Program: BTM (Business and Technology Management) Graduate

1. Learning goals and rubrics

Learning Goal	Learning Objectives	Where to measure?	How to Measure?
L1. Research Qualification - Our graduates will have skills (or ability) to conduct quality research	L11. Graduates will have fundamental quantitative analytical skills	Course embedded subject	Test Evaluation
	L12. Graduates will have basic knowledge on theory, literature, and trend in their research field	Qualification Exam	Qualification Exam
L2. Professional and Global Communication - Our graduates will be effective professional and globalized communicators	L21. Graduates will create well-written professional research papers in English	Course embedded subject	Project Report Evaluation
	L22. Graduates will be able to efficiently deliver their research ideas, analytical results, and academic contribution in English	Course embedded subject	Project Report Evaluation
L3. Creative and Analytical Thinking - Our graduates will be creative academic researchers	L31. Graduates will be able to identify the gap in the literature, and develop new research idea about their research field	Final Defense of Dissertation	Dissertation Evaluation
	L32. Graduates will be able to analyze the new research ideas using qualitative or quantitative analytical skills	Final Defense of Dissertation	Dissertation Evaluation
L4. Cross-disciplinary Study - Our graduates will integrate business and technology management	L41. Graduates will be able to integrate the analytical subjects between business and technology management areas	Course-embedded subject	Project Presentation Evaluation/ Report Evaluation

2. Rubric to assess achievements of learning objectives

L1. Research Qualification - Our graduates will have skills (or ability) to conduct quality research			
L11. Graduates will have fundamental quantitative analytical skills			
Traits	**Performance Level**		
	1 (Fails to meet expectations)	**2 (Meets expectations)**	**3 (Exceeds expectations)**
1. Understanding statistical theory	· Misunderstands probability theory and statistical analysis.	· Have a knowledge in probability theory and statistical analysis.	· Completely understand probability theory and statistical analysis and utilize techniques in business cases.
2. Identification of research problems	· Inappropriately identifies research issues, and vaguely demonstrates key ideas. · Neglects to identify case issues; recounts facts of case with little statistical analysis.	· Illustrates most of the major issues appropriately but some of minor omission exist. · Clearly identifies the key issues in the case and demonstrates understanding of quantitative analytical skills.	· Fully understands complex problems and detailed relevant issues · Develops further a well-integrated statement of the complex business cases by applying quantitative analytical skills.
3. Effective methodology search skills	· Methodology is inappropriate in research plan and monotonous. · Do not consider statistical error in business model	· Methodologies are appropriate and backed up with proper literatures and references. · Satisfy statistical error and try to deal with statistical error	· Methodologies are trendy and creatively utilized in business model. · Shows complete understanding of statistical issues and overcome the statistical error.

4. Solution finding	· Misuses quantitative analysis tools, concepts, and techniques · Doesn't clearly connect quantitative analysis with appropriate tools. · Fail to apply analytical tools to real data	· Appropriately use quantitative analysis tools, concepts, and techniques. · Able to show quantitative analysis effectively by using tools. · Apply analytical tools to real data	· Shows strong understanding application of quantitative analysis tools, concepts, and techniques in various way. · Enable to digest quantitative explanation clearly by using tools. · Utilize analytical tools to real data in various way.
5. Consistent conclusions	· No or very weak connection between analysis and conclusions. · Unreliable explanation and inconsistency in conclusions	· Reasonable connection between analysis and conclusions; there may be minor inconsistencies · Most of reasoning are plausible.	· Very strong connection between analysis and conclusions; there are no inconsistencies. · The flow of analysis and final conclusions are reliable and convincing.

