



Virudhunagar – 626 001.

Course: Master of Business Administration (MBA) (For those who Join in June 2022 and after)

OBJECTIVES

- 1. To provide the society with a steady stream of competent young persons with necessary knowledge, skills, values and attitudes to occupy positions of management and administration in business, industry, government and public systems.
- 2. To impart the students with relevant and latest knowledge from the field of management theory and practice.
- 3. To provide opportunities to the students to develop a strong foundation in functional skills.

Course Scheme:

		50	S	Marks		ks	Subject Code	Courses having focus on	Revised / New / NoChange /	
Part	Course Title	Hours	Credits	I	Е	Total	Cout	employability/ entrepreneurship/ skill development	Interchanged & Percentage of revision	
Core	Principles of Management	5	4	40	60	100	P22MSC11	Entrepreneurship	10% Change	
Core	Organizational Behaviour	5	4	40	60	100	P22MSC12/ P19MSC12	Entrepreneurship	No Change	
Core	Economics for Managers	6	4	40	60	100	P22MSC13/ P19MSC13	Entrepreneurship	No Change	
Core	Accounting of Managers	6	4	40	60	100	P22MSC14/ P19MSC14	Employability	No Change	
Core	Business Statistics	6	4	40	60	100	P22MSC15/ P19MSC15	Entrepreneurship	No Change	
SBE	Workshop on Life Skills	2	1	100	-	100	P22MSW11/ P19MSW11	Skill Development	No Change	

SEMESTER I

			5		Mar	ks		Courses having	Revised / New /
Part	Course Title	Hours	Credits	Ι	Е	Total	Subject Code	focus on employability/ entrepreneurship/ skill development	NoChange / Interchanged & Percentage of revision
Core	Marketing Management	5	4	40	60	100	P22MSC21	Entrepreneurship	10% Change
Core	Financial Management	5	4	40	60	100	P22MSC22	Employability	20% Change
Core	Human Resources Management	5	4	40	60	100	P22MSC23	Entrepreneurship	10% Change
Core	Operations Management	5	4	40	60	100	P22MSC24/ P19MSC24	Entrepreneurship	No Change
Core	Business Intelligence	4	4	40	60	100	P22MSC25	Entrepreneurship	40% Change
SBE	Workshop on Managerial Skills	2	1	100	-	100	P22MSW21	Skill Development	20% Change
NME	Non Major Elective Entrepreneurship	4	4	40	60	100	P22MSN21/ P19MSN21	Entrepreneurship	No Change

SEMESTER II



VIRUDHUNAGAR HINDU NADARS' SENTHIKUMARA NADAR COLLEGE

(An Autonomous Institution Affiliated to Madurai Kamaraj University)



[Re-accredited with 'A' Grade by NAAC] Virudhunagar – 626 001.

ELECTIVES GROUPS FINANCE ELECTIVES (EF)

Sl.No	Semester	Course Code	Course Title
1	3	P22MSE31F /P19MSE31F	Project Management
2	3	P22MSE32F /P19MSE32F	Indian Capital Market
3	3	P22MSE33F /P19MSE33F	Management of Financial Services
4	4	P22MSE41F/ P19MSE41F	Banking Services Operations
5	4	P22MSE42F /P19MSE42F	Income Tax
6	4	P22MSE43F/ P19MSE43F	Security Analysis
7	4	P22MSE4FP /P19MSE4FP	Lab - Financial Accounting With Tally

MARKETING ELECTIVES (EM)

Sl.No	Semester	Course Code	Course Title
1	3	P22MSE31M /P19MSE31M	Consumer Behavior
2	3	P22MSE32M /P19MSE32M	Advertising and Sales Promotion Management
3	3	P22MSE33M /P19MSE33M	Integrated Marketing Communication
4	4	P22MSE41M/ P19MSE41M	Services Marketing
5	4	P22MSE42M /P19MSE42M	Retail Management
6	4	P22MSE43M/ P19MSE43M	Brand Management

HUMAN RESOURCES ELECTIVES (EH)

Sl. No	Semester	Course Code	Course Title
1	3	P22MSE31H /P19MSE31H	Human Resources Development
2	3	P22MSE32 H/ P19MSE32H	Industrial Relations
3	3	P22MSE33H /P19MSE33H	Training & Development
4	4	P22MSE41H / P19MSE41H	Strategic Human Resources Management
5	4	P22MSE42H /P19MSE42H	Conflict & Negotiation
6	4	P22MSE43H / P19MSE43H	Performance Management

SYSTEMS ELECTIVES (ES)

Sl. No	Semester	Course Code	Course Title
1	3	P22MSE31S /P19MSE31S	Software Project Management
2	3	P22MSE32S /P19MSE32S	RDBMS/ Client Server Computing (ORACLE)
3	3	P22MSE33S /P19MSE33S	Enterprise Resource planning
4	4	P22MSE41S/ P19MSE41S	Data Mining and Data Warehousing
5	4	P22MSE42S /P19MSE42S	Networking Management and Information security
6	4	P22MSE43S/ P19MSE43S	Web page Designing using PHP 6 & MySQL 5

OPERATIONS ELECTIVES (EO)

Sl. No	Semester	Course Code	Course Title
1	3	P22MSE31R /P19MSE31R	Purchase and Material Management
2	3	P22MSE32R /P19MSE32R	Supply Chain Management
3	3	P22MSE33R /P19MSE33R	Total Quality Management





Virudhunagar – 626 001.

4	4	P22MSE41R/ P19MSE41R	Logistics Management			
5	4	P22MSE42R /P19MSE42R	Business Process Management			
6	4	P22MSE43R/ P19MSE43R	Production planning and Inventory Control.			
	Ouestion Pattern for MBA Summative Written Exams:					

Total Marks: 75 Marks

Section – A: $(5/7 \times 2 = 10 \text{ Marks})$ Answer Any Five Questions At least one question from each unit

Section – B: $(5 \times 7 = 35 \text{ Marks})$ Answer All Questions choosing either "a" (or) "b" One 'either or' question from each unit

Section – C: $(3/5 \times 10 = 30 \text{ Marks})$ Answer Any Two Questions from Question Number 13 to 16. Question Number 17 Compulsory – Case Study One question from each unit.

Question Pattern for MBA Internal Written Exams:

Total Marks: 50 Marks

Section – A: $(3 / 5 \times 2 = 6 \text{ Marks})$ Answer Any Three Questions.

