

Entrepreneurship and Start up Curriculum (C-20)

**Government of Karnataka****DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION**

Program	Pathway	Semester	5
Course Code	20ET51I	Type of Course L:T:P	104:52:312
Course Name	Entrepreneurship and Start up	Credits	24
CIE Marks	240	SEE Marks	160

Introduction:

“Entrepreneurs are simply those who understand that there is little difference between obstacle and opportunity and are able to turn both to their advantage.”

Congratulations on your decision to prioritize entrepreneurship course as a carrier pathway.

“If you have a Vision, we will make it Reality”

This course will spark your interest in starting a new endeavour by introducing you to the basic tools and processes of launching a new venture. This course immerses students in entrepreneurship with an emphasis on critical thinking, creativity, and product development. Students will explore the evolution of a product from concept to market using a real-world simulation, prototyping, feasibility analysis, risks and benefits analysis etc. Student will interact with entrepreneurs and business professionals and explore the feasibility of their original ideas which in turn in establishing a platform to participate in entrepreneurial and management activities. Finally, student will develop a business plan for minimum viable product (MVP) or service through 12 weeks bootcamp to pith for the start-ups.

Pre-requisite

Before the start of this specialisation course, you will have prerequisite knowledge gained on the following subjects:

Engineering Mathematics, Communication Skills, Computer Aided Engineering Graphics, Statistics & Analysis, Basic IT Skills, Fundamentals of Electrical and Electronics Engineering and Project Management skills.

In this year of study, you shall be applying your previous years learning along with specialised field of study in translating your idea into prototype, business model and minimum viable product (MVP) or service

Course Cohort Owner

A Course Cohort Owner is a faculty who is fully responsible for this specialised field of study and the cohort of students who have chosen to study this specialised field of study.

Guidelines for Cohort Owner

1. Entrepreneurship pathway is restricted to a Cohort of 20 students which could include students from other relevant programs.
2. One faculty shall be the Cohort Owner for facilitating this pathway
3. The course shall be delivered in boot camp mode spanning over 12 weeks of training with weekly developmental assessments
4. On weekends, cohort owner must arrange interactions (physical mode, online mode or recorded videos) with the entrepreneurs
5. Cohort owner shall plan and accompany the cohort for incubator visits.
6. Cohort owner shall maintain and document entrepreneur assignments, weekly assessments, and practices
7. The cohort owner shall coordinate with faculties across programs needed for their course to ensure seamless delivery as per time table
8. The cohort owner along with classroom sessions can augment or use supplementally teaching and learning opportunities including good quality online courses available on platforms like Karnataka LMS, Infosys Springboard, NPTEL, Unacademy, SWAYAM , start-up Karnataka etc

Course outcome:

At the end of the course the student will be able to

CO1	Identify entrepreneurial activities and its application.
CO2	Conceptualize the Idea, design and conduct feasibility analysis
CO 3	Develop, Test and Validate the Prototype
CO 4	Develop a business model for an entrepreneurial venture
CO 5	Prepare a successful business plan for an entrepreneurial venture

Detailed course plan

Week	CO	PO	Days	1 st session (9am to 1 pm)	L	T	P	2 ND session (1.30pm to 4.30pm)	L	T	P
1	1	PO3	1	<ul style="list-style-type: none"> • Concept of Entrepreneurship • Learn how entrepreneurship has changed the world • Learn how entrepreneurship has brought changes in India • Exploring opportunities in the ecosystem • Identify the reasons why people want to become entrepreneurs • Discuss Entrepreneurship Trend spotting • Map The skills/ Traits required to be an entrepreneur 	4			<ul style="list-style-type: none"> • Understanding entrepreneurs' risk and rewards • Understand that risk-taking is a positive trait • Identify risk-taking traits and resilience traits • Appreciate the role of failure on the road to success and understand when to give up • Identify entrepreneurial myths and uncover the true facts. 	3		
	1		2	<ul style="list-style-type: none"> • Entrepreneurship Mindset? • (Dream Bigger, recognise opportunity, try something new & challenging, Plan & execute, bounce back from failures, Analyse and learn Perseverance) 	4			<ul style="list-style-type: none"> • Express your dreams • Asses the Personal Entrepreneurial Competencies (PECs) Self Rating Questionnaire • Identify your potential entrepreneurship style based on personality traits, strengths, and weaknesses. 			3

	1	3	<ul style="list-style-type: none"> Understand how ordinary people become successful global entrepreneurs, their journeys, their challenges, and their success stories Understand how ordinary people from India have become successful entrepreneurs. Discuss Global innovation index India in global innovation index Reasons for India's weakness in innovation 	4			<ul style="list-style-type: none"> Discuss the Entrepreneurial success stories of Flipkart, Ola, Paytm, Practo, Thyrocare, Swiggy, Byju's etc 			3	
	1	4	<ul style="list-style-type: none"> National innovation and start-up policy 2019 for student and faculty Government initiatives for vibrant start-up eco system 			4	<ul style="list-style-type: none"> Western and Japan start up models Identify the Trends in Indian start up Emerging technologies and start up 			3	
	1	5	<p>Developmental Weekly Assessment</p> <ul style="list-style-type: none"> Seminar on "Recognizing and Shaping Opportunities" 				<p>Assessment Review and Discursion on outcome of seminar</p>			3	
	1	6	<p>Meet an entrepreneur, ask him/her the keys to successful entrepreneurship. Also ask him/her whether he/she attributes the success of his business to luck or hard work. + Assignment</p>			5					
Week	C	P O	Days	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P