	L1. Research Qualification - Our graduates will have skills (or ability) to conduct quality research		
	L12. Graduates will have basic knowledge on theory, literature, and trend in their research field		
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. · Does not have a fundamental basis of theory related knowledge.	· Have trained through a theory-based course and hold proper knowledge · Understands most but not all aspects of basic theory.	· Correctly understands all aspects of basic theory. · Links aspects of basic theory with suggested problems and addresses clear explanation.
2. Application of Theory	· Derivation or application of theory is not strong enough to support research arguments. · Inconsistent harmony of research arguments and theory.	· Derivation or application of theory supports research arguments, but still some logical gap or unnatural assumptions exist. · Partial abrupt connection between theory and arguments remains.	· Derivation or application of theory strongly supports research arguments. · Consistent harmony of research arguments and theory and theory complements research arguments in a concrete way.
3. Understanding of principle of research tools.	· Principle of methods and tools used for research are irrelevant with research arguments. · Unable to suggest clarified explanation with tools and methods.	· Principle of methods and tools used for research is relevant with research arguments. But there is a room for improvement.	· Principle of methods and tools used for research is perfectly adequate to address a research arguments.

		· Further development is needed, but methods and tools weakly supplement main arguments.	· Clear clarification by methods and tools substantially supports main research arguments.
4. Understanding currently important issues on research area.	· Has no knowledge of currently important or actively discussed topics in their research area. · Main research issues are inconsistent and fluctuated.	· Has some knowledge of currently important or actively discussed topics in their research area. · Satisfied understanding of main research issues within research areas.	· Fully aware of currently important or actively discussed topics in their research area. · High possibility of research progress exists concerning current issues.

L2. Professional and Global Communication - Our graduates will be effective professional and globalized communicators			
L21. Graduates will create well-written professional research papers in English			
Traits	**Performance Level**		
	1 (Fails to meet expectations)	**2 (Meets expectations)**	**3 (Exceeds expectations)**
1. Logic & Paper Construction	· Does not develop ideas cogently and demonstrate uneven and ineffective organization · Weakness of logic flow is appeared easily and unclear description of overall ideas · Unclear or missing structure exists · Weak or unfocused thesis statement	· Demonstrates unified and coherent ideas within paragraphs with generally adequate transitions · Clear description of most ideas within paragraphs , but some ideas seem illogical and/or unrelated · General illustration of adequate structure · Opens with clear thesis statement of research problems/issues	· Demonstrates and Utilize ideas cogently, and connects them with effective transitions · Provide persuasive and convincing description of overall contents within papers to guide readers with logic of analysis. · Well organized and effective flow of paragraph construction · Draw attention from readers with clever/insightful description to identify research issues
2. Language delivery	· Employs words that are unclear or inappropriate and sentence structure cause confusion · Use of informal terms and no use of academic terms	· Word forms and sentence structure are correct · Uses some academic terms	· Deliver effective word forms and clear sentence structure · Use sufficient academic terms appropriately

3. Spelling and Grammar	· Writing contains numerous grammatical errors and those interfere with comprehension. · Not properly edited · Uses many misspelled words and it distracts attention on papers	· Writing follows normal conventions of spelling and grammar throughout and minor errors exist. · Proper proofread has been done · Spell-checked, but may miss few typos	· Writing contains essentially no error in terms of spelling and grammatical errors. · The writing is carefully proofread · Uses correct spelling throughout and demonstrates strong vocabulary skills
4.Development of Ideas	· Most ideas are unsupported and described ineffectively · Shows irrelevant information and inconsistency and causes confusion between personal opinion and evidence	· Supports most ideas with effective examples references, and details · Minor inconsistency and partially weak reasoning	· Supports main points fully by using a balance of subjective and objective evidence and explores ideas thoroughly · Suggesting consistent and reasonable logics by making useful distinction.
5. Objectives of research ideas and Consideration on Specific Audience	· The writer's decision about focus, structure, style and content is unclear, so does not support the writing goal and objectives of the paper. · Never addresses the right audience.	· The writer has made adequate decisions about focus, structure, writing style, and content so as to achieve the main goals of the writing · Address the right audience more than once	· The writer's decision about focus, structure, style and content fully elucidate the writing goals and keep the consistent goals throughout the whole paper · Always addresses and target the right audience
6. Format	· Not in memo format · No or sloppy exhibits and does not refer to exhibits · No professional use of space, bullets or fonts	· Uses correct format with minor error · Refers to exhibits in body of paper · Looks professional (fonts, etc.)	· Correct format. · Attractive exhibits and seamless references. · Uses bullets appropriately to make good use of space, and attractive, professional use of fonts and bullets