Section – **B:** $(3/5 \ge 6 = 18 \text{ Marks})$ Answer any three questions

Section – C: (2 x 13 = 26 Marks) Question Number 11: A structured case Question Number 12: Either a (or) b

WORKSHOPS ON SELF DEVELOPMENT AND SKILL

The students will have to take up one Workshop in each semester. There will be internal evaluation based on Reports documented & maintained at the end of semester.

Workshop on Life Skills: It is designed to include Listening skills, Verbal communication Non verbal communication, Live Projects, Book reading/Presentation and Comprehension skills.

Workshop on Managerial Skills: It is designed to include Writing skills, Presentation skills, News Assimilation Skills, Social Skills, Computational skills in Microsoft Word, Power Point, Excel, Access and Financial tools.

Workshop on Employability Skills: It is designed to include Resume preparation, Presentation skills, Aptitude tests, Group discussion, Personal Interviews, Case analysis/presentation, Analysis and presentation of Industry, Company, Products and Personalities.



Virudhunagar – 626 001.

	workshops (ws)						
Sl. No	Semester	Course Code	Course Title				
1	1		Workshop on Life Skills				
2	2		Workshop on Managerial Skills				
3	3		Workshop on Employability Skills				

Scheme of Evaluation for Workshop:

Sl.No	Workshop					
51.110	Evaluation	Grading	Marks			
1	Internal	Record	40			
2		Final Exam Viva Voce	60			
	Total 100					

PROJECTS

Final Research Project:

The Students will have to do their project in a company where the major value addition of the product or services takes place. The company shall not be a Showroom and Dealers or Distributors. The company shall preferably be a Public sector or a Private Limited company. The project will be for a period of six weeks during Semester IV. The students will do a project identifying a problem and conducting a research on it.

PROJECTS & VIVA VOCE (PV)

Sl. No	Semester	Course Code	Course Title
1	4		Final Project & Viva Voce

Scheme of Evaluation for Project:

Sl.No	Final Project					
51.110	Evaluation	Grading	Marks			
1	Internal	Internal Faculty	50			
2		Project Report	50			
3	External	Project Diary	25			
4	External	Viva Voce	75			
5	Te	200				







Subject code: P22MSC11	SEMESTER I	Total Contact hours : 75 hrs
Credits : 4	PRINCIPLES OF MANAGEMENT	Contact hours per week: 5 hrs

Course Outcomes:

CO1:	Understand the key concepts of management and different management experts'
	views on new dimensions of management
CO2:	Able to plan and apply their creative mind in decision making leading to business
	success.
CO3:	Acquire knowledge on nature of organization and its contribution to business
	administration.
CO4:	Have leadership qualities and skills to be used in the development of the firm.
CO5:	know the requirements of effective control in the organization and involve in
	Corporate Social Responsibility

Unit – I Introduction and Schools of Management

Management - Science or Art - Management and Administration - Skills of a manager - Efficiency and Effectiveness - F.W.Taylor - Henry Fayol - Elton Mayo's Hawthorne studies Douglas McGregor's Theory X, Theory Y, Theory Z - Peter Drucker - Emerging trend in management.

Unit – II Planning

Nature - Planning premises - Steps involved in planning, Types, Methods **MBO:** Process, Merits and demerits of MBO - Modern Techniques of Decision making – Process - Creativity in Decision making – MBE (Management By Exception) – MBWA (Management By Walking Around)

Unit – III Organising and Staffing

Organisation - Types, Principles of organisation, Steps- Organisation charts and manualsDelegation of authority - Principles of effective delegation
Decentralisation: Process - Authority & Power.
Departmentation: Factors influencing departmentation, Types.
Span of Management: Factors determining an effective span.

Staffing- Selection process.

Unit – IV Directing

Direction – Elements - Importance – Principles – Techniques **Communication** –Types – Process – Barriers of effective communication. **Leadership** – Styles – Qualities - Role – Managerial grid.

Unit – **V** Controlling

System and process of controlling - Requirements of effective controlling – Control Techniques - Budgetary control - Business Ethics – Importance – Concept & Need for social responsibility of business.

Case studies: Relevant case study (not exceeding 500words) in all units except Unit I to be dealt. Industry Exposure is to be provided by giving assignments based on Industrial Visit.

15Hours

15Hours

15Hours

15Hours





Text Book:		
Dr.C.D.Balaji "Principles of Management", Margham Publications, 2015. First Edition.		
	1.1 – 1.39	
Unit – I	2.1 - 2.15	
	3.1-3.24	
	4.1 - 4.34	
Unit – II	5.1-5.12	
	6.1 - 6.20	
	7.1 - 7.26	
	9.1 - 9.32	
Unit – III	0.1 - 10.16	
	11.1 – 11.11	
	12.1 – 12.11	
	7.1 - 7.26	
	9.1 - 9.32	
Unit –IV	10.1 - 10.16	
	11.1 – 11.11	
	12.1 - 12.11	
	7.1 - 7.26	
Unit – V	9.1 - 9.32	
	10.1 - 10.16	
	11.1 – 11.11	
	12.1 – 12.11	

Reference Books

- 1. Heinz Weirich, MarkV Cannice, Harold Koontz "Management" A Global innovative and Entrepreneurial Perspective 14e McGraw Hill Education (India) Private Limited, 2014.Second Edition.
- 2. L.M.Prasad, Principles of Management, 2015, Sulthan Chand & Sons-New Delhi.

e-Resources

1. URL of the resource 1 <u>https://corporatefinanceinstitute.com/resources/careers/soft-skills/hawthorne-effect/</u>

- 2. https://www.simplypsychology.org/hawthorne-effect.html
- 4. URL of the resource 2 https://www.simplypsychology.org/hawthorne-effect.html
- 5. https://www.cleverism.com/management-by-walking-around-mbwa/

5. URL of the resource 3https://www.cleverism.com/management-by-walking-around-mbwa/ https://slideplayer.com/slide/5785063/

https://www.slidesalad.com/product/goleman-six-leadership-styles-powerpoint-template/ https://www.youtube.com/watch?v=NNVZxTkiX1Y;

https://www.youtube.com/watch?v=FIjiSZMUtXI

https://nptel.ac.in/noc/courses/noc22/SEM1/noc22-mg42/

- <u>· · ·</u>

Subject code: P22MSC12/ P19MSC12	SEMESTER I	Total Contact hours: 75 hrs
Credits : 4	ORGANISATIONAL BEHAVIOUR	Contact hours per week: 5 hrs

Course Outcomes:

COs	CO Statement
CO1	Make them understand the contextual perspectives of OB and its models
CO2	Create ability to apply appropriate learning theory and shape the employees'
	personality.
CO3	Provide suitable motivational technique and imbibe proper values in individual
	behavior.
CO4	Make them able to modify group behavior through conflict management.
CO5	Knowledge to handle stress and understand the need for organizational change and
	culture.

