Master of Financial Engineering(MFE) Learning Goals and Rubrics

Learning Goal	Learning Objectives	Where to Measure?	How to Measure? (Rubrics)
Analytical Thinking  Our graduates will command analytical thinking in solving complex financial decision problems. (L1)	Graduate will have basic quantitative skills for research. (L11)      Graduate will use appropriate quantitative analytical techniques to identify problems in finance and develop a solution.(L12)	Course-embedded test     Course-embedded     assignment and test	Test evaluation  2. Test evaluation and assignmentevaluation
Research Qualification Our graduates will have skills (or ability) to conduct quality research. (L2)	Graduatewill engage in management research and present the findings of such research effectively. (L21).      Graduate will have basic theory, analytical research tools, and background about their research area. (L22)	Course-embedded test     Course-embedded test	Test evaluation     Test evaluation
Communication Our graduates will be effective communicators. (L3)	Graduatewill produce professional     business or academic documents. (L31)      Graduatewill deliver effective presentation accompanied with proper media technology. (L32)	Course-embedded     assignment      Course-embedded     presentation	Term paper evaluation     Class presentation     evaluation  3. Class presentation

	Graduatewill demonstrate effective interpersonal communication in a team setting. (L33)	Course-embedded team     project	evaluation
Global perspective Our graduates will have a global perspective. (L4)	1. Graduatewill understandglobal business issues and relate current issues to emerging business opportunities. (L41)      2. Graduatewill take command of global financial marketsin business English or other languages. (L42)	Course-embedded     assignment      Classparticipation and Test     (OPI)evaluation	Test evaluation     Classparticipation     evaluation &OPI evaluation

### **APPENDIX 1. Rubrics for MFE Assessment**

Rubrics to assess achievements of learning objectives

#### L1. Analytical Thinking: Our graduates will command analytical thinking in solving complex financial decision problems.

#### L11. Graduatewill have basic quantitative skills for research

Traits		Performance Levels	
Traits	1 (Fails to Meet Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
1. Logic and	Arguments are poorly organized, do not flow	Most but not all of the arguments are well	All arguments are well organized, flow
organization	well, and are hard to follow.	organized, flow logically, and are easy to follow.	logically, and are easy to follow.
2.Identification	Neglects to identify case issues; recountsfacts of	Clearly identifies the key issues in thecase and	Develops a well-integrated statement ofthe
of research	case with little analysis	demonstrates understanding of the research issues	complex research issues
problems			
3. Effective	No literature or used of inappropriate web-based sources; sources are not come from professional	Uses more than one research source but demonstrates no attempt to incorporate current	Uses multiple researchsources and makes effective use of current and reliable information;
literature	literature; sources are not current and/or	information; most sources are authoritative or	sources are authoritative or come from the
search skills	relevant.	come from professional literature; sources are generally current and relevant.	professional literature; includes current relevant sources.
4.Application of	Misuses quantitative analysis tools, concepts,	Appropriately quantitative analysis	Shows strong understanding andapplication of
quantitative	and techniques	tools,concepts, and techniques	quantitative analysis tools,concepts, and techniques
tools			-
5. Consistent	No or very weak connection between analysis	Reasonable connection between analysis and	Very strong connection between analysis and
conclusions	and conclusions	conclusions; there may be minor inconsistencies	conclusions; there are no inconsistencies.

### L12. Graduatewill use appropriate quantitative analytical techniques to identify problems in finance and develop a solution.

Tuo:4a		Performance Levels	
Traits	1 (Fails to Meet Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
	Shows little understanding of	Shows solid understanding of quantitative	Shows through grasp of quantitative
1. Quantitativeknowledge	quantitative knowledge	knowledge	knowledge
2. Application of quantitative	Misuses quantitative analysis	Appropriately quantitative analysis	Shows strong understanding andapplication
analytical Tools	tools,concepts, and techniques	tools,concepts, and techniques	of quantitative analysis tools,concepts, and
anarytical 100is			techniques
	Fails to incorporate financials into	Shows knowledge of ratios and	Applies ratios and trend analysis to develop
3. Application of financial	caseanalysis or shows only limited	trendanalysis; demonstrates understanding	sound judgments about company situation
analysis	attempts tounderstand financials	offirm's financial standing	and prospects; presentsfinancial analysis
			professionally
4. Identification of case	Neglects to identify case issues;	Clearly identifies the key issues in thecase	Develops a well-integrated statement of the
problems/issues	recountsfacts of case with little analysis	and demonstrates understanding	complex issues of the case anddemonstrates
problems/issues		ofcompany's decision situation	understanding of situation
	Identifies weak or infeasible	Generates 2 or 3 feasible alternatives for	Develops 2 or 3 insightful alternatives
5. Generation of alternatives	alternatives with little attention to case	resolving the key issues of the case	forresolving the issues; offers specificity and
	issues		originality
	Offers weak recommendations or pays	Provides well-reasoned recommendations	Integrates alternatives into a well-developed
6. Recommendations	little attention to addressing case issues	that follow from thepreceding analysis and	action plan; offers specificity, priorities, and
		clearly addresscase issues; no surprises	sequencing of actions
7. Solutions	Shows little attention to presenting	Provides good arguments backed up with	Provides strong rationale and
	soundarguments or backing up ideas	quantitative knowledge, analysis, and	convincingarguments backed up with
	withanalysis; offers "I think" statements	persuasive rationale	quantitative knowledge, analysis, and
			persuasive rationale