2	2	PO3	1	PEER Discussion on entrepreneur Assignments			Creativity, Design thinking and Innovation <ul style="list-style-type: none"> • Understand Design Thinking as a problem-solving process. • Impact of design thinking on design, manufacturing, and delivery • Importance of Design thinking for entrepreneurs • Describe the principles of Design Thinking. • Describe the Design Thinking process 	3		
	2		2	Execution of strategies <ul style="list-style-type: none"> • Brainstorming • Pain storming • Kano model • The art of Tinkering 		4	Execution of strategies <ul style="list-style-type: none"> • Decomposition • Blue Ocean Strategy • TRIZ 			3
	2		3	Organize and play the games <ul style="list-style-type: none"> • Six hat game • Alter-egos • Word association • Idea swapping • Reverse brainstorming 		4	Methods in Visual Thinking Visualization techniques, Visual thinking, and envisioning information as taught by Edward Tufte multimedia tools			3
	2		4	Idea Generation	4		<ul style="list-style-type: none"> • Value proposition design 	3		

				<ul style="list-style-type: none"> Sources of business ideas How to find & assess ideas? Where to find data for ideation? Transformation of ideas into opportunities Idea and opportunity assessment 				<ul style="list-style-type: none"> Market assessment Customer insight Ideas development Challenges in Innovation Disruptive vs. Sustaining innovation Radical vs. incremental innovation 			
			5	Developmental Weekly Assessment <ul style="list-style-type: none"> Individually post a picture representing a problem or a solution that they find interesting as a potential startup idea 				Assessment Review and discursion			3
	2		6	<ul style="list-style-type: none"> Meet an entrepreneur and interact about Transformation of ideas into an opportunities + Assignment 			5				
Week	CO	PO	Days	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P
3	3	PO3	1	PEER Discussion on entrepreneur Assignments			4	Integrated Product Development Process <ul style="list-style-type: none"> An integrated and interdisciplinary approach to engineering design Design for manufacturing Aesthetic and Ergonomic considerations Role of modelling and Simulation 			3
	3		2	Stages of product development	4			Stages of product development	3		

				<ul style="list-style-type: none"> Ideation Feasibility Analysis Industry & competition analysis Environment impact analysis Financial feasibility analysis Prototyping Testing and Validation 				<ul style="list-style-type: none"> Commercialization Value proposition for customer Minimum Viable Product Bootstrapping to MVP success Product development life cycle and its management 			
	3		3	Visit to makers lab or Technical Business Incubator- Observe the Scenario, interact and prepare a report							7
			4	Visit to makers lab or Technical Business Incubator- Observe the Scenario, interact and prepare a report							7
	3		5	CIE 1– Written and practice test				Assessment Review and corrective action			3
	3		6	Meet entrepreneurs and interact about the product development process + Assignment			5				
We ek	C O	P O	Da ys	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P
4	3		1	PEER Discussion on entrepreneur Assignments and practice						4	3
	3	PO4	2-4	Prototyping, Modelling & Testing							
				Includes Generation of mock-ups and look-like prototypes, CAD, digital fabrication, electromechanical -optical bread board design, fabricate, build, and test multiple generations of rapid prototypes, Computer modelling methods, testing, sensors and data collection; firmware, systems integration and debugging, programming /coding, back-							21

				end(server/cloud) and front-end (user) software. (Use any of the above or other technologies as required by your concept idea or prototype)					
	3		5	Developmental Weekly Assessment The testing lab or makers lab is an opportunity for you to work and develop 4-5 potential MVP of your project idea. You are welcome to use the Testing lab or makers lab to work through these ideas. In lab, the faculty will offer feedback about your ideas and viability of the MVP tests.				Assessment Review and corrective action	3
	3		6	Meet the entrepreneur and interact about the prototype development process + Assignment			5		
5	3	PO4		PEER Discussion on entrepreneur Assignments and practice				4	3
	3		2-4	Prototyping, Modelling & Testing Includes Generation of mock-ups and look-like prototypes, CAD, digital fabrication, electromechanical -optical bread board design, fabricate, build and test multiple generations of rapid prototypes, Computer modelling methods, testing, sensors and data collection; firmware, systems integration and debugging, programming /coding, back-end(server/cloud) and front-end (user) software (Use any of the above or other technologies as required by your concept idea or prototype)					21
	3		5	CIE 2– Written and practice test				Assessment Review and corrective action	3

			6	Meet entrepreneurs and Discuss about the prototype development process + Assignment			5				
6	3	PO4	1	PEER Discussion on entrepreneur Assignments and practice					4	3	
	3		2-4	Prototyping, Modelling & Testing Includes Generation of mock-ups and look-like prototypes, CAD, digital fabrication, electromechanical -optical bread board design, fabricate, build and test multiple generations of rapid prototypes, Computer modelling methods, testing, sensors and data collection; firmware, systems integration and debugging, programming /coding, back-end(server/cloud) and front-end (user) software (Use any of the above or other technologies as required by your concept idea or prototype)						21	
	3		5	Developmental Weekly Assessment • Work on your project. Conduct MVP tests.				Assessment Review and corrective action		3	
	3		6	Meet entrepreneurs and Discuss about the prototype development process of your Project+ Assignment			5				
Week	CO	PO	Days	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P
7	2	PO4	1	PEER Discussion on entrepreneur Assignments		4		Intellectual Property (IP) Creation and Management • Patents, copyrights, trademarks, trade secrets both domestic and international	3		