UNIT I:

OVERVIEW OF BEHAVIOR MANAGEMENT

Definition, Foundations of OB, Need & Scope of OB - Organisational Arrangements for OB – Evolution - Contemporary OB, Contextual Perspectives of OB, OB model.

UNIT II:

INDIVIDUAL BEHAVIOUR

Introduction, foundation of individual behaviour:

(a) **Personality:** Definition, The shaping of Personality, determinants, types, Personality trait theory.

(b) **Perception:** Definition, factors influencing perception, Perceptual Process

(c) Learning: Definition, Learning curve – Classical Conditioning, Operant Conditioning, Cognitive theory, Social learning theory.

UNIT III:

INDIVIDUAL BEHAVIOUR

(a) Attitudes: Definition, Nature & Components, formation of attitudes, Functions, Changing attitudes.

(b) Motivation: Definition, Nature, importance, Types, Theories – Maslow's, Herzberg, ERG.

(c) Values: Meaning, Types, Factors in value formation

UNIT IV:

GROUP BEHAVIOUR

(a) **Group:** Definition, Types of groups, Reasons to join in group, Stages of group development, Determinants of Group Behaviour. Group decision making- Approaches, Advantages and problems.

(b) Conflict: Definition, Functional & dysfunctional conflict, Process of conflict, Levels of Conflict, Conflict handling styles.

UNIT V:

(a) Stress: Meaning, Sources, Outcomes and Stress management techniques.

15 Hours

I – M.B.A. 205

77
RI.
WHENSY HE HER DEALTH EDITION

15 Hours

15 Hours







Virudhunagar – 626 001.

(b) Organisational Culture: Meaning, Cultural dimensions, Formation of culture, changing organizational culture.

(c) Organisational change: levels of change, Types, forces of change, Resistance to change, Change process.

Case studies: Relevant case study (not exceeding 500words) in all units is to be dealt.

Industry Exposure is to be provided by giving assignments based on Industrial Visit. **Text Books:**

- 1. K.Aswathappa Organizational Behavior 12th Ed. Himalaya Publishing House
- 2. L.M.Prasad Organizational Behavior 5th Edition (Reprint 2016), Sultan Chand &

201	Sons	
Unit – I	1-26	
	(a) 144-160	
Unit – II	(b) 169-190	
	Textbook (2): (c) 137-147	
	(a) 224-231	
Unit – III	(b) 256-269	
	Textbook (2): (c) 184-190	
Unit –IV	(a) 363-389	
Unit –i v	(b) 450-474	
	(a) 339-354	
Unit – V	(b) 613-633	
	(c) 649-667	

Reference Books:

- 1. Fred Luthans, 12th edition, Organizational Behavior, Tata McGrawhill.
- Stephen P Robbins, 15th edition, Organisational Behavior.
- Uma Sekaran, Organisational Behaviour- Text and cases,2nd edition, Tata McGrawhill Companies
- 4. Robin Fincham, Peter Rhodes, Principles of Organizational Behavior, 4th edition, Oxford,
- 5. Jerald Greenberg, Robert A Baron, Behavior in organizations, 10th edition (Global edition) PHI.

e- Resources:

- 1. https://youtu.be/r2Xv9Am7PWQ
- 2. https://youtu.be/SheMhZeajyk
- 3. https://youtu.be/pjgdvp2f_cs
- 4. <u>https://youtu.be/qv3NKv2TqGE</u>
- 5. https://youtu.be/xl287XuWBIo
- 6. https://youtu.be/MWsPO0qXRn8

Subject code: P22MSC13/ P19MSC13	SEMESTER I	Total Contact hours : 90 hrs
Credits :4	ECONOMICS FOR MANAGERS	Contact hours per week: 6 hrs

Course Outcome:

COs	CO Statement
CO1	Adequate knowledge on the techniques and evolution of managerial economics
CO2	Enable them to perform demand analysis



Virudhunagar – 626 001.

CO3	Have the ability to formulate the production function and estimate relevant cost
CO4	Able to select suitable pricing strategy in various market structures
CO5	Understand and analyze macroeconomic conditions.

Unit I: Introduction to Managerial Economics

Managerial Economics - Definition – Nature and characteristics, Scope, Basic Concepts, Methods & Techniques - Interdisciplinary approach to Managerial Economics

Unit II: Demand Theory

Demand – Types of Demand – Determinants of Demand – Demand function – Law of Demand – Diminishing Marginal Utility - Elasticity of Demand and Types – Methods of Demand Estimation – Demand Forecasting – Law of Supply.

Unit III: Production and Cost Functions

Production function and Theory – Production with variable inputs: Law of Variable Proportions, Production Isoquant curve and curve properties – Return to scale.

Cost concepts – Cost classification – Cost Function – Short run and Long run cost functions – Economies and Diseconomies of scale - Economies of Scope.

Unit IV: Theory of Pricing & Market Structure

Pricing - Product pricing practices and strategies: Cost based pricing, Firm objective pricing, Competition based pricing, Product life cycle pricing, Cyclic Pricing, Multiproduct Pricing.

Market Structure: Features of Perfect competition, Monopoly, Monopolistic competition, oligopoly.

Unit V: Macro Economic Analysis for Business Decision Making 20Hours

National Income – Concepts of National Income – Measurement of National Income – Difficulties in measurement of National Income - Circular flow of Economic Activities & Income

Inflation – Causes of Inflation – Measuring Inflation: PPI, WPI, CPI, COLI, SPI – Controls of Inflation: Monetary Policy & Fiscal Policy – Business Cycle: Phase of Business cycles, Effects of Business cycles – Controlling Business Cycles. – Concept of Multiplier and Accelerator.

Case studies: Relevant case study (not exceeding 500words) in all units except unit I to be dealt.

Text Book

Geetika, Piyali Ghosh, Purba Roy Choudhury., 2009 "Managerial Economics" Tata Mcgraw-Hill Education Private Ltd., New Delhi.

