphing.	No or very minimal spelling, grammar, sentence structure, and paragraphing errors.

7. Effective literature search skills	No literature or used of inappropriate web-based sources; sources are not come from professional literature; sources are not current and/or relevant.	Uses more than one research source but demonstrates no attempt to incorporate current information; most sources are authoritative or come from professional literature; sources are generally current and relevant.	Uses multiple research sources and makes effective use of current and reliable information; sources are authoritative or come from the professional literature; includes current relevant sources.
8. Documents sources	No or inconsistent references; evidence of plagiarism.	Generally includes appropriate citations within the document and lists references at the end of the documents; references are generally usable but may not contain the full bibliographic information; citations and references are generally consistent throughout the documents	Includes appropriate citations within the documents and lists references that include full bibliographic information for each citation in the document; citations and references are consistent throughout the document.

<b>L3. Communication: our graduates will be effective communicators.</b>			
<b>L12. Graduate will deliver effective presentation accompanied with proper media technology.</b>			
<b>Traits</b>	<b>Performance Level</b>		
	<b>1 (Fails to meet expectations)</b>	<b>2 (Meets expectations)</b>	<b>3 (Exceeds expectations)</b>
1. Organization	No opening statement or irrelevant statement; Loses focus more than once; does not manage time	Has opening statement relevant to topic, and gives outline of speech; mostly organized with some	Has a clear opening statement that catches audience's interest and gives overview; stays focused

	effectively.	transitions; allows enough time to deliver speech, although it could have been better edited	throughout. Has transition statement, ties sections together; effective time management.
2. Quality of slides	Sloppy and/or unprofessional; may be difficult to read; many slides are superfluous.	Readable, professional, appropriate number	Readable, professional, imaginative and/or high quality (without being a distraction).
3. Voice quality and pace	Demonstrates one or more of the following :mumbling, too soft, too loud, too fast, too slow, "umms."	Can easily understand; appropriate pace and volume; delivery is mostly clear and natural	Excellent delivery; conversational, modulates voice, projects enthusiasm, interest, confidence.
4. Mannerisms	Demonstrates one or more distracting mannerisms, which may include bad posture, shifting feet, etc.	No distracting mannerisms. Decent posture.	Uses body language effectively (and naturally) to maintain audience's interest
5. Professionalism	Makes excuses for the presentation; word choice is not appropriate for audience; inappropriately informal, does not stay "in role."	Treats audience profession-ally, word choice is acceptable (does not use slang);keeps nervousness under control	Treats audience professionally; confident, shows command of topic
6. Use of media/rapport with audience	Relies heavily on slides or notes; makes little eye contact; inappropriate number of slides(too many or too few).	Looks at slides to keep on track with presentation; appropriate number of slides; maintains eye contact most of the time.	Slides are use effortlessly to enhance speech; speech could be effectively delivered without them; perfect eye contact.

**L3. Communication: our graduates will be effective communicators.**

**L12. Graduate will demonstrate effective interpersonal communication in a team setting.**

Traits	Performance Level		
	1 (Fails to meet expectations)	2 (Meets expectations)	3 (Exceeds expectations)
1. Commitment	Seems reluctant to engage fully in discussions and task assignments	Consistently demonstrates commitment to the project by being prepared for each group meeting	Follows up on ideas and suggestions from previous meetings and reports findings to the group
2. Balance between task and interpersonal relations	Focuses exclusively on task to be accomplished without regard to team member or focuses exclusively on interpersonal relations without regard to task	Balances the need for task accomplishment with the needs of individuals in the group	Volunteers to assist others and shares information openly
3. Contributions	Does not offer ideas or suggestions that contribute to problem solving	Frequently offers helpful ideas or suggestions	Listens actively and shows understanding by paraphrasing or by acknowledging and building on others' ideas
4. Stays on track	Takes the group off track by initiating conversations or discussions unrelated to the task	Introduces suggestions and ideas that are relevant to the task	Uses tact and diplomacy to alert group that focus has strayed from the task at hand

<b>L4. Global Perspective: Our graduates will have a global perspective.</b>
<b>L41. Graduate will understand global business issues and relate current issues to emerging business opportunities.</b>

Traits	Performance Level		
	1 (Fails to meet expectations)	2 (Meets expectations)	3 (Exceeds expectations)
1.Understanding of global issues	No or incomplete understanding of some or all of the following relevant global issues: economic, cultural, legal, demographic	Some understanding of most of the relevant issues	Clear and detailed understanding of relevant issues
2. Analysis of global issues	No analysis of impact of relevant global issues; erroneous analysis of impact	Some analysis of impact of global issues; some inaccuracies in analysis	Clear, accurate and detailed analysis of impact of relevant global issues
3.Application of analysis to global business situation	No application of analysis to specific global business situation; incorrect conclusions or recommendations made.	Some application of analysis to specific global business situation, weak conclusions or recommendations made	Clear application of analysis to global business situation; valid conclusions and good recommendations given

<b>L4. Global Perspective: Our graduates will have a global perspective.</b>			
<b>L42. Graduate will have command of business English or other language of global financial markets.</b>			
Traits	Performance Level		
	1 (Fails to meet expectations)	2 (Meets expectations)	3 (Exceeds expectations)

1. Knowledge	A few of the required elements (vocabulary, structures, and/or cultural context) are complete and correct.	Some of the required elements (vocabulary, structures, and/or cultural context) are complete and correct.	Most of the required elements (vocabulary, structure, and/or cultural context) are complete and correct.
2. Comprehension	The response shows little understanding of main ideas and/or details.	The response shows some understanding of main ideas and details.	The response for the most part shows understanding of main ideas and most details.
3. Communication	The communication skills and strategies are minimally evident, appropriate, and/or correct.	The communication skills and strategies are somewhat complete, appropriate and/or correct.	The communication skills and strategies are mostly complete, appropriate and correct.