	2		2	<ul style="list-style-type: none"> Patents, copyrights, trademarks, trade secrets both domestic and international 	4			<ul style="list-style-type: none"> Patents, copyrights, trademarks, trade secrets both domestic and international 	3		
	2		3	Patenting procedure <ul style="list-style-type: none"> Parenting search Patentability and marketability Support from incubators for ideation, prototyping and patenting 			4	Patenting procedure <ul style="list-style-type: none"> Parenting search Patentability and marketability Support from incubators for ideation, prototyping and patenting 			3
	2		4	<ul style="list-style-type: none"> Intellectual property issues: confidentiality, nondisclosure, agreement not to compete, founders' agreements 	4			<ul style="list-style-type: none"> Intellectual property issues: confidentiality, nondisclosure, agreement not to compete, founders' agreements 	3		
	2		5	CIE 3– Written and practice test				Assessment Review and corrective action			3
	2		6	Interaction with corporate/IP lawyers and discuss about IP Rights + assignments			5				
Week	CO	PO	Days	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P
8	4	P06	1	PEER Discussion on corporate/IP lawyers Assignments				Developing A Business Model <ul style="list-style-type: none"> The importance and diversity of business model Components of an effective business model, core strategy, strategic resources, partnership network, customer interface. 	3		

4		2	<p>Do Your Research</p> <ul style="list-style-type: none"> • Conduct detailed research into the vertical you will operate and the business opportunity • Understand your customers and accurately assess market opportunity • Asses the competitors, and costs of the business • Identify your strengths, weaknesses, opportunities, and potential risks <p>Strategize</p> <ul style="list-style-type: none"> • Use the research to determine the best strategy for your business • Best practices in the industry <p>Choosing a form of business organization</p> <ul style="list-style-type: none"> • Sole proprietorship, Partnership Corporations, Limited Liability Company, Collaboration with NGOs 		7
4		3	<p>Financial considerations</p> <ul style="list-style-type: none"> • Importance and use of cash flow projections • Working capital • Gross and net working capital • Costing-direct and indirect cost • Return on investment (ROI)and return on equity (ROE) • Gross Profit Analysis • Depreciation & amortization • Break even analysis 		7

				<ul style="list-style-type: none"> • Inventory control • Profit Volume Ratio (P/V Ratio) • Budgeting • Capital Requirements - Start-Up Costs, Sales & Marketing, Inventory, Capital Equipment 							
	4		4	Ways of Resource Mobilization <ul style="list-style-type: none"> • Capital markets – Primary market (Public issue, Rights issue, Private placement, Offer to the employees), Secondary market • Angel investors • Venture capital • Financial institutions (Banks, IDBI, SIDBI, IFCI, ICICI, NABARD, IIBI, SFCs, TFCI, SIDC, etc) • Insurance companies • Govt. Schemes and funding support to ideas, innovations, and start-up • Government incentives for entrepreneurship 						7	
	4		5	Developmental Weekly Assessment <ul style="list-style-type: none"> • Conduct seminar on “Financing Entrepreneurial Ventures” 				Assessment Review and discussions on outcome of seminar			3
	4		6	Meet the entrepreneur and interact about criteria’s to be considered in developing an effective business model + Assignment			5				
Week	CO	PO	Days	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P

9	4	PO6	1	<p>PEER Discussion on entrepreneur Assignments</p>	<p>Market consideration</p> <ul style="list-style-type: none"> • Market strategy • Marketing entities • Right to market • First to market • Customer behaviour • Buyer and seller characteristics • Product purchasing decision • Digital impact of buy-sell 			3
	4		2	<ul style="list-style-type: none"> • Customer-product profitability analysis • Branding and Building brand equity • Concept of Logos and tag lines • The marketing mix and Balancing mix • Packaging • Labelling • Market segmentation • Product costing and Pricing -Cost plus pricing, Penetration pricing, Creaming or skimming, Variable pricing • Channel of distribution • Promotion strategy 			7	
	4		3	<p>Price elasticity of demand</p> <ul style="list-style-type: none"> • Entry deterrent price • Marketing organisation 			7	

	4		4	<ul style="list-style-type: none"> Refining the product/service, Establish the success and operational matrix and Starting Operations <p>Customer Validation:</p> <ul style="list-style-type: none"> Voice of the customer, customer survey and feedback, Evaluate the efficiency with which customers can be captured and kept, Early insights on cost of customer acquisition, Other Stakeholder Validation, Customer Development and Experience 							7	
	4		5	CIE 4– Written and practice test				Assessment Review and corrective action				3
	4		6	Meet entrepreneurs and Discuss about the Effect of market study on business model+ Assignment			5					
We ek	C O	P O	Da ys	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P	
10	5	PO6	1	PEER Discussion on entrepreneur Assignments				<p>Translate Business Model into a Business Plan</p> <ul style="list-style-type: none"> Why business plan? What should be included in business plan <ul style="list-style-type: none"> Executive summary Business and competitors' analysis Description of venture Production plan Operation plan Organizational plan Financial plan 				3