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

L21. Graduatewill engage in management research and present the findings of such research effectively.

Traits		Performance Levels			
Traits	1 (Fails to Meet Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)		
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)		

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

Tunita	Performance Levels		
Traits	1 (Fail to expectations)	2 (Meets Expectations)	3 (Exceed 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.	<ul> <li>Methods and tools used for research is perfectly adequate to address a research arguments.</li> </ul>
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: ourgraduates will be effective communicators.

L31. Graduatewill produce professional business documents.

Traits		Performance Levels	
Traits	1 (Fails to Meet Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
1. Clear introduction and	No or unclear introduction, and absence of	Provides an introduction, present some but	Provides a coherent introduction and
background	background information.	not all of the key background information.	addresses key background issues effectively.
2. Discipline-related	Discipline-specific concepts and issues are	Appropriately addresses most of the key	Appropriately addresses all key discipline-
concepts and issues	not identified or they are identified inappropriately.	discipline-specific concepts and issues but omits or identifies a few of the minor ones.	specific concepts and issues and most of the minor ones.
3. Internally consistent	Arguments are inconsistent, different parts	Most arguments are consistent, and most	Arguments presented in the paper are
arguments	of the paper do not relate well to each other and are inconsistent.	parts of the paper are integrated and consistent.	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 researchsources 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	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.

throughout the documents	
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# L32: Graduatewill deliver effective presentation accompanied with proper media technology.

Tuoite		Performance Levels	
Traits	1 (Fails to Meet Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
	No opening statement or irrelevant	Has opening statement relevant to topic, and givesoutline of speech;mostly organized	Has a clear opening statement that catches audience's interest and gives overview;
1. Organization	statement; Loses focus more than once;does	with sometransitions; allows enough time to	staysfocused throughout.Has transition
	notmanage time effectively.	deliver speech, although it could have been	statement, ties sections together; effective
		better edited	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 highquality (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 thepresentation; word choice is not appropriate for audience; inappropriately informal, does not stay "in role."	Treats audience profession-ally, word choice isacceptable (does not use slang);keeps nervousnessunder control	Treats audienceprofessionally; confident, shows command of topic
6. Use of media/rapport withaudience	Relies heavily on slides or notes;makes littleeye 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 contactmost of the time.	Slides are use effortlessly to enhance speech; speech could be effectively delivered withoutthem; perfect eye contact.

### L33. Graduatewill demonstrate effective interpersonal communication in a team setting.

Traits		Performance Levels		
	1 (Fails to Meet Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)	
1. Commitment	Seems reluctant to engage fully indiscussions 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	
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 accomplishmentwith 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	

#### L4. Global Perspective: Our graduates will have a global perspective.

#### L41. Graduatewill understandglobal business issues and relate current issues to emerging business opportunities.

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

#### L42. Graduatewill have command of business English or other language of global financial markets.

Traits		Performance Levels	
	1 (Fails to Meet Expectations)	2 (Meets Expectations)	3 (Exceeds Expectations)
1. Knowledge	A few of the requiredelements (vocabulary,structures, and/or cultural context) are complete andcorrect.	Some of the requiredelements (vocabulary,structures, and/or cultural context) are complete andcorrect.	Most of the requiredelements (vocabulary, structure, and/or culturalcontext) are complete andcorrect.
2. Comprehension	The response shows littleunderstanding of main ideasand/or details.	The response shows someunderstanding of main ideasand details.	The response for the mostpart shows understanding ofmain ideas and most details.
3. Communication	The communication skillsand strategies are minimally evident, appropriate, and/orcorrect.	The communication skillsand strategies are somewhat complete, appropriate and/or correct.	The communication skillsand strategies are mostlycomplete, appropriate and correct.