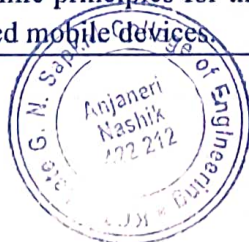


302047: Skill Development					
Teaching Scheme		Credits		Examination Scheme	
Practical	2 Hrs./Week	Practical	1	TW	25 Marks
<p>Prerequisites: Students should have knowledge of Construction and working of IC engine / compressor / gear box / centrifugal pump/tail stock. Working principles of any type of mechanism / power plants. Working of electric and hydraulic systems of 4 wheeler vehicle. Working of machine tools, engine and transmission of different automotive and home appliances. Advanced manufacturing processes. Solid mechanics and design of machine elements.</p>					
<p>Course Objectives:</p> <ol style="list-style-type: none"> 1. INTRODUCE the skills required in an industry such as design, development, assembly & disassembly.. 2. DEVELOP the skills required for fault diagnose of engine and transmission of different automotive and various home appliances. 3. ESTABLISH the skills required for maintenance of any machine tool. 4. CREATE awareness about industrial environment. 					
<p>Course Outcomes:</p> <p>On completion of the course, learner will be able to</p> <p>CO1.APPLY& DEMONSTRATE procedure of assembly & disassembly of various machines.</p> <p>CO2.DESIGN & DEVELOP a working/model of machine parts or any new product.</p> <p>CO3.EVALUATE fault with diagnosis on the machines, machine tools and home appliances.</p> <p>CO4.IDENTIFY & DEMONSTRATE the various activities performed in an industry such as maintenance, design of components, material selection.</p>					
Course Contents					
<ol style="list-style-type: none"> 1. Assembly and Disassembly of any of the following mechanical systems/ subsystems: bicycle (geared), e-Bikes, e-Motor Cycles, Drones, Flying devices, gear box, IC engines, centrifugal pump etc. 2. Assembly- Disassembly/ Fault diagnosis of home appliances such as mixer, grinder, washing machine, fan, ovens, gas geyser, chopping machine, kneading machine, exercise machines, etc. 3. Development and demonstration of working/animation model of any mechanism. 4. Design a circuit of electric and hydraulic system of 4 wheelers and its verification. <p style="text-align: center;">OR</p> <p>Circuit design /PCB design using software for control of BLDC electric motors used in e-Vehicles.</p> <ol style="list-style-type: none"> 5. Undertake total preventive maintenance for any machine tool or mechanical system. 6. Visit to an industry for awareness about preventive maintenance. 7. Use of ergonomic principles for the design of hand tools, control in automobile dashboards, human operated mobile devices. 					



8: Entrepreneurship & IP - Government initiates

1. Incubators, research parks
2. Various Government policies
3. Integrative approach – Entrepreneurship & IP strategy
4. Capsule revision
5. Am I ready to venture my start up? (Course applicability)

Books and references

1. Ove Granstrand, The Economic and management of Intellectual Property, (1999)
2. Narayanan, V. K., Managing technology and innovation for competitive advantage, first edition, Pearson education, New Delhi, (2006)
3. Idris, K. (2003), Intellectual property: a power tool for economic growth, second edition, WIPO publication no. 888, Switzerland
4. Bosworth D. & Webster E , The Management of Intellectual Property, Edward Elgar.
5. Berman, Ideas to Assets, Wiley publications
6. Richard Dorf & Thomas Byers, Technology ventures from idea to enterprise, 2 nd edition.

ADDITIONAL READING:

WIPO - <http://www.wipo.int/patents/en/>



Syllabus of Audit course V

Subject: -Entrepreneurship and IP strategy (302048A)

1: Introduction to entrepreneurship and intellectual property: Definition, concepts

1. Introduction
2. What is an entrepreneurship?
3. What do you understand by IP?
4. Whether entrepreneurship and IP related? What is role of IP strategy in Entrepreneurship?
5. Case study I – IT industry

2: Innovation and entrepreneurship

1. Innovation, invention and creativity
2. Types of innovation
3. Innovation, market and IP
4. Open innovation and IP
5. Case Study II - Biotechnology

3: IPR: Trademark and entrepreneurship

1. Trademark-Definition
2. Trademark-Types
3. Trademark-Registration
4. Trademark infringement
5. Case study III - Textile industry

4: IPR: Patent and entrepreneurship

1. Patent-introduction
2. Patent infringement
3. Patent strategies- I
4. Patent strategies- II
5. Capsule version

5:IPR: Copyright and entrepreneurship

1. Copyright – Definition and subject matter
2. Copyright and related rights
3. Copyright registration and entrepreneurship
4. Copyright infringement
5. Case study IV – Film industry

6: IPR: Industrial design and entrepreneurship

1. Industrial Design- Definition, concept
2. Industrial Designs Act - Key features
3. Industrial Design-Business
4. Industrial Design infringement
5. Case study V - Automobile industry

7: IP strategy & entrepreneurship

1. IP strategy for start-up and MSME
2. IP transaction - introduction
3. IP valuation, bank loan, insurance
4. Success story and business model of a few start-ups
5. Case Study VI – Pharma industry and Agriculture



7 : Sustainable financial product and services

8 : Sustainable Value Framework

9 : Course Summary

Books and references

1.Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage, Daniel C. Esty, Andrew S. Winston

2. Business and Sustainability, Michael Blowfield

3.The Triple Bottom Line: How Today's Best-Run Companies Are Achieving Economic, Social and Environmental Success - and How You Can Too, by Andrew Savitz

4.The New Sustainability Advantage: Seven Business Case Benefits of a Triple Bottom Line, Bob Willard

5. Various articles, cases, research literature, websites in the related area



Syllabus of Audit course VI

Subject: - Business and Sustainable Development (302056A)

1: Introduction to Sustainable Development and Sustainability

- 1 : Introduction to Sustainable Development and Sustainability
- 2 : Evolution of Sustainable Development
- 3 : Importance of Sustainability
- 4 : Sustainability - A mega trend
- 5 : Environment, Human & Economy
- 6 : Robert Solow's Conceptualization of Sustainability
- 7 : Introduction to Firm's Response
- 8 : Sustainable Products

2: Sustainability Tools: Assessment, Management and Reporting Tools

- 1: Cleaner Production
- 2: Cleaner Production Illustrations
- 3 : Life Cycle Assessment
- 4 : Understanding LCA Through Examples
- 5 : Design for Environment
- 6 : Sustainability Reporting
- 7 : Current Status of ESG in Indian Companies

3: Sustainability Standards and Strategies

- 1: Corporate Strategy
- 2 : Competitive Environment Strategies
- 3 : Eco-Branding
- 4 : Competitive Environmental Strategy Matrix
- 5 : CSR and Social Sustainability
- 6 : Sustainable Development Goal (SDG)
- 7: Sustainability Standards
- 8: Sustainability Standards

4: Beyond firms, Regulation, Market, New perspective towards Sustainability

- 1: Green Supply Chain
- 2 : Examples of Green Supply Chain
- 3 : Environmental Regulations and Policy Instruments
- 4 : Market based instruments in India
- 5: Environmental Laws and Disclosure Regulations
- 6 : Risks and Opportunities



Prof (Dr.) Sahebrao B. Bagal
Principal

Late G. N. Sankal College of Engineering
Anjaneni, Warananagar, Dist. Solapur, Maharashtra - 422 213.