								<ul style="list-style-type: none"> - Product and portfolio analysis - Marketing analysis and strategy - Manpower plan - Risk analysis 			
5		2	Refine your concept and begin your plan <ul style="list-style-type: none"> • Prepare concept statement-what, who, why, when, and how • Identify product features and benefits • Identify the limitations, liabilities, and regulations • Write a business description and evaluate it against business descriptions checklist 							7	
5		3	Prepare the market plan <ul style="list-style-type: none"> • Conduct industry and capitative analysis • Perform market analysis and identify target markets, and market penetration strategy • Identify pricing strategy • Write a marketing plan and evaluate against marketing plan checklist 							7	
5		4	Prepare management and financial plans <ul style="list-style-type: none"> • Identify key people and position, duties, and responsibilities • Determine funding needs and sources • Create sales and expense estimates • Write management and financial plans and evaluate management and financial plans against checklists 							7	
5		5	Developmental Weekly Assessment					Assessment Review and corrective action			3

				<ul style="list-style-type: none"> Develop an estimate of how much start-up capital you will need for your project and how you will source it. Work on your projects. Formulate your pitch deck and begin to formulate your financing and operations slides. 							
	5		6	Meet entrepreneurs and interact about preparing the business plan + Assignment			5				
Week	CO	PO	Days	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P
11	5	PO6	1	PEER Discussion on entrepreneur Assignments				Complete business plan and asses business feasibility <ul style="list-style-type: none"> Revisit the entire plan to look for any ideas or wording that may be confusing, redundant, or irrelevant to the points you are making 			3
	5		2	<ul style="list-style-type: none"> Evaluate business plan against checklists and identify the additional items in need 							7
	5		3	<ul style="list-style-type: none"> Asses business work against feasibility checklist 							7
	5		4	<ul style="list-style-type: none"> Polish the plan and add final elements-cover page, executive summary 							7
	5		5	CIE 5– Written and practice test				Assessment Review and corrective action			

	5		6	Meet entrepreneurs and interact best way to preparing the business plan + Assignment			5				
We ek	C O	P O	Da ys	1 st session (9am to 1 pm)	L	T	P	2 ND session (1.30pm to 4.30pm)	L	T	P
12	5	PO6	1	PEER Discussion on entrepreneur Assignments				Entrepreneurial marketing-The customer as a driver <ul style="list-style-type: none"> Marketing decision framework Positioning the product or service Marketing strategies and goals 			3
	5		2	Communicate value to the customers <ul style="list-style-type: none"> Key selling messages Crating emotional connections Personal selling Networking- your 30 seconds introduction 							7
	5		3	Creating a strong brand <ul style="list-style-type: none"> Managing the marketing mix Marketing on a shoestring budget The marketing calendars Implementing the plan 							7
	5		4	Building a customer relationship <ul style="list-style-type: none"> Tools to meet the strategic gools Online opportunities and social media checklist 							

				<ul style="list-style-type: none"> Generating a buzz-word of mouth marketing Measuring effectiveness 							
	5		5	Developmental Weekly Assessment <ul style="list-style-type: none"> Seminars on “Developing Business Plans and Pitching Opportunities” 				Assessment Review and corrective action			3
	5		6	Meet entrepreneurs and interact about customer validation of MVP/Service + Assignment			5				
Week	CO	PO	Days	1st session (9am to 1 pm)	L	T	P	2ND session (1.30pm to 4.30pm)	L	T	P
13	5	PO6		Evaluate business plan of MVP for incubation or commercialisation <ul style="list-style-type: none"> Nature of product Value proposition The market, competitors, and substitutes Business model canvas 							40

Rubrics for 13th week- Business plan of MVP for incubation or commercialisation

	Weak (1 marks)	Moderate (2 marks)	Strong (3marks)	Very Strong (4 marks)	Exceptional (5 marks)
Nature of product					
Value proposition					
The market, competitors, and substitutes					
Business model canvas					
Total					

Teaching Methodologies

The following teaching methodologies can be used to provide students with an interactive learning environment:

- Classroom learning through an experienced Faculty on campus
- Videos, In-class Activities, Outbound Activities
- Assignments and Projects
- Practical Experiences including challenges,
- Establish Entrepreneurs cell (E-Cell) and Intellectual property rights cell (IPR cell) to conduct seminars, workshops, Hackathons, Challenges etc
- Visit to makers lab/ Technical business incubators
- Asking mentors from businesses and corporations to work with the students,
- Inviting business leaders to review student business plans
- Inviting in professionals from stakeholder organizations (banks, government groups, venture capitalists, competitors) to role play as the students prepare their plans.
- **Interviewing Entrepreneurs** —Identify entrepreneurs, and ask students to interview them.
- **Processing New Experiences** - After a field trip, you can ask students to prepare a summary of the services and products they learned about. Questions that students may address in their summary from the field experience may include: Can the services and products viewed be categorized? What opportunities (concepts) were being developed or sold? What new ideas could be pursued as a result of this field experience? Encourage many responses in order to promote the creative entrepreneurial process. information on a student's ability to process information could be recorded.
- **Guest Speakers** - A guest from an organization may be invited to the classroom to discuss experiences in his/her organization. Prior to the guest visit, students may prepare questions they would like the guest to address. A reflective discussion may be held following the guest's presentation.

