



SBM1203 Venture/Project Economics & Finance

<i>UOS CODE</i> SBM1203	<i>UOS NAME</i> Venture/Project Economics & Finance			<i>CREDIT POINTS</i> 6	<i>STATUS</i> Secondary Core
<i>SUMMARY</i>	<p>Money is the life blood of economy. Understanding, modelling and managing the finances of projects/programs and ventures are fundamental to achievement of successful business outcomes. Project/venture economics and finance belong to a branch of knowledge that is used very widely for the analysis of alternatives, formulation of financial strategies and decision making on virtually all investments. Thus, it is really at the core of quantitative management and capital budgeting.</p> <p>This unit of study will equip students with insights and tools for financial appraisal and decision optimisation. It aims at imparting the basic knowledge and competencies required in project appraisal and financial management applicable to all sectors of industry and business, including services, business investment, R&D, capital projects and projects in local, state and national government departments and agencies. Students are encouraged to learn to apply the tools to analyse projects, programs and ventures. The foundation sciences are compound interest rate mathematics and the family of techniques broadly known as discounted cash flow (DCF) techniques. Coverage includes Equivalent Uniform Annual Cashflow (EUAC), Present Value (PV), Internal Rate of Return (IRR), Benefit-Cost Ratio (BCR) as well as Bonds and Debentures, Depreciation, Replacement, Valuation and Capital Budgeting techniques.</p> <p>Professor Jaafari will aid students individually and in teams to work practically through the underpinning knowledge and proceed to respond to the team assignment.</p>				
<i>COURSE CONVENOR</i> <i>COURSE TUTOR</i>	Professor A Jaafari, ME, MSc, PhD, FIEAust, CPEng TBA				
<i>ASSUMED KNOWLEDGE</i>	Fundamentals of project cost estimation and financial management				
<i>APPROXIMATE WORKLOAD</i>	Lectures & Workshops	Team Work	Personal Work	Readings	
	>30 hours	>30 hours	>50 hours	>30 hours	
<i>PRE-REQUISITE (course name)</i>	Recommended: SBM1201 Project Management Fundamentals 3				
<i>OBJECTIVES</i>	<p>Students should be able to carry out basic project appraisal, financial planning and value engineering tasks. It is expected that students will develop skills in decision making regarding analysis of alternatives, financial budgeting and project capital decisions. More specifically students should demonstrate:</p> <ul style="list-style-type: none"> • A sound understanding of financial modelling, analysis and interpretation techniques • Ability to design and orchestrate actual project/venture appraisal studies • Ability to understand and prudently apply techniques of depreciation, valuation, replacement and associated analysis • Ability to develop criteria for appraisal and optimisation that incorporate not only financial returns but also community and stakeholders' benefits 				
<i>TARGET COMPETENCIES (Project and Program Management)</i>	<p>Target competencies in this unit of study comprise the following:</p> <p>Financial Modelling</p> <ul style="list-style-type: none"> • Competency in systematic evaluation of financial modelling techniques, with a view to utilisation in the analysis of typical alternatives encountered in venture/project life cycle • Competency in framing and applying at least 6 (preferably 8 or more) typical financial analysis techniques to venture/project in order to achieve project objectives and establish the criteria for selection of best alternatives in order to meet the desired set of business objectives <p>Financial Analysis</p> <ul style="list-style-type: none"> • Competency in performing both quantitative and non-quantitative analysis of alternatives for optimum development of a project to meet specific business objectives particularly in its formative stage. 				



	<ul style="list-style-type: none"> Competency in performing sensitivity, risk and uncertainty analysis to explore probable zones for optimum decision choices and associated courses of action affecting venture/project choices <p>Finance and Financial Planning & Management</p> <ul style="list-style-type: none"> Competency in undertaking analysis of various funding options, selection development and management of the same in order to achieve specified business objectives Ability to develop and implement a selected project alternative based on both financial and non-financial considerations, and monitoring of the same during different phases of a venture/project life with view to ensuring that the business and strategic objectives are met or exceeded 	
TARGET COMPETENCIES (Personal and Socio-cultural)	<ul style="list-style-type: none"> Generic: All competencies that are common to all professionals (including cognitive and communication abilities, problem solving and analytical mindset) Leadership: Ability to direct, motivate & manage individuals & teams. Commitment: Ability to dedicate to tasks & to project outcomes. Attitude: Ability to create the right frame of mind that promotes integrity & support for achievement of project goals within a social context. Self Direction: Ability to manage within and without guidelines & processes, and to work without supervision. Learning: Ability to commit to continuous improvement in knowledge, skills & attitude, & to creating new knowledge developing skills & approaches. Cultural Empathy: Ability to respect for & accommodation of individual lifestyle, beliefs & norms. Creativity & Innovation: Capacity to generate new ideas/approaches & make them happen. 	
MODES OF DELIVERY	<ul style="list-style-type: none"> Upfront intensive workshop (5 days) Project and team based flexible work facilitated via the Internet (over 10 weeks) Face-to-face formal assessment (one week) 	
ASSESSMENT	<ol style="list-style-type: none"> Formal knowledge test Team project submissions (formatted as per specification for the same) Formal PM competency assessment Formal Leadership & Socio-cultural competency assessment 	
	PRESCRIBED FOR THE COURSE	SELECTED REFERENCES
PRINTED MATERIALS	<p>Course notes as provided by Professor Jaafari</p> <p>Case study material (select one of the nominated case study projects or students' own case project subject to endorsement)</p> <p>Brief for team projects</p> <p>Grant, Ireson and Leavenworth, <i>Principles of Engineering Economy</i> (J.Wiley & Sons)</p>	<p>Many reference books are written on this subject and most are similar to one another. The following may be found useful:</p> <p>Wyatt, Steve B. <i>The Principles of Finance</i>. Southwestern College, 1998 (ISBN: 0-538-84377-2)</p>
WEB SITES	<p>No single Web site presents all the necessary knowledge that students need to learn and apply. However, opposite are some useful sites to visit.</p>	<p>Online useful sources of references are:</p> <p>Students are expected to conduct own search and locate useful web sites. The following are just a sample of such sites:</p> <p>http://members.aol.com/AllenWeb</p> <p>http://www.ausaid.gov.au/ausguide/ausguidelines/ind ex.cfm</p> <p>http://www.au.af.mil/au/awc/awcgate/awc-sp.htm#gen</p> <p>http://www.gannettfleming.com/damproject/01_home .htm</p> <p>http://www.projectmanagement.tas.gov/index.htm</p> <p>http://www.un.org/esa/sustdev/agenda21.htm</p> <p>http://www.adb.org/Projects</p>