L2. Professional and Global Communication - Our graduates will be effective professional and globalized communicators

L22. Graduates will be able to efficiently deliver their research ideas, analytical results, and academic contribution in English

Traits	Performance Level		
	1 (Fails to meet expectations)	**2 (Meets expectations)**	**3 (Exceeds expectations)**
1. Logic and Organization	· Arguments are poorly organized and produce leap of logic · Does not manage time effectively.	· Arguments are well organized and flow of arguments are fairly logical · Allows enough time to deliver speech, although it could have been better edited	· Arguments are completely organized and flow of arguments are perfectly logical, and are easy to follow · Manage time effectively
2. Quality of slides	· Sloppy and/or unprofessional · May be difficult to read · Many slides are redundant.	· Overall professional · Readable · Appropriate number of slides	· Exceptionally professional · Eye-catching and easy to read · Appropriate number of slides with concise and high quality information.
3. Voice quality, pace, and mannerism	· Demonstrates one or more of the following**:** mumbling, hard to understand English, too soft, too loud, too fast, too slow, "umms." · Demonstrates one or more distracting mannerisms including bad postures, shifting feet	· Demonstrates appropriate pace and volume, and delivers messages very clearly and naturally · Demonstrates decent posture	· Demonstrate excellent delivery with confidence, conversational attitude, modulating voice and appropriate pace · Demonstrate decent, relaxed posture and use body language adequately throughout presentation

4. Use of media/rapport with audience	· Relies heavily on slides or notes. · Read slide note without explaining confidently and no eye contact with audience	· Looks at slides to keep on track with presentation and uses prepared complements. · Make an eye contact with audience to tracking their response	· Utilize slides to enhance speech and draw audience's attention through supplementary resources. · Confident but humble eye contact ensures audience and supports the whole speech well.
5. Ability to answer questions.	· Cannot answer basic questions.	· Can reply most questions with correct information	· Answers all questions with relevant, correct information and refers proper examples

L3. Creative and Analytical Thinking - Our graduates will be creative academic researchers		
L31. Graduates will be able to identify the gap in the literature, and develop new research idea about their research field		

Traits	Performance Level		
	1 (Fails to meet expectations)	**2 (Meets expectations)**	**3 (Exceeds expectations)**
1. Fact finding	· Have weak idea of relevant theories · Shows little knowledge of currently issuing facts	· Understand at least 3 sources of relevant research · Addresses satisfied factual understanding of centered issues	· Research that goes beyond "literal" categories into "lateral" for points of comparison · Enable to see and analyze various perspectives concerning related facts.
2. Research gap	· Do not notice where the research gap is and business issues are already preceded in prior research. · Poorly organized classification of problems in a monotonous perspective.	· A research gap identified but no or only vague objectives · Noticeable demonstration on problems and objectives	· Research gap is clearly stated and multiple objectives prioritized toward solution opportunities · Well organized classification of problems in a variety of perspectives.
3. Idea finding	· Not many ideas generated with little novelty or diversity · A likely or possible single idea suggested and very derivative · Relevant business issues are already preceded in prior research	· Good number of ideas but not overly novel or diverse · Partly draw some attentions · Main idea has discrimination with prior research	· Many ideas of a diverse nature · Approach a topic from a new and originative ways. · Main idea has creativity and originality.

