Programme: M.B.A. (Executive)

Sl.No	Course Type	Course Code	Course Title	To be offered in
1	**Core**	**EMC007**	Information Systems and Data Security	**Trimester 2**
2	**Core**	**EMC008**	Production and Operations Management	**Trimester 2**
3	**Core**	**EMC009**	Quantitative Techniques for Decision Making	**Trimester 2**
4	**Soft Skill**	**EMS003**	Creativity and Innovative Thinking	**Trimester 2**
5	**Core**	**MBCB014**	Strategic Management	**Trimester 2**

Code: EMC 007   Course Name   Information Systems and Data Security   **2 Credits**

Objective:	To provide understanding of risk and threats faced by Information Systems, and learn how vital, indispensable business data and information can be compromised, lost, corrupted or be prone to unauthorized access. Understand techniques and procedures used to protect your Information Systems and loss of privacy.
Content:	**Computer Security Technology and Principles (15 hours)** Types of Information Systems; Computer Security & Challenges; Model for Computer Security; Threats and Attacks; Threats and Assets; Security Functional Requirements, OSI Security Architecture: Security Attacks, Security Services, Security Mechanism. Computer Security Strategy: Security Policy, Security Implementation, Assurance and Evaluation. Basic Cryptographic Concepts: Symmetric and Public Key Encryption, Confidentiality using symmetric encryption, Message Authentication, Digital Signatures & Non Repudiation, Digital Certificates, Importance of Key Management. User Authentication: Password based User Authentication, Password Selection and Management, Token Based and Biometric Authentication, Security issues for Password Authentication. Access Control, Access Control Principles: Authentication, Authorization, Audit; Access Control Policies: Discretionary Access Control, Mandatory Access Control, Role Based Access Control

	Intrusion Detection and Prevention Systems: Intruder, Host based verses Network based Intrusion Detection, Honeypots, Firewalls, Types of Firewalls, Intrusion Prevention Systems.
	Malicious Software and Countermeasures, Viruses, Works, Bots, Rootkits, Backdoors, Trojan Horses, Spammers, Key loggers, Spyware , Adware, OS hardening
	Denial of Service Attacks (DOS), Defense against DOS, Firewall and Intrusion Detection and Prevention systems: Types of Firewalls, Firewall Location and Configuration
	Trusted Computing and Multilevel Security, The Bell LaPadula Model, Trusted Systems, Criteria of Information Technology Security Evaluation: Protection Profiles, Security Targets
	Managing Security Risks (15 hours)
	Physical Security, Physical Security Prevention and Mitigation Measures, Threat Assessment, Planning and Plan Implementation.
	Human Factors, Security Awareness, Training and Education, Organizational Security Policy, Employment Practices and Policies, Email and Internet use policies.
	Security Audits, Security Audit Architecture, Audit Trail, Audit Trail Analysis
	IT Security Management and Risk Assessment, Detailed Security Risk Analysis, Security Safeguards, IT Security Plan, Implementation of Controls and implementation follow-up.
Pedagogy:	Lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study/ Case Studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.
References/Readings	1.William Stalling, Lawrie Brown, Computer Security: Principles and Practice, Pearson Education, 2010, 2. Chuck Easttom, Network Defenses and Countermeasures: Principles and Practices, Pearson Education 2014. 3. Behrouz A Forouzan, Data Communication and Networking, Tata McGraw-Hill Eduaction 2006. 2. Behrouz A Forouzan, Debdeep Mukhopadhyay, Cryptography & Network Security,
Learning Outcomes	1. To understand how to mitigate security risk and

	2. To diminish loss of reputation and business resulting from such security breach.

Code: EMC008   Course Name Production and Operations Management   **2 Credits**

Objective:	To introduce the participants to the function of Production and Operations Management , Quality Management and Productivity Management
Content:	Classification of operations; Process types in manufacturing and Services, Plant layout & Location; Production Planning and Control. (6 hours) Quality Management, Quality Control, Tools for improving Quality, TQM, Quality Assurance, Six Sigma Concept. (4 hours) Productivity Improvement Techniques, Work study and Time Study, Maintenance policies for facilities and equipment, Preventive versus breakdown maintenance, Procedure for maintenance, total productive maintenance (TPM). (10 hours) Introduction to Operations Research and Linear Programming. Transportation and Assignment Models, Network Analysis including PERT and CPM. Decision Theory and Decision Tree Model.(10hours)
Pedagogy:	Lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study/ Case Studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.
References/Readings	1. Adam Jr Everetl E. R J – Production and Operations Management (Prentice-Hall, 1992), latest Edition. 2. Krajewski, Lee J. and Larry P. Ritzman; 'Operations Management: Strategy and Analysis'; Pearson Education India; Latest Edition. 3. Taha H- Operations Research- An Introduction (Prentice-Hall, 7th edition), Latest Edition 4. Production & Operations Management.- Kanishka Bedi, (Oxford University Press)
Learning Outcomes	1. To take business decision issues in the domain of Production Operations in a Manufacturing and Service setup.