- **Role Play** - Students may break into groups and develop a script for a role-play. The situation may be one within the school organization, or a local or provincial organization. Alternatively, students may develop the script for a problem situation within the community that may be “in the news”. Some examples of activities that may be considered include fundraising for the school or a charity, development of an environmentally sound school, or advertising or marketing of a new product. Students may role-play a variety of real-life situations that can provide an introduction to identifying opportunities and ideas. For example, role-play situations may address financial restraints at home, school, or for community projects; environmental concerns such as the pollution of surrounding waters; or social concerns such as unemployment and a perceived need to stay in the community for family support. The role-play situations can involve the audience in determining the opportunity(ies) and idea(s) that may result from the situation. This activity may assist students in understanding how the origination of ideas may be generated from real-life situations. A reflective discussion may be used to follow up on the opportunities and ideas identified by the students. As groups develop the script, one or two members of each group may play the role of positive support for a plan while the other members of the group would try to stifle the suggestion. Roles may include employees, students, principals, trustees, supervisors, managers, Chief Executive Officers (CEOs), town officials, or others. When roles are played in activities, students should rotate roles to ensure that all individuals have equal opportunity to participate in various roles. Assessment information may be collected on content elements such as: Was a role identified for each group member? Is the suggested plan feasible? etc
- **Brainstorming** - In small groups, students may be provided a scenario and asked to devise a number of possible solutions. The scenario may involve a service-oriented or product-oriented occupation or profession requiring students to brainstorm new ideas, approaches, and improvements. Examples of scenarios may include: How might a doctor (the family doctor) improve the delivery of service for the community? Could the checkout procedures in the local grocery store be improved to meet the needs of customers? Assessment information may be collected on task attitude such as: demonstrates enthusiasm in providing ideas, cooperates with others, works with others as a team, and shows consideration for the comments of others. These criteria could be listed on a rating scale or observation checklist.
- **Teamwork** - To simulate the business world, students should work on teams whenever appropriate. Not only does this help build critical communication and negotiation skills, but also allows students to divide difficult and time-consuming tasks. Students should learn how to use critical thinking and communications skills to evaluate opportunities identified by others, too. This encourages teamwork, can help build self-esteem and provides a “stretching of the mind” to promote an in-depth understanding of this aspect of the entrepreneurial process.
- **Using Case Studies** - Case studies may be distributed for students to analyse how entrepreneurial education may be of benefit in the given situation. Case studies could profile a variety of successful and unsuccessful ventures. Students could focus on analysing the case study and justifying and confirming the benefits of entrepreneurship education for the given situation. A written summary may be prepared. Assessment information may be collected on students’ ability to analyse, extract, and suggest new possible outcomes. Students may also be assessed on skills such as the correct use of grammar, punctuation, sentence structure, spelling, and document format. Consider creating your own case study by referring to recent problems/situations within the school, community or in current community/newspaper articles. Students may

discuss how the problem/issue could benefit from entrepreneurial activity. For example, students may look at the homeless and how entrepreneurial activity may benefit that problem. Anecdotal notes may be collected on student positive contributions to the discussion.

- **Venture Initiation Plan (VIP) Teams - Extensive group work outside of class is an essential part of this course. This means that although the readings each week are relatively light, you will be expected to spend time outside of class interviewing potential customers, obtaining insights from hypothesis tests of your idea using minimum viable products and simple experiments, and conducting secondary market research to understand the market and competition. Course participants will therefore be asked to form teams of 5-8 people for their VIP projects. These teams will work together to prepare the final project deliverable for the course**
- **Seed Money** - You may choose to investigate possibilities to help students get financing to start up their businesses following the successful completion of their plans. Seed money may be available through special programs with local lending organizations, non-profit organizations that sponsor student business competitions. It is important to explore these options so that students are able to turn their hard work planning into an actual business.

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41. Entrepreneurship in Knowledge Economy, BS Rathore, DD Sharma, SK Dhameja, Abhishek Publications Chandigarh
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CIE and SEE Assessment Methodologies

CIE Assessment	Assessment Mode	Duration In hours	Max Marks
Week 3	CIE 1– Written and practice test	4	30
Week 5	CIE 2– Written and practice test	4	30
Week 7	CIE 3– Written and practice test	4	30
Week 9	CIE 4– Written and practice test	4	30
Week 11	CIE 5– Written and practice test	4	30
On line Course work (Minimum 10 hours online course with certification from (SWAYAM/NPTEL/Infosys Springboard)			40
Evaluate business plan of MVP for incubation or commercialisation			20
Portfolio evaluation (Based on industrial assignments and weekly developmental assessment) *			30
TOTAL CIE MARKS (A)			240
SEE 1 - Theory exam (QP from BTE) duration – 3hr Marks – 100 min marks 40 reduced to 60		2	60
SEE 2 – Practical duration 3hr. Max marks 100		3	100
TOTAL SEE MARKS (B)			160
TOTAL MARKS (A+B)			400

* The entrepreneur assignment shall be based on peer-to-peer assessment for a total of 10 marks (on a scale of 1 to 10) and in the event of a group assignment the marks awarded will be the same for the entire group, the developmental assessment will be for a total of 20 marks and based on MCQ/case study/demonstration and such other assignment methods