<i>Software</i>	Typical Electronic Spreadsheets (e.g. MS Excel)	Not necessary															
COURSE CONTENTS	<p>Intensive Phase</p> <p>Day 1</p> <ul style="list-style-type: none"> • Introduction to course aims, objectives, target competencies, learning strategies, resources available, timetable and deliverables, assessment methods and related briefings • Case study presentation • Briefing on how to conduct the entire unit of study • Lecture: Introduction to project/venture financial appraisal • Lecture: EUAC technique • Tutorial work on fundamental frameworks and approaches to financial appraisal and simple EUAC problem • Class discussion of tutorial outcomes • Lecture: Net present value technique • Tutorial work on NPV technique <p>Day 2</p> <ul style="list-style-type: none"> • Bonds, debentures, debt and other financial instruments • Tutorial work on bonds and debentures • Lecture: Internal rate of return and its application range • Tutorial work on IRR • Lecture: Benefit cost ratio • Tutorial work on BCR technique • Class discussion of tutorial work <p>Day 3</p> <ul style="list-style-type: none"> • Lecture: Depreciation, valuation and capitalisation studies • Tutorial work on depreciation, valuation and capitalisation studies • Class discussion of tutorial work <p>Day 4</p> <ul style="list-style-type: none"> • Individual competency assessment in venture/project economics and finance • Reinforcing learning outcomes and application of the same to forthcoming team project • Conduct of written test on fundamentals of venture/project economics & finance • Students' feedback on intensive phase 																
	<p>Teamwork phase</p> <p>A structured learning program will be applied; in summary form it will comprise:</p> <ul style="list-style-type: none"> • An overall process for venture/project economics and finance studies on case project as per typical approach advised in the unit's web site; • A program of the learning activities which are part of student's Team Workplan and individual competency acquisition needs. All teamwork activities are to be conducted within the Master Schedule as advised in the unit's web site (detailed schedules are to be developed and submitted as part of the Team Work/QA Plan) • The Brief is available as downloadable files. Your team needs to follow this Brief carefully and submit all its work as per format specified. <p>The Learning activities will broadly comprise:</p> <table border="1" data-bbox="453 1760 1374 2033"> <tr> <td colspan="5" data-bbox="453 1760 1374 1845">Assessment of learning styles and team roles, and balancing of team development of self management and socio-cultural/teamwork competencies</td> </tr> <tr> <td data-bbox="453 1845 612 1951">Team Formation, Case Project selection and team QA/Workplan</td> <td data-bbox="612 1845 794 1951">Activity 1 Best Practice Models vs. Case Project Requirements</td> <td data-bbox="794 1845 991 1951">Activity 2 Initiation Plan for Case Project Appraisal and Finance</td> <td data-bbox="991 1845 1177 1951">Activity 3 Detailed Plan for Case Project Appraisal and Finance</td> <td data-bbox="1177 1845 1374 1951">Activity 4 Evaluation, Formatting and Presentation of Project Report</td> </tr> <tr> <td data-bbox="453 1951 612 2033">Case Project Summary, QA/Workplan</td> <td data-bbox="612 1951 794 2033">Submit Assignment 1</td> <td data-bbox="794 1951 991 2033">Submit Assignment 2</td> <td data-bbox="991 1951 1177 2033">Submit Assignment 3</td> <td data-bbox="1177 1951 1374 2033">Submit Assignment 4</td> </tr> </table> <p>Continuous reflection, self and peer assessment and competency acquisition. Final Individual Report and Viva to validate competencies acquired versus target competencies</p>		Assessment of learning styles and team roles, and balancing of team development of self management and socio-cultural/teamwork competencies					Team Formation, Case Project selection and team QA/Workplan	Activity 1 Best Practice Models vs. Case Project Requirements	Activity 2 Initiation Plan for Case Project Appraisal and Finance	Activity 3 Detailed Plan for Case Project Appraisal and Finance	Activity 4 Evaluation, Formatting and Presentation of Project Report	Case Project Summary, QA/Workplan	Submit Assignment 1	Submit Assignment 2	Submit Assignment 3	Submit Assignment 4
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	<p>*. PAR should include financial appraisal and estimation of the capital/financing needs of the case project through different phases including cashflow financing cost if applies.</p>
<p>COMPETENCY VALIDATION (via evidence and professional interview)</p>	<p>Final Report and assessment</p> <p>Each student must plan to progressively acquire, develop and document both target financial engineering and personal/socio-cultural competencies. The protocols on the web site for this purpose need to be followed carefully to prepare the required evidence of competency acquisition. The evidence for this unit to comprise a final report in two parts to validate individually the following: Project Management competencies and Personal and Socio-cultural competencies. These will be assessed separately and both need to show the student's development history using the student's L&D plan as the basis.</p>