Unit I	10 -21
Unit II	62 -82,
	95 -97,
	118 -120,
	127 -135,
	146 to 172.
Unit III	188 to 194,

15Hours

15Hours

20Hours







Virudhunagar – 626 001.

	202 to 203,
	216 to 230,
	239 to242.
Unit IV	255 to 257,
	275 to276,
	305 to 307,
	323 to326,
	382 to 398.
Unit V	434 to 437,
	441 to456,
	474 to 470,
	479 to 481,
	484 to 486,
	494 to 501,
	511 to 515.

Reference Books:

- 1. Dominick Salvatore, (2009) "Principles of Microeconomics", Oxford International student edition, New Delhi.
- 2. Gupta.G.S. (2011) "Managerial Economics" Tata Mcgraw-Hill Education Private Ltd, New Delhi.
- 3. Manoj Kumar Mishra.,(2010) "Managerial Economics" Vayu Education of India, New Delhi.

e- Resources:

- 1. https://youtu.be/wW3BfdZD4n4
- 2. https://youtu.be/LwLh6ax0zTE
- 3. https://youtu.be/HHcblIxiAAk
- 4. https://youtu.be/iQrshdeQHWM
- 5. https://youtu.be/ucJBO9UTmwo
- 6. https://youtu.be/B_49lQxwMaM
- 7. https://youtu.be/A374ELBK7Cc
- 8. https://youtu.be/XqA27kgR2xc
- 9. https://youtu.be/CSSH0N_xcwo

Subject O P19MSC	Code: P22MSC14/SEMESTER ITotal Contact hours : 90 hC14			
Credits:	4	ACCOUNTING OF MANAGERS	Contact hours per week: 6 hrs	
Cours	se Outcomes			
COs	CO Statement			
CO1	Understand the fundamentals of management accounting			
CO2	Able to prepare Journal, ledgers and Subsidiary Books.			
CO3	Ability to analyze the financial statements			
CO4	Able to prepare various budgets & understand the budgetary control techniques.			
CO5	Able to determine marginal costing and perform break even analysis			

UNIT I

Management Accounting – Meaning – Definition – Distinction between Financial accounting and Management Accounting - Scope of Management Accounting - Tools of management accounting - Limitations of Management accounting - Management Accountant- Functions & Duties of management accountant -Qualities of Management Accountant.

UNIT II Financial Accounting - Accounting Principles- Accounting concepts - Accounting conventions – Journals- Subsidiary Books – Purchase book, sales book, purchase return, sales return (Theory Only) - Preparation of three column cash book and petty cash book under imprest system only- (Simple Problems)

Ledger - Trial Balance - Final Account - Trading a/c - Profit & loss a/c - Balance sheet -(Simple problems)

UNIT III

Financial statement Analysis (Simple Problems)

Ratio Analysis

Liquid ratios: Current ratio, Quick ratio, Cash position ratio (absolute liquidity ratio) Profitability ratios: Gross profit ratio, Net profit ratio, Operating profit ratio, Expenses ratios, Return on total assets (ROA)

Turnover ratios / Activity ratios: Inventory (stock) turnover ratio, Debtors turnover ratio, Debt collection period, Creditors turnover ratio, Working capital turnover Solvency Ratios: Debt-equity ratio, Proprietary ratio

Fund flow statement - Common size statement - Comparative statement - Trend analysis -(Simple Problems without adjustments)

UNIT IV

Budgeting – Budget, Budgeting, Budgetary control - Objectives – Steps - Types of budget -Preparation of cash budget (Simple Problems) - Master budget: Zero Based Budgeting -Advantages & Limitations of Zero Based Budgeting.

UNIT V

Cost – Classification - **Marginal Costing** – Break Even Analysis - Assumptions – Advantages - Limitations - Break Even Chart - contribution - profit volume ratio - Margin of Safety-(Simple Problems). Application of Marginal Costing Techniques – Make or Buy Decisions – Shutdown or Continue – Selection of a Suitable Product Mix (Simple problems).

60% Problems and 40% Theory

Case studies: Relevant Case study in the form of application oriented problems. **Text Book:**

- 1. A Text Book of Accounting For Management S N Maheshwari & S K Maheshwari, Vikas Publishing House Pvt Ltd., New Delhi, Second Revised Edition
- 2. Management Accounting R S N Pillai & Bagavathi, S Chand Publishing, New Delhi
- 3. Financial Accounting T S Reddy & Dr. A Murthy, Margham Publications, Chennai

Unit I	Text Book 1 – Sec 3	Chapter 1	3.1 - 3.10

18 Hours

15 Hours

I - M.B.A.209



21 Hours

21 Hours





Virudhunagar –	626 001.	

Unit II	Text Book 1 – Sec 1	Chapter 2	1.17 – 1.23
		Chapter 3	1.38 - 1.51
		Chapter 4	1.57 – 1.68
		Chapter 5	1.88 - 1.102
		Chapter 7	1.146 – 1.197
Unit III	Text Book 1 – Sec 2	Chapter 1	2.1 - 2.49
		Chapter 2	2.62 - 2.81
	Text Book 2	Chapter 3	43 - 51
Unit IV	Text Book 1 – Sec 4	Chapter 1	4.1 – 4.47, 4.57-
			4.64
Unit V	Text Book 1- Sec 3	Chapter 3	3.33 - 3.40 , 3.47 -
			3.55
	Text Book 2	Chapter 7	362 - 399

Reference Books:

- 1. Financial and Management Accounting T S Reddy & Y.Hari Prasad Reddy , Margham Publications, Chennai
- 2. **Management Accounting** Khan and Jain Tata Mc Graw Hill Publishing Co.Ltd, New Delhi (2006)

e- Resources :

- 1. <u>https://www.youtube.com/watch?v=3TgqOL1Bdms</u> Management Accounting
- 2. <u>https://www.youtube.com/watch?v=xWKfKCnQqAE</u> Basic Concept of Accounting
- 3. <u>https://www.youtube.com/watch?v=76gMXQBnbps</u> Ratio Analysis
- 4. <u>https://www.youtube.com/watch?v=pYSgMGoK_Jo</u> Budgeting
- 5. <u>https://www.youtube.com/watch?v=i_7dxah6h3w</u> Marginal Costing

Subject Code: P22MSC15/ P19MSC15	SEMESTER I	Total Contact hours : 90 hrs
Credits: 4	BUSINESS STATISTICS	Contact hours per week: 6 hrs

Course Outcomes

COs	CO Statement
CO1	Able to tabulate and present data and calculate index number.
CO2	Understand the measures of central tendency & measures of dispersion.
CO3	Know the hypothesis testing under various conditions.
CO4	Ability to perform correlation and regression analysis.
CO5	Understand different non parametric methods.