Assessment framework for CIE

Note : Theory to be conducted for 1 hour and practice for 3 hours, total duration of exam – 4 hours

Programme		Semester	V		
Course		Max Marks	30		
Course Code		Duration	4 hours		
Name of the course coordinator					
Note: Answer one full question from each section.					
Qn.No	Question	CL	CO	PO	Marks
Section-1 (Theory) – 10 marks					
1.a)	"An opportunity may be derived from the needs and problems of the society. "" Discuss	L3	1		5
1 b)	What factors are involved in the process of sensing an entrepreneurial opportunity	L3	1		5
2.a)	'An enterprise that does not grow will eventually die'. justify this statement with suitable examples	L3	1		5
2 b)	Many times, creative products and services are born as results of problem solving". Give examples.	L3	1		5
Section-2 (Practical) - 20 marks					
3)	You are an individual, who wants to create an enterprise that produces chocolates. Develop a competition analysis, considering the giants that almost control the market (Nestle, Cadbury etc). Prepare a detailed SWOT (strengths, weaknesses, opportunities, and threats) analysis of your enterprise and devise a strategy that gives you an edge over your competitors	L4	1		10
4)	Appraise yourself for an entrepreneurial Career using a Personal Entrepreneurial Competencies (PECs) Self Rating Questionnaire	L4	1		10

Assessment framework for SEE 1 (Theory) – 100 Marks / 3 hours (Reduced to 60 marks)

Programme: Course: Course Code:			Semester: V Max Marks: 100 Duration: 3 Hrs		
Instruction to the Candidate: Answer one full question from each section.					
Qn.No	Question	CL	CO	Marks	
Section-1					
1.a)	“It is the process of entrepreneurship which involves the translation of a useful idea into an application which has commercial value.” Do you agree or disagree, justify your comment	L4	1	8	
1 b)	Shri Jhunjhunwala of Varanasi is a businessman engaged in the production of “Jhula Vanaspati”. He started his business career from a humble beginning. He had a small retail shop of oil and ghee. His earning was limited and not sufficient to meet the needs of his family. He started looking for an opportunity to earn more. One of his relatives owned an oil factory which was running at a loss. The relative was willing to sell it. Jhunjhunwala thought he can run the factory and earn profit out of it. He bought his relative’s factory. The factory took a new birth and today it is earning huge profit. “Jhula Vanaspati” is now a reputed brand of ghee in that part of the country. He says “business is an opportunity; it involves risk and it is a challenge.” Do you agree or disagree, justify your comment	L4		12	
2.a)	Since her college days Mehak, loved the thrill of adventure sports. She was an avid reader which helped her to keep track of various new adventure sports taken up all around the world. She had recently read an article on increasing trend towards ‘space tourism and adventurous holidays. Using her personal experiences and her passion for adventure sports she decided to	L4	1	10	

	start a company called 'YOLO'. For the same purpose she also decided to collect statistics to see how much of these sports were accepted in our country. Identify the ways in which she was able to spot the trend.			
2 b)	Vinay was a young entrepreneur who wanted to start a new business with an initial investment of 25 lakhs. He was not sure of what business he has to undertake. His friend suggested to seek the help of professionals who would spot the latest trends in the market and give him an idea, but Vinay decided to do it by himself. Suggest the various ways by which he can do it.	L4		10
Section-2				
3.a)	Discuss the various forms of intellectual property rights. Mention its relevance on business	L3	2	8
3 b)	Discuss the process of getting the Intellectual Property rights	L3		12
4.a)	Discuss the relevance of design thinking in today's disruptive world	L3	2	8
4 b)	Discuss in detail the various stages of Design Thinking process	L3		12
Section- 3				
5.a)	Modelling and simulation are a critical stage in prototype and product development- Justify the statement	L3	3	8
b)	The improper selection of materials and neglecting manufacturing feasibility would adversely affect the product design and development, Discuss	L3		12
6.a)	An integrated and interdisciplinary approach to engineering design is essential to reduce the lead time and number of prototype iterations, do you agree or disagree? discuss	L3	3	10
b)	The complete knowledge of Product development life cycle and its management is essential for entrepreneur, Discuss	L3		10
Section-4				
7.a)	When will you choose Limited Liability company or collaboration with NGOs as a business model? Discuss with an illustration	L3	4	8
b)	Production', 'Marketing', and Financing' – deemed as the most important factors for any business's survival rates. Why these are most critical elements? Discuss	L3		12