4. Solution finding	· Selection fails to meet objective(s) · Selection of solution do not meet the prioritized objectives	· Selection solves problem stated in main objective · Selection of solution satisfies prioritized objectives.	· Selection meets all objectives/maximizes solutions to all problems · Selection of solution completely coincide with prioritized objectives.
5. Contribution	· Not a successful solution · Eventually turn out to be not suitable or appropriate.	· Minimally successful (modification or improvement) · Supplement preceded research theory	· Highly successful solution (uniquely creative) · Opening up novel and innovative potentials for further research ideas

L3. Creative and Analytical Thinking - Our graduates will be creative academic researchers			
L32. Graduates will be able to analyze the new research ideas using qualitative or quantitative analytical skills			
Traits	**Performance Level**		
	1 (Fails to meet expectations)	**2 (Meets expectations)**	**3 (Exceeds expectations)**
1. Business analytics	· Shows little understanding of business analytical model	· Show solid understanding of business analytical model	· Shows complete understanding of business analytic model and extend adequate analytic model
2. Generation of alternatives	· Identifies weak or infeasible alternatives with little attention to case issues	· Generates several feasible alternatives for resolving the key issues of the case	· Develop several creative alternatives for resolving the issues or identifies set of feasible options that demonstrates the ability to integrate knowledge
3. Quantitatively or Qualitatively analytical evaluation	· Misuses quantitative or qualitative analysis tools, econometric models, concepts, and methodology	· Use appropriate quantitative or qualitative analysis tools, econometric models, concepts, and methodology	· Shows complete understanding of quantitative or qualitative analysis tools and knowledge to empirically estimate and interpret outcomes from econometric techniques

4. Utilize analytical tools in a logical manner	· No Identification of business problems and poorly develop proper hypotheses and utilize analysis tools in academic quest · Analysis design is poorly organized and does not flow effectively	· Use analysis tools logically to model hypotheses in real data · Analysis design is sequentially well organized and flow is adequate	· Identify business problems and develop proper hypotheses and utilize analysis tools in academic quest · Analysis design is very well organized and flow is effective and logically flawless
5. Use new ideas and analysis methods not includes in the problem	· Absence of any new ideas and creative analytical methods	· Integrate ideas and analytical methods from other sources not directly presented in the case reasonably well	· Integrates new ideas and analytical methods from other sources not directly presented in the problem with creative analytical methods

L4. Cross-disciplinary Study - Our graduates will integrate business and technology management.			
L41. Graduates will be able to integrate the analytical subjects between business and technology management areas			
Traits	**Performance Level**		
	1 (Fails to meet expectations)	**2 (Meets expectations)**	**3 (Exceeds expectations)**
1. Integrating cross disciplinary study	· Deals only with a single perspective and fails to discuss possible perspectives from other disciplines.	· Begins to relate alternative views from other disciplines to qualify business analysis.	· Additional diverse perspectives other disciplines to qualify business analysis with comprehensive knowledge
2. Analyzing social issues	· Fail to converge with social issues and multidisciplinary theories.	· Understand social issues and present solutions from multiple perspectives.	· Determine the problems that society needs to tackle using a combination of business, technology and management knowledge and lead a team of experts to solve them.
3.Advanced analytical techniques	· Does not use any advanced analytical techniques such as statistical analysis and decision science tools	· Somewhat uses advanced analytical techniques such as statistical analysis and decision science tools to analyze data and solve the problem	· Effectively uses advanced analytical techniques to analyze data and solve the problem
4. Intellectual ability	· Does not yet demonstrate intellectual acuity, imagination, and sensitivity.	· Somewhat demonstrates intellectual acuity, imagination, and sensitivity.	· Demonstrates a high degree of · intellectual acuity, imagination, and sensitivity.

5. Awareness of interrelationships	· Does not yet demonstrate awareness of inter-relationships among self, discipline, business, and society.	· Demonstrates some awareness of interrelationships among self, discipline, business, and society	· Clearly demonstrates an awareness of inter-relationships among self, discipline, business, and society.