Unit I

Statistics- Introduction, scope, limitation & application.

Presentation of data-Classification & Tabulation, Graphical Presentation: Frequency curve, Frequency Polygon, Ogives, Histogram, Bar chart.

Index Number – Cost of Living index, Laspeyre's Index, Paasche's Index and Fisher' Ideal Index

Unit II

Measures of Central Tendency- Arithmetic Mean by Direct Method, Weighted Arithmetic Mean, Geometric Mean, Quartile, Median, and Mode.

Measures of Dispersion- Range, Mean Deviation, Variance and Standard Deviation, Coefficient of Variation.

Unit III

Probability- Introduction & significance – Area of application, Subjective Probability, joint, Marginal, Conditional Probability, Independent, Dependent, Mutually Exhaustive And Complementary Events (Simple Problems) - Normal probability distribution (Theory Only). **Forecasting-** Introduction, variations, Time series: Trend Analysis, Cyclical variation Seasonal, Irregular variations – Free Hand, Semi average and Moving average methods (Simple Problems).

Unit IV

Correlation analysis - Measure of Linear Correlation - Spearman's Rank Correlation, Pearson Correlation - Regression analysis –Simple Linear Regression Equations (For two Variables).

Unit V

Point Estimation- Interval Estimation -Desirable properties of point estimation **Testing of Significance**- Z-test, t-test and F-test - ANOVA. **Non-Parametric test:**-Chi square Test for Goodness of fit, Test for independence.

Case studies: Relevant Case study in the form of application oriented problems to be dealt. **Text Book:**

Statistics for Management- T.N.Srivastava and Shailaja Rego by Tata McGraw Hill, New Delhi. (3rd Reprint 2009)

1.2-1.9 3.1-3.11

<u>17.2-17.7</u> 4.3-4.18

4.20-4.54 5.2-5.28 13.2-13.8

13.38-13.41

11.2-11.25

8.2-8.43 10.4-10.83

Unit – I

Unit – II

Unit – III

Unit –IV

Unit – V

Reference:

- 1. Statistics Theory and Practice R.S.N.Pillai and Bagavathi S.Chand Publication, New Delhi. (7th Edition, 2010 Reprint)
- 2. Fundamentals of Statistics S.C.Gupta, Himalaya Publishing House, 7th Revised & Enlarged Edition.

e- Resources:

1) <u>https://youtu.be/nPM2GWi1_qM</u>



20Hours

20Hours

20Hours





Virudhunagar – 626 001.

- 2) <u>https://youtu.be/EnRgYQRdSyw</u>
- 3) <u>https://youtu.be/k_uny4mac_E</u>
- 4) <u>https://youtu.be/HtkTVmnILY0</u>
- 5) <u>https://youtu.be/OYm6Vp3Wy_4</u>

Subject code: P22MSW11/ P19MSW11	SEMESTER I	Total Contact hours : 30
Credits :1	WORKSHOP ON LIFE SKILLS	Contact hours per week: 2 hrs

Module	Unit Name	Hours	Торіс	Exercise
		1	The Art and Logic of Listening Effective Listening skills	
1	Listening skills	1	Live Projects – I	 Listening to video clip from any news channel Listening to video clip of commentary of any sports
2	Non Verbal	1	Introduction to Kinesics Kinesics: Gestures & Postures	
2	Communication	1	Live Projects – II	1. Observing and Recording kinesics of 1 self profile chosen.
3	Verbal Communication a. Self Profiling	5	Introducing self The Place I stay My Parents My Siblings My Academics – My School My Academics – My College Hobbies & Special Interests Sports & Games	 Record on Self profiling of all listed Presentation on Self profiling
	b. Personal Signposts	6	My Favorite Leader My Favorite CEO My Favorite Brand - I My Favorite Brand - II The Advertisement I Like.	 Record on Personal Signposts Presentation on Personal Signposts
4	Book Reading & Presentation	5	Book Reading and Presentation - Introduction - Book Talk - Book Summaries	1. Book reading and Presentation
5	Comprehension Skills	6	News Articles - Introduction - Comprehension skills	1. Three exercise preparation from 3 different fields of news

Record Note – All the exercises given under column heading exercise are to be recorded in the record note.





Subject code: P22MSC21	SEMESTER II	Total Contact hours : 75 hrs
Credits : 4	MARKETING MANAGEMENT	Contact hours per week: 5 hrs

Course Outcomes:

COs	CO Statement
CO1	Understand core competencies and growth of marketing.
CO2	CO2: Able to perform the segmentation of market.
CO3	Determine the stage of the Product life cycle
CO4	Have knowledge of different pricing strategies.
CO5	Involve themselves in new product development and green marketing

Unit – I Evolution & Growth of Marketing

Marketing – meaning - What is marketed - Who markets - Fundamental concepts of marketing - The new marketing realities - Relationship marketing - Internal marketing - Performance marketing - Marketing management tasks - The value chain process - Core competencies - Contents of marketing plan - Updating the four Ps.

Unit – II Market & Market Segmentation

Business markets - Buying situations – Types - participants in the business buying process - Stages – Bases for segmenting consumer markets - Criteria of effective segmentation – Packaging – Labeling - Warranties and Guarantees.

Unit – III Brand & Promotions

Product life cycle-stages - Diffusion of innovation - Brand-role of brands-scope of branding-Marketing advantages of strong brands - Brand equity -Brand resonance model - Brand elements choice criteria - Brand communities - Brand extensions - Advantages of brand extensions - Choosing POP and PODs.

Unit – IV Pricing Strategies & Retailing

Price – Steps in setting a pricing policy - Types-marketing channels - Push strategy - Pull strategy - Channel member functions - Channel design decisions - Major types of retailers-Recent developments in market logistics.

Unit – V New Product Development & Sales Promotion, New Trends of 15Hours Marketing

The new product development decision process - The future marketing – Sales promotionsmajor decisions - Major customer promotion tools - Major trade promotion tools – Event Management & Sponsorships – Recent Trends - E-tailing, Green marketing - Digital marketing - Internet marketing-Social media marketing.