8.a)	<p>Why logo and tagline are important for the company</p> <p>What does the following signify? Discuss</p> <ul style="list-style-type: none"> • Amul’s message — “A gift for someone you love. • ” Rasna — “I love you, Rasna.” • “I’m loving it” — McDonald • Weekender — “Wear your attitude. • ” Raymond’s Suiting — “The complete man.” • “Yamaha Bike— “The rugged personality.” 	L3	4	4+6
8 b)	<p>Discuss the following terms with proper example:</p> <ul style="list-style-type: none"> • Cash inflow • Cash outflow • Cash flow projection • Cash conversion cycle <p>Calculate working capital Raja & Co. has the following items in its Balance sheet Stock - 50,000; Trade creditors - 32,000; debtors - 75000; cash - 1,00000 Dividend payable - 50,000; Tax - 44,000; Short term loan - 61,000; Short term investments - 76,000 Calculate gross and net working capital</p>	L3		4+6
Section-5				
9.a)	<p>As an entrepreneur, you are having a responsibility to decide the operational plan for your business. While deciding the technology to be used, you come across three alternatives:</p> <p>a) Use a cheaper technology which lets you dispose of the waste water and lets you fix the price of your product low.</p> <p>b) Use a technology that is a little expensive as it lets you recycle that waste water into water fit for drinking. In this case, you will have to fix the price a little higher in order to earn profits.</p> <p>c) Use the technology that recycles the waste, do not change the price. And go about cost cutting though efficient utilization of resources. Give reasons for your selection of an alternative</p>	L4	5	10
9 b)	<p>Vikrant was always interested in technology driven products. After finishing his engineering degree, he started working on a new walking stick which will help blind people. The stick will be Bluetooth and wi-fi enabled which will be connected through an app on the phone which</p>	L4		10

	will guide the blind persons about the objects in front of their walking path. He has started testing the walking stick and found that the stakeholders were satisfied and it had a great value to the customers. Vikrant is in final stage of innovation process. Please help him to formulate the business plan for his endower			
10.a)	Ab ltd. was into manufacturing security cameras for household and commercial buildings. Their Research and development team came up with a new idea of manufacturing drones as security cameras which will give a 360-degree view of the entire building. They needed huge finance for the same. The company MD Sharath heard of group of venture capitalists who are ready to invest in new ideas. He took an appointment with them and started preparation of a business plan to be presented before them. Write a Business plan for Ab ltd to present before venture capitalist	L4	5	10
10 b)	Satnam, an IIT-IIM graduate, started three chemists' shops at Amritsar, Patiala and Chandigarh in the name of 'Quality Medicines'. Encouraged with the success of these shops Satnam opened 50 more shops in different parts of Punjab. His strategy was to cut price, focus on lower and upper middle class and open shops near hospitals. He operated on very thin margins. But he was not able to maintain sufficient funds to meet the day-to-day expenses of the business. The staff at the shops did not give much attention to the customers and there was very poor system of control. Because of this mismanagement he started incurring huge losses and his business failed. Based on the above paragraph, identify, and present the reasons for failure of Satnam business plan	L4		10

Scheme of Evaluation for SEE 2 (Practical)

Sl. No	Description	Marks
1	Case submission	20
2	Case presentation	20
3	Case out comes	20
4	Case innovation	20
5	Viva voce	20
Total		100

Case Submission / Content Evaluation Rubrics

Evaluation Parameters	5	4	3	2	1	Student Score
Identification of the main issues / problem	Identifies and understands all the main issues in the problem statement	Identifies and understands most of the main issues in the problem statement	Identifies and understands some of the issues in the problem statement	Identifies and understands a few of the issues in the problem statement	Identifies limited issues in the problem statement	
Analysis of the issues	Insightful and thorough analysis of all the issues	Thorough analysis of most of the issues	Superficial analysis of some of the issues in the problem statement	Incomplete analysis of the issues	No analysis of the issue	
Comments on effective solutions / strategies (The solution may be in the problem statement already or proposed by you)	Well documented, reasoned and pedagogically appropriate comments on solutions, or proposals for solutions, to all issues in the problem statement	Appropriate, well thought out comments about solutions, or proposals for solutions, to most of the issues in the problem statement	Superficial and / or inappropriate solutions to some of the issues in the problem statement	Little and/or inappropriate solutions to all of the issues in the problem statement	No action to all issues in the problem statement	
Links to course learning and additional research	Excellent research into the issues with clearly documented links to course learnings and beyond.	Good research and documented links to the materials read during the course	Limited research and documented links to any readings	Incomplete research and links to any reading.	No research or links to any reading	
Total						

Case Presentation Evaluation Rubrics

Evaluation Parameters	5	4	3	2	1	Student Score
Delivery & Enthusiasm	Very clear and concise flow of ideas Demonstrates passionate interest in the topic and engagement with class / examiner	Clear flow of ideas Demonstrates interest in the topic and engagement with class / examiner	Most ideas flow but is lost at times Limited evidence of interest in and engagement with the topic	Hard to follow the flow of ideas Lack of enthusiasm and interest	No flow in the presentation Poor presentation skills	
Visuals	Visuals augmented and extended comprehension of the issues in unique ways	Use of visuals related to the topic	Limited use of visuals loosely related to the topic	No use of visuals	Poor visuals used and some visuals are not easy to understand its relevance.	
Staging	Uses stage effects such as props, sound effects, and speech modulation in a unique and dramatic manner that enhances the understanding of the issues in the problem statement.	Uses stage effects such as props, sound effects, and speech modulation in an effective manner to extend the understanding of the issues in the problem statement.	Limited use of stage effects and/or used in a manner that did not enhance the understanding of the issues in the problem statement.	No use of stage effects	Poor stage effects usage	

<p>Involvement of the class / Examiners</p> <ul style="list-style-type: none"> • Questions • Discussions • Activities 	<p>Excellent and salient discussion points that elucidated material to develop a deep understanding Appropriate and imaginative activities used to extend understanding in a creative manner</p>	<p>Questions and discussions addressed important information that developed understanding Appropriate activities used to clarify understanding</p>	<p>Questions and discussions addressed important superficial issues of the problem statement Limited use of activities to clarify understanding</p>	<p>Little or no attempt to engage the class / examiner in demonstrating their learning</p>	<p>Did not engage the class / examiner and poor listening skills</p>	
Total						

