



KV INSTITUTE OF MANAGEMENT AND INFORMATION STUDIES - COIMBATORE

Approved by AICTE - New Delhi, Affiliated to Anna University - Chennai

A Nationally Ranked B School for MBA

No. 545, Sathy Main Road, Kurumbapalayam Post, Coimbatore - 641 107

LESSON PLAN

DEGREE - MBA (2018-2020 BATCH)	SEMESTER I	TARGET SESSIONS - 45 Hrs
COURSE CODE – BA5105	COURSE TITLE – STATISTICS FOR MANAGEMENT	
FACILITATOR – Dr. S.P.Thenmozhi		

AIM:

To equip the students with the fundamentals of Business Statistics .

COURSE OBJECTIVE

To learn the applications of statistics in business decision making.

LEARNING OUTCOMES:

To facilitate objective solutions in business decision making under subjective conditions.

COURSE DELIVERY:

Facilitate the students through theory and practical applications. To develop true interest in the subject, text books, reference books, Videos and Case Studies are prescribed as the sources of study material. The teaching methodologies will include Class Lecture, Discussions through PPT's, Case studies, Videos, Assignment Writing and Seminar Presentations. Students can approach the course facilitator for any clarifications in the subject and also refer relevant sources for their Assignment and Seminars.

GRADING PATTERN

No.	Component	Unit Score	Times	Total Score	Weight
1	Attendance*			05	05
2	Internal Assessment Tests	50	3	100	10
3	Assignments	-	3	5	05
4	End Semester Examination	100	1	100	80
	Total				100

ATTENDANCE MARKS

Percentage of Attendance	Weight
96-100	5
91-95	4

86-90	3
81-85	2
76-80	1

CODE OF CONDUCT:

Any form of cheating, plagiarism, impersonation, falsification of a document as well as any other form of dishonest behavior related to the obtaining of academic gain or the avoidance of evaluative exercises committed by a student is judged as an academic offence.

CLASS PARTICIPATION:

It means physical, mental and intellectual participation in class. Students are expected to read well in advance for active participation in class. They need to contribute to the academic discussion in every session and quality of such contribution must be appreciable. They are welcome to share their practical experiences, provided those are relevant and related to topic.

IMPORTANT INFORMATION:

1. Students are required to be present in class at scheduled time.
2. They must carry their subject note book and lesson plan to the class.
3. If a student fails to attend the class within 05 minutes of its scheduled time, he will be marked absent.
4. Students are required to take consent from the course faculty for any kind of permission.

NO. OF STUDENTS ENROLLED IN THE CLASS: 120

COURSE PLAN/SCHEDULE

SESSION	CONTENT	PEDAGOGY	DELIVERABLES (ONLINE - VIDEOS / CASE STUDY)	RESOURCE	DATE OF CLASS HANDLED	NO OF STUDENTS PRESENT IN THE CLASS
Pre Course Video:						
https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-ap/measuring-center-quantitative/v/statistics-intro-mean-median-and-mode https://www.youtube.com/watch?v=eGRhCNWcHSk https://www.youtube.com/watch?v=5C9LBF3b65s						
UNIT I – INTRODUCTION						
1	Introduction to Statistics Basic definitions and rules of Probability	Lecture, PPT	https://www.khanacademy.org/math/ap-statistics/probability-ap/randomness-probability-simulation/v/basic-probability	JF:Pg.226-274		
2	Conditional Probability	Lecture, PPT		JF:Pg.226-274		
3	Independence of events	Lecture, PPT	https://www.youtube.com/watch?v=WD2gMDi_0I	JF:Pg.226-274		

4	Baye's theorem and random variables	Lecture, PPT	https://www.youtube.com/watch?v=bmQrnBh5QfU	JF:Pg.226-274		
5	Probability Distributions-Types-Binomial	Lecture, PPT	https://www.youtube.com/watch?v=G4MfuRI3htk	JF:Pg.226-274		
6	Poisson disrtibution					
7	Uniform and Normal distributions					
8	Uniform and Normal distributions					
9	Case study	Discussion	JF:The Automobile Industry	JF:Pg.271		

Assignment – 1: Solve the problems for the case study - [The Automobile Industry](#)

Pre Course Video: https://www.youtube.com/watch?v=z0Rv_3_qhDw

UNIT II – SAMPLING DISTRIBUTION AND ESTIMATION

10	Introduction to Sampling distributions	Lecture, PPT		JF:Pg.346-351		
11	Sampling distribution of mean and proportion	Lecture, PPT	https://www.khanacademy.org/math/ap-statistics/sampling-distribution-ap/sampling-distribution-mean/v/sampling-distribution-of-the-sample-mean	JF:Pg.361-371		
12	Sampling distribution of mean and proportion	Lecture, PPT		JF:Pg.361-371		
13	Application of central limit theorem	Lecture, PPT	https://www.youtube.com/watch?v=-T-sIzCWPvw	JF:Pg.357-360		
14	Sampling techniques	Lecture, PPT	https://www.youtube.com/watch?v=be9e-Q-jC-0	JF:Pg.352-357		
15	Estimation: Point and Interval estimates for parameters of large samples and small samples	Lecture, PPT	https://www.khanacademy.org/math/statistics-probability/confidence-intervals-one-sample/old-confidence-interval-videos/v/small-sample-size-confidence-intervals	JF:Pg.390-395		
16	For small samples			JF:Pg.390-395		
17	Determining the sample size	Lecture, PPT	https://www.youtube.com/watch?v=HuG150C8Q30	JF:Pg.400-403		
18	Determining the sample size	Lecture, PPT		JF:Pg.400-403		