Case Studies: Relevant case study (not exceeding 500words) in all units except Unit I is to be dealt. **Industry Exposure is to be provided by giving assignments based on Industrial Visit**.

Text book:

1. Marketing Management-Philip Kotler, Kevin lane, Abraham Koshy, MithileshwarJha- 14e-Pearson Publications 2014.

15Hours

15Hours





Unit – I	1-25
Unit – II	182-190, 212-235.
Unit – III	240-255.
Unit –IV	382-402, 414-431.
Unit – V	536-549, 567-573.

Reference books:

1. Marketing Management- Ramasamy & Namakumari – 4th Edition, Macmillan India 2009.

e- Resources:

- 1. https://studentzone-
- ngasce.nmims.edu/content/Marketing%20Management/Marketing_Management_ZO SMLuTCjy.pdf.
- 2. https://www.economicsdiscussion.net/marketing-management/what-is-marketingmanagement/31788.
- 3. https://www.businessmanagementideas.com/marketing-management/questions-andanswers/marketing-management-questions-and-answers/18322.

Subject Code: P22MSC22	SEMESTER II	Total Contact hours : 90 hrs
Credits: 4	FINANCIAL MANAGEMENT	Contact hours per week: 5 hrs

Course Outcomes:

COs	CO Statement
CO1	Understand the objectives and functions of finance manager and the concepts of profit maximization vs. wealth maximization.
CO2	Be able to calculate cost of capital.
CO3	Calculate earnings before interest and tax.
CO4	Ability to know the features of management of cash and receivables.
CO5	Learn features and theories of capital structure and dividend policy.

Unit I

10 Hours

20 Hours

Financial management - Definition -Objective - Profit maximization Vs Wealth maximization –Function of financial manager – Relationship between FM and other areas of management – Functional areas of Financial Management- Financial Decisions **20 Hours**

Unit II

Sources of capital - Long term and Short term sources.

Hire Purchase - Leasing - Capital market structure - Primary market - Secondary market -Debt and Equity market.

Cost of capital - Meaning, Importance, cost of debt and preferences - Cost of equity -Weighted average cost of capital (Simple Problems)

Unit III

Capital structure – Forms – Importance – Factors determining Capital Structure – Theories of Capital Structure – Problems on EBIT – EPS Analysis

Leverage Analysis – Operational Leverage, Financial Leverage, Combined Leverage.





20 Hours

Working Capital management – Definition and Concepts of working capital – Determinants of Working Capital - Computation of working capital requirement. (Simple Problems)

Cash management - Motives of holding cash - objectives of cash management. (Theory only)

Receivables management – Objectives - Credit policy, Credit terms, Collection policies (Theory only)

Unit V

Unit IV

20 Hours

Capital budgeting – Techniques – Investment evaluation methods- Payback period -Average rate of return –NPV- Profitability Index (Problems on IRR to be excluded).

Dividend policy – Factors affecting dividend policy – Forms of dividend – Stock dividend and Stock split. (Theory only)

Recent trends in raising capital – Angel Investing – Venture capital.

50% Problem and 50% Theory

Case studies: Case studies in the form of application oriented problems to be dealt.

Text Books:

- 1. P.V.Kulkarni and B.G.Satyaprasad Financial Management A Conceptual Approach Himalaya Publishing house (Fourteenth edition) 2015.
- 2. M.Y. Khan and P.K.Jain Financial Management Text, Problems and cases Tata McGraw Hill Publishing company Ltd., New Delhi (Fourth edition)
- **3.** Security Analysis and portfolio management Punithavathy Pandian Vikas publications.

Unit I	Text Book 1	Chapter 4	57 - 64, 67 - 74
Unit II	Text Book 1	Chapter 17	411- 422
		Chapter 18	427 – 437
		Chapter 23	496 - 518
Unit III	Text Book 1	Chapter 13	367-385
		Chapter 21	467-481
Unit IV	Text Book 2	Chapter 13	13.4-13.5, 13.13-13.30,
		Chapter 14	14.2-14.5,
		Chapter 15	15.1-15.16
Unit V	Text Book 1	Chapter 27	561-592
	Text Book 2	Chapter 30	30.1-30.15

Reference Books:

- 1. Prasanna Chandra Financial Management Tata McGraw Hill Publishing company Ltd., New Delhi.
- 2. James C.Van Horne, Financial Management Prentice Hall of India Pvt. Ltd, New Delhi.
- 3. I.M.Pandey, Financial Management Vikas Publishing House Pvt. Ltd.,



HNCN12022
OTH ENGINEERS AT HIGH DURING COMPANY

Subject code: P22MSC23	SEMESTER II	Total Contact hours : 75 hrs
Credits : 4	HUMAN RESOURCES MANAGEMENT	Contact hours per week: 5 hrs

Course Outcomes

COs	CO Statement
CO1	Understand the characteristics and functions of HR Managers.
CO2	Able to perform job analysis, recruitment, and selection.
CO3	Ability to select appropriate methods of placement, induction, training and
	development.
CO4	Able to understand absenteeism, labour turnover, and job satisfaction.
CO5	Learn the work life quality and recent techniques in HRM.

Unit – I

Introduction: Human Resource Management - Definition - Characteristics - Functions - Managerial Functions, Operative Functions –scope - Role of a HR Manager - competencies of HR Manager

Human Resource Planning: Meaning, need, Objectives, Factors affecting HRP – steps in HRP process- (Demand forecasting - Supply forecasting), Qualitative aspects of HRP.

Unit – II

Job Analysis: meaning, contents, procedure, Job description-contents, uses, Job specification **Recruitment:** meaning, features, factors affecting recruitment, sources - Internal and External recruitment

Selection: Selection process – Barriers to effective selection.

Unit – III

Placement and Induction: Objectives, Benefits, Induction procedure, contents. **Training and Development**: Importance, identifying training and development needs, methods.

Performance Appraisal: Introduction, objectives, process, techniques of performance appraisal – problems

Separation – Methods – Challenges.

Unit – IV

Absenteeism – Meaning – Types – Causes – Measures to minimise absenteeism.

Labour Turnover – Meaning – Types – Effects of External Mobility – Controlling External Mobility.

Job Satisfaction – Meaning – Factors of Job Satisfaction.

Morale – Definitions – Importance – Individual and Group Morale – Factors Affecting Morale – Measurement of Morale – Morale and Productivity – Warning Signs of Low Morale – Maintenance of Morale – Improvement of Morale.