Case outcome Evaluation Rubrics

Evaluation Parameters	5	4	3	2	1	Student Score
Problem outcome	<p>The topic was well researched and all information and data included are accurate and from reliable sources of information like high impact journals standards, etc. The proof was enough backed up with accurate data, analysis and reasoning beyond the class learning.</p>	<p>The topic was researched and most information and data were from reliable sources of information. The proof was backed up with good data and reasoning as taught in the class. Outcome achieved as per the problem brief</p>	<p>The topic was researched but information and data were only partly from reliable sources of information. The proof was not fully backed up with good data or reasoning as taught in the class. Partial outcome achieved as per the problem brief</p>	<p>The topic was researched and data were not from reliable sources. The proof was not backed up with data, analysis or reasoning as taught in the class. Some outcome obtained as per the problem brief</p>	<p>Desired results not obtained, but some relevant research was done. Outcome not obtained as per the problem brief</p>	

	Outcome achieved beyond the problem brief					
Application of class learning in problem solving	Made effective use of class principles, models and theories. Also used creativity to find effective results appropriate to industry beyond class learning.	Made good use of class principles, models and theories Some creative ideas were explored to find desired outcome but within the framework of class learning	Made some use of class principles, models and theories No creative ideas or models explored	Made limited use of class principles, models and theories	Poorly applied class principals, models and theories	
Response to Class / Examiners Queries	Queries Excellent response to comments and discussion with appropriate content supported by theory/research	Good response to questions and discussions with some connection made to theory/research	Satisfactory response to questions and discussions with limited reference to theory/research	Limited response to questions and discussions with no reference to theory/research	Poor or no response to questions and did not participate in the discussions.	
Conclusions	Provides detailed and appropriate conclusion for the problem statement	Provides appropriate conclusion for the problem statement	Provides adequate and mostly appropriate conclusions for the problem statement	Provides limited and somewhat appropriate conclusions for the problem statement	Has not provided appropriate conclusions for the problem statement.	
Total						

Case Innovation Evaluation Rubrics

Evaluation Parameters	5	4	3	2	1	Student Score
Finding new processes / models / approaches	The newly discovered processes / models / approaches are of good quality and relevant	The newly discovered processes / models / approaches are of appropriate quality but limited relevance	The newly discovered processes / models / approaches have limited application but relevant to the problem	The newly discovered processes / models / approaches has restricted application	No new processes / models / approaches were identified	
Proposing ideas and innovative solutions in terms of processes / models / approaches and how they can be applied to solve the problem on hand	Various ideas and innovative solutions have been proposed and their application have been clearly outlined	Various ideas and innovative solutions have been proposed as well as the outline of the process to apply them	Some ideas or innovative solutions have been proposed but the process of applying them hasn't been specified	Few ideas have been proposed	No ideas or innovative solutions have been proposed	
Using creativity techniques to provide and reason good ideas which are original and unconventional	Wherever necessary creativity techniques are utilized to analyse and solve the problem	Creativity techniques are frequently utilized in more than 50% of the occasions	Creativity techniques are utilized at times in less than 50% of the occasions	Creativity techniques are used a few times only	Creativity technique are not utilized to analyse and solve the problem	
Finding constraints and weak points in existing processes / models / approaches or methods	Constraints and weak points are understood	Constraints and weak are identified	A critical analysis is undertaken	Only a description of the working process and methods are provided	No constraints or weak points have been identified.	
Total						



Government of Karnataka
DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION

Program	Carrier pathway	Semester	6
Course Code	Program specific	Type of Course L:T:P	MVP/Incubation/ start-up
Course Name	Development/Incubate the Minimum Viable Product (MVP)	Credits	16
CIE Marks	240	SEE Marks	160

Outcomes

At the end of the 6 semesters, the students will be able to:

- 1 -Develop the Minimum Viable Product (MVP)
- 2 - Craft and present an effective business pitch for investors, partners, and other stakeholders.

Outcomes	Description of Activities
1	Development/Incubate the Minimum Viable Product (MVP) / Service (Continuation from 5th semester)
2	<p>Entrepreneurial Start-up Project</p> <p>Includes key aspects surrounding starting a start-up, venture value Proposition, Developing your business platform including Lean Business Model or Business Canvas Modelling, financial forecasts, Revenue Model and Streams, Key Resources, identify possible sources of funding for your venture , Take product or service to market, voice of the customer, Customer Segments, customer survey and feedback, Deliver an investor pitch to a panel of investors and business plan to launch their start-up idea and start operations. Mentorship towards grant application, writing for aids, grants and start-up competitions, Legal and regulatory aspects for starting up specific to your venture.</p>

Graduating Standards

Students will be considered graduated from the This Program only if they satisfy the following criteria;

1. Development of Minimum Viable Product (Functional Prototype)/ Service
2. Lean Business Canvas Modelling for their start-up Idea
3. Business Plan,
4. 2 Min Elevator Pitch(video)
5. Customer survey & Feedback
6. Application to at least 1 Start -up /Idea to Proof-of-Concept (POC) Grant