Code: EMC009 Course Name Quantitative Techniques for Decision Making   **2 Credits**

Objective:	To provide an overview of management science / operations research with select applications from management systems.
Content:	**Quantitative Methods and Probability** An analytical scientific approach to Problem solving ; quantitative

	analysis, Operational research models & modeling process for Managerial Decision Making; Statistics for Management: Measures of Central Tendency & Dispersion; Probability concepts; Bayes Theorem; Probability Distributions; (4 Hours) **Collection and Analysis of Data** Sampling & Sampling Distributions, Testing of Hypothesis. Correlation, Regression & Multivariate Analysis. (3 Hours) **Decision making and Quantitative Techniques** Forecasting methods & Time Series Analysis; Stochastic process; Decision Analysis, Decision Trees & Utility Theory; Decision Making under different conditions; (7 Hours) **Linear Programming** Linear Programming; graphical & simplex methods, Dual simplex, Sensitivity Analysis & Duality; Integer Programming. Transportation, Transhipment & Assignment Models. (7 Hours) **Multi-criteria Decision making Tools**: Linear Goal Programming; Scoring Models, Fuzzy outranking; (4 Hours) **Inventory & Queuing Management** Inventory models (static, dynamic, probabilistic & stochastic), Waiting Line / Queing models; Simulation concepts & applications for inventory & Q-ing situations. Network models; PERT &CPM (5 Hours)
Pedagogy:	Lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study/ Case Studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.
References/Readings	1. Anderson, Sweeney, Williams, Quantitative Methods for Business, Thomson South Western; Latest Edition 2. Hamdy A Taha, Operations Research-An Introduction, Prentice Hall of India; Latest Edition
Learning Outcomes	1.To be able to take managerial decisions using quantitative techniques

Code: EMS003   **Course Name** Creativity and Innovative Thinking   **2 Credits**

Objective:	To understand the techniques for improving the flexibility and originality of thinking and will explore approaches used by managers and organizations to create and sustain high levels of innovation.
Content:	**Creative thinking** as a skill; Valuing diversity in

	thinking; Thinking preferences; Creativity styles; Creativity in problem solving: Problem Definition, Understanding & Representing; Pattern Breaking; Mind stimulation. (7 Hours) **General Strategies** Idea-collection processes including Brainstorming/Brain-writing, The SCAMPER methods, Metaphoric thinking, Outrageous thinking; Mapping thoughts; Eight-Dimensional (8D) Approach to Ideation; Using Math and Science: Systematic logical thinking, Using math concepts; (8 Hours) **Systematic Inventive Thinking** The TRIZ methodology; Levels of inventions; Evolution of technical systems; Ideality and the ideal final result (IFR); Stating contradictions and the contradiction table; Standards features and Inventive principles; Separation principles; Using physical, geometrical, and chemical effects, fields (8 Hours) **Decision and Evaluation** Focused thinking framework; Six thinking hats, PMI (Plus, Minus, Interesting); Ethical considerations (5 hours) **Introduction to intellectual property**: Patents, Copyrights ©, Trademarks ®, Trade Secret, Unfair Competition. (2 Hours)
<u>Pedagogy</u>:	Lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study/ Case Studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.
<u>References/Readings</u>	1. Six Thinking Hats by Edward DeBono , Penguin Books, Latest Edition 3. Creativity, Inc.: Overcoming the Unseen Forces That Stand in the Way of True Inspiration by <u>Ed Catmull</u>, &<u>Amy Wallace</u>, kogan Page, Latest Edition 4. Creativity and Innovation for Managers by Brian Clegg, Routledge; Latest Edition 5. Harvard Business Essentials – "Managing Creativity and Innovation ", Harvard Business Publishing
<u>Learning Outcomes</u>	1. Understand building blocks of innovation 2. Be familiar with processes and methods of creative problem solving: observation, definition, representation, ideation, evaluation and decision making 3. Enhance their creative and innovative thinking skills

Code: MBCB014 **Strategic Management** **2 Credits**

Objective:	At the end of the subject, the student will have the competencies to: 1. Analyze the structure of any industry, 2. Indicate sustainable strategies for firms for competitive advantage, 3. Identify organizational structure to support the strategies and
Content:	**Introduction to Strategy** Strategy meaning & importance, Strategy development process, Vision, Mission statements, Objectives of the company. (3 Hours) **External and Internal Analysis of Firms** Evaluating company's external environment (Porter's 5 Forces Analysis, Political Economic Social Technological Environmental Legal (PESTEL) Analysis), Evaluating company's internal environment (Strength Weakness Opportunity Threats (SWOT) Analysis), resource capabilities, & competitive environment (12 Hours) **Crafting Strategy** Five generic competitive strategies: Low cost, Broad Differentiation, Focussed Differentiation, Focussed Low Cost, Best Cost Strategy. (7 Hours) **Strategy Implementation** Strengthening company's competitive position, Strategies for international markets, Corporate Group strategy. (8 Hours)
Pedagogy:	Lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study/ Case Studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.
References/Readings	1. Arthur Thompson Jr., Margaret Petarf, John Gamble, Strickland III & Arun K. Jain, "Crafting and Executing Strategy", MacGraw Hill Publication, Latest Edition. 2. Bowman, Cliff: 'The Essence of Strategic Management'; Prentice Hall of India Private Ltd; New Delhi; Latest Edition. 3. Faulkner, David and Cliff Bowman; 'The Essence of Competitive Strategy'; Prentice Hall of India Private Ltd; New Delhi; Latest Edition. 4. Industry notes and business stories from popular business periodicals, databases.