Unit – V

Quality of work life - Quality of Work life-Meaning - Specific issues in Quality of Work life-Quality of work life and productivity.

Recent Techniques in HRM - Employers Brand - Competency Mapping - HR matrix-Attitudes, Emotions-Business Process Outsourcing: HR Issues – Right size of Workforce -Knowledge Management - Learning Organisation.

15 Hours

15 Hours

15 Hours

15 Hours





Virudhunagar – 626 001.

Case studies: Relevant Case study (not exceeding 500words) in all units except unit I to be dealt.

Industry Exposure is to be provided by giving assignments based on Industrial Visit.

Text Books:

- **1.** Priyanka Goel "Human resource management" Atlantic publishers and distributors(P) LTD, 2017
- **2.** P.Subba Rao "Personnel and human resource management" fourth edition, Himalaya publishing house
- **Unit I**: Text book 1 Chapters 1& 3
- **Unit II**: Text book 1- Chapters 4 & 6
- **Unit III**: Text book 1- Chapters 8, 9 & 14
- Unit IV: Text book 2- Chapters 13, 18 & 19
- **Unit V:** Text book <u>2- Chapters 30 & 33</u>

Unit – I	Introduction: 1-21	
Omt - I	Human Resource Planning:28-40	
	Job Analysis:41-53	
Unit – II	Recruitment:63-68	
	Selection:69-74	
	Placement and Induction:88-92	
Unit – III	Training and Development:94-106	
	Performance Appraisal:147-161	
	Absenteeism:195-198	
Unit –IV	Labour Turnover:198-200	
Unit –I v	Job Satisfaction:263	
	Morale:262-270	
Unit – V	Quality of Work Life:400-406	
$\operatorname{Umt} - \mathbf{v}$	Recent Techniques in HRM:430-446	

Reference Books

C.B.Memoria S.V.Gankar- Personnel Management text & Cases - Himalaya Publishing house, 2011

K.Aswathappa—Human Resource Management text & cases—Tata McGraw Hill Education Private limited, 7th edition

e-Resources

https://youtu.be/qWv570bxjdU https://youtu.be/HbuOdOSB2ZM https://youtu.be/yVuLtdTL5IM https://youtu.be/iBhTv2-VfRo

Syllabus for those who joined in 2022 – 2023 and afterwards



Subject Code: P22MSC24/ P19MSC24	SEMESTER II	Total Contact hours : 75 hrs
Credits: 4	OPERATIONS MANAGEMENT	Contact hours per week: 5 hrs

Course Outcomes:

COs	CO Statement	
CO1	Understand the responsibilities of Production Manager.	
CO2	Able to design the plant layout and select suitable plant location.	
CO3	Able to use the inventory control techniques.	
CO4	Ability to make production planning and analyze the dimension of quality.	
CO5	Learn the scrap and surplus disposal.	

Unit I:

15 Hours

15 Hours

Introduction - Definition - Types of Production System - Characteristics of production system-Objectives and scope of production system- Responsibilities of production manager Automation- Definition, Need and Types, Automated production systems.

Unit II:

Plant Location – meaning, Factors affecting Location, Cost factor in location.

Plant Layout – Principles, Types of facilities layout (Product, Process, Fixed position layout and Hybrid layout).

Purchase management – Concepts of material management, Objectives of purchase department, Selection of suppliers.

Standardization - Meaning, Benefits, Codification- Design of codification, Advantages

Unit III:

Inventory management – Meaning, objectives, and Types of inventories, Techniques (ABC Analysis, VED analysis and other models)

Inventory control: EOQ method and EBQ method Value analysis and values engineering

Unit IV:

15 Hours

15 Hours

Production planning- Material requirement planning - Objectives, Capacity planning -Concepts

Quality control: Definition, Dimension of quality, Benefits, Determinants, Control charts Quality circle: Meaning, Objectives and benefits, ISO- Objectives, Steps in implementation, JIT, TOM- Essentials,

Unit V:

15 Hours Method study: Meaning, Steps. Time and motion study- Meaning, Charts & diagrams Maintenance management – Objectives, Types. Waste management- Scrap and Surplus disposal

Case studies: Relevant Case study (not exceeding 500words) in all units except unit I is to be dealt.

Industry Exposure is to be provided by giving assignments based on Industrial Visit. **Text Book**

1. N.V.Badi "A Text on production and operations management" first edition (2013), Vrinda publications (P) ltd.







Virudhunagar – 626 001.		
Unit – I	(a) 1 - 15 (b) 18 - 25	
Unit – II	(a) $31 - 43$ (b) $48 - 59$ (c) $67 - 85$ (d) $130 - 131$ (e) $131 - 132$	
Unit – III	(a) 91 - 98, 102 - 104 (b) 99 - 101 (c) 133 - 135	
Unit –IV	 (a) 148 - 158 (b) 166 - 179 (c) 182 - 185 (d) 144 - 145 (e) 188 - 191 	
Unit – V	(a) 201 - 203 (b) 203 - 219 (c) 226 - 229 (d) 234 - 235	

Reference Books:

- 1. Prof. L.C.Jhamb "Production Operations management" Everest publishing house 18th edition
- 2. Anil kumar.S. and Suresh.N "Production and Operation Management"2nd Ed., New Age International Publishers, New Delhi.
- Richard B Chase, F Robert Jacobs, Nicholas J Aquila no and Nitin K Agarwal "Operations Management for Competitive advantages" 3rd Ed., Tata McGraw Hill – New Delhi.
- 4. Joseph G.Monks "Sahaum's Outlines Operations Management" 2nd Ed., Tata McGraw-Hill, New Delhi.

e- Resources:

https://youtu.be/nG5-52a5lRo https://youtu.be/JNwsKJ_SSXI

Subject code: P22MSC25	SEMESTER II	Total Contact hours : 60 hrs
Credits :4	BUSINESS INTELLIGENCE	Contact hours per week: 4 hrs

Course Outcomes:

COs	CO Statement			
CO1	Understand the concept and importance of decision support system and the			
	framework for business intelligence			
CO2	Able to determine the right phase of decision making			
CO3	Learn data mining and data warehousing.			
CO4	Acquire knowledge about the appropriate methodology of business performance			
	management.			
CO5	Learn proper technique in knowledge management.			



UNIT-I DECISION SUPPORT SYSTEM AND BUSINESS INTELLIGENCE

12Hours

Changing business environment and computerized decision support - Managerial decision making - Computerized support for decision making – An Early frame work for Computerized Decision Support - The concept of decision support system - A frame work for business intelligence - A work system view of decision support.

UNIT–II DECISION MAKING SYSTEMS MODELS & SUPPORT 12Hours

Characteristics of Decision Making - Models - Phases of Decision Making Process - Intelligence Phase - Design Phase - Choice Phase - Implementation Phase.

UNIT-III DATA MINING FOR BUSINESS INTELLIGENCE

Data mining: concept & application – Definition - Applications- Data mining process - Data warehousing – Definition - Characteristics of data warehousing - Data ware housing process overview - Data warehousing implementation issues - Real time data warehousing.

UNIT- IV BUSINESS PERFORMANCE MANAGEMENT

Business performance Management overview- Strategize, Plan, Monitor, Act and Adjust - Performance measurement- BPM Methodologies – BSC (Balanced score card).

UNIT-V COMPUTATIONAL TOOLS

. MS – Excel - Statistical Tools (Correlation & Regression) - IF Condition, Pivot Table - Financial Tools (IRR, NPV) - Ms Access - Database & Table Creation - Query & Report Generation

Cases Studies: Relevant case studies (not exceeding 500words) in all units except unit I & II is to be dealt.

Text Book:

Decision Support and Business Intelligence Systems, 9th Edition by Efraim Turban, Ramesh Sharda, DursunDelen – Published by Pearson.

Unit – I	5-25
Unit – II	39-61
Unit – III	191-325
Unit –IV	339-361
Unit – V	Study Material

Reference book:

1. Business Intelligence: Data Mining and Optimization for Decision Making (WSE) by Carlo Vercellis- Wiley Publication, April 2009.

e- Resources link:

https://youtu.be/114DipNd1n8

https://slideplayer.com/slide/6903188/

12Hours

12Hours





Subject code: P22MSW21	SEMESTER II	Total Contact hours : 30 hrs
Credits : 1	WORKSHOP ON MANAGERIAL SKILLS	Contact hours per week: 2 hrs

Module	Unit Name	Hours	Торіс	Exercise
		1	Self Review	SWOT
1	Writing Skills	3	Letter Writing Emails MS Word	Job Application Letter with Resume, Business Letter using Mail Merge – MS Word
		2	Presentation Skills Presentation Process Presentation Techniques 	Prepare a max. of 8 slides using all insert functions in MS –Power point
2	2 Presentation Skills	2	JAM Session • Introduction & Steps in Preparation	1 minute topic presentation
		3	Cue Cards Introduction, Steps in Preparation and Application 	Cue card preparation
3	News Assimilation Skills	4	Introduction to Note Making and Note Taking Current News – An Introduction – Gathering News – Writing a News Article – Opinion Interview on News Story writing – News Lead	A news story is a factual, prose story for print or broadcast media about a person, place or event answering these five questions: who, what, when, where, why and how. One News Article preparation One Story Writing
		1	Attitude on People, Event and Object	Report on People/Event/Object
4	Social Skills	5	Grooming & Etiquette Work Etiquette, Telephone Etiquette, Dinning Etiquette, E-Mail Etiquette, Meeting People	One exercise on all etiquette
5	Computational Skills	4	 MS – Excel Statistical Tools (any 2) Goal Seek, Scenario Manager, Vlook, Hlook, IF Condition, Pivot Table Financial Tools (any 2) Ms Access Database & Table Creation Query & Report Generation 	Lab Exercises

Record Note – All the exercises given under column heading exercise are to be recorded in the record note.

Subject code: P22MSN21/ P19MSN21	SEMESTER II	Total Contact hours : 60 hrs
Credits : 4	NON – MAJOR ELECTIVE ENTREPRENEURSHIP	Contact hours per week: 4 hrs

Course Outcomes

COs	CO Statement	
CO1	Understand the concepts of entrepreneur, his qualities and functions.	
CO2	Gain insights about women entrepreneurship and rural entrepreneurship.	
CO3	3 Understand family business and challenges in it.	
CO4	4 Able to devise a business plan and decide upon the type of ownership.	
CO5	Be able to choose the suitable institution to support their entrepreneurial activity.	

Unit – I Entrepreneurship

Evolution of the Concept of Entrepreneur - Characteristics of a Successful Entrepreneurs -The Entrepreneurial Decision Process – Functions of Entrepreneur – Types of Entrepreneurs – Distinction between an Entrepreneur and a Manager.

Unit II Women Entrepreneurship & Rural Entrepreneurship 12 Hours Women Entrepreneurship: Concept, Functions, Problems – Growth of Women Entrepreneurship in India - Developing Women Entrepreneurship - Limitation of Women Entrepreneurship.

Rural Entrepreneurship: Meaning, Need and Problems.

Unit III Family Business

Family Business: Introduction – Meaning – Types of Family Business – Family Business in India – Advantages & Disadvantages of Family Business – Major Challenges Faced by Family Business in India – Business Succession Planning.

Unit IV Business Plan and Business Ownership

Business Plan – Meaning - Contents of Business Plan – Formulation of Business Plan. Business Ownership: Sole Proprietorship - Main Features. Partnership: Main Features, Advantages & Disadvantages.

Unit V **Institutional Support to Entrepreneurs:**

Need for Institutional support - National Small Industries Corporation Ltd., (NSIC) - Small Industries Development Organization (SIDO) - District Industries Centres (DIC) - Industrial Estates: Types, Objectives, Industrial Estate in India.

Text Book:

Dr.S.S.Khanka - Entrepreneurial Development - Revised Edition 2012 - Sultan Chand & Sons

Unit – I	3 - 25
Unit – II	(a) 51 - 58 (b) 67 - 72
Unit – III	135 - 148
Unit – IV	(a) 303 - 306

12 Hours

12 Hours

12 Hours









, in a dan an again of a contr	
	(b) 356 - 358
Unit – V	403 - 412

Reference Book

- 1. Dr. C. B. Gupta, Dr. N. P. Srinivasan Entrepreneurial Development Revised Edition 2010 Sultan Chand & Sons.
- 2. Robert D Hisrich, Michael P Peters, Dean A Shepherd Entrepreneurship Sixth Edition TataMcGraw Hill Publications.

E-Resources

- 1. <u>https://youtu.be/TGqkbq2nLfo</u>
- 2. <u>https://youtu.be/XdwhSkKmhrU</u>
- 3. https://youtu.be/jmhuphKCCWM