Assignment-2: Solve the problems given**Pre Course Video:** https://www.youtube.com/watch?v=pWEWHKnwg_0**UNIT III – TESTING OF HYPOTHESIS- PARAMETRIC TESTS**

19	Hypothesis testing: one sample and two sample tests for means of large samples (z-test)	Lecture,PPT	https://www.youtube.com/watch?v=EwyxQ-yLSbU	JF:Pg.412-445		
20	Hypothesis testing: one sample and two sample tests for means of large samples (z-test)			JF:Pg.412-445		
21	one sample and two sample tests for means of small samples (t-test)	Lecture, PPT	probability/significance-tests-one-sample/more-significance-testing-videos/v/small-sample-hypothesis-test	JF:Pg.452-466-499		
22	one sample and two sample tests for means of small samples (t-test)			JF:Pg.452-466-499		
23	F-test for two sample standard deviations	Lecture, PPT	F-Test for two sample variances - YouTube	JF:Pg.512-519		
24	F-test for two sample standard deviations	Lecture, PPT	https://www.youtube.com/watch?v=Pml68e3Eh3o	JF:Pg.512-519		
25	ANOVA one way	Lecture, PPT	https://www.youtube.com/watch?v=WUjsSB7E-ko	JF:Pg.533-545		
26	ANOVA two way	Lecture, PPT		JF:Pg.547-552		
27	Revision	Co-operative learning				

Pre Course Video:**<https://www.khanacademy.org/math/statistics-probability/inference-categorical-data-chi-square-tests/chi-square-goodness-of-fit-tests/v/chi-square-distribution-introduction>****UNIT IV NON-PARAMETRIC TESTS**

28	Chi-sqaure test for single sample standard deviation	Lecture,PPT	https://www.youtube.com/watch?v=1Ldl5Zfcm1Y	JF:Pg.562-570		
29	Chi-sqaure test for independence of attributes and goodness of fit	Lecture, PPT	https://www.youtube.com/watch?v=Ztx11advjU0	JF:Pg.571-578		
30	Sign test for paired data, Rank sum test	Lecture, PPT	https://www.youtube.com/watch?v=9TIM3ef_oFw https://www.youtube.com/watch?v=	JF:Pg.589		

			=la_M-OJvml8		
31	Komogorov –Smirnov test for goodness of fit comparing two populations	Lecture, PPT	https://www.youtube.com/watch?v=EdFfXi0JwBA	JF:Pg.597	
32	Mann-Whitney U test and	Lecture, PPT	https://www.youtube.com/watch?v=LnfPKGhJypU https://www.youtube.com/watch?v=BkyGuNuaZYw	JF:Pg.591-593,	
33	Kruskal Wallis test			JF:Pg.604-607	
34	One sample run test	Lecture, PPT	https://www.khanacademy.org/math/statistics-probability/significance-tests-one-sample/more-significance-testing-videos/v/hypothesis-testing-and-p-values	JF:Pg.589	

Assignment – 3: (Group Task) Develop a Research paper-Identify a problem/Topic in a selected industry/service sector , Define the objectives and develop a Questionnaire for data collection. Collect data (can also use secondary resources), do data analysis and Interpret the results. Submit a paper and Do group Presentation.

Pre Course Video:

<https://www.youtube.com/watch?v=TU2t1HDwVuA>

<https://www.youtube.com/watch?v=zJWzkN-amcE>

UNIT V CORRELATION AND REGRESSION

35	Correlation-Types,applications	Lecture, PPT		JF:Pg.626-633	
36	Co-efficient of Determination Karl Pearson Correlation coefficient	Lecture, PPT	https://www.youtube.com/watch?v=2SCg8Kuh0tE	JF:Pg.634-637	
37	Karl Pearson Correlation coefficient	Lecture, PPT	https://www.youtube.com/watch?v=rWsiBmA_8Q4	JF:Pg.638	
38	Spearmen’s Rank correlation	Lecture, PPT	https://www.youtube.com/watch?v=0qLKfMm45-4	JF:Pg.646-649	
39	Regression-Types, applications	Lecture, PPT	https://www.youtube.com/watch?v=BLRjywb0mes	JF:Pg.650	
40	Regression line,equation,co efficient	Lecture, PPT	https://www.youtube.com/watch?v=GhrxgbQnEEU		
41	Estimation of Regression line	Lecture	https://www.youtube.com/watch?v=ZkjP5RJLQF4	JF:Pg.654	
42	Estimation of Regression line	Lecture	https://www.youtube.com/watch?v		

			=iAgYLRy7e20		
43	Method of Least squares	Lecture	https://www.youtube.com/watch?v=Qa2APhWjQPc		
44	Standard Error estimate	Lecture			
45	Revision	Q&A			

LEARNING RESOURCES:

S.NO.	RESOURCES	PARTICULARS
1	REFERENCE BOOKS	Richard Levin, David Rubin, Sanjay Rastogi, Masood Siddiqui, Statistics for Management, Pearson Education, 7 th Edition, 2016
		Prem.S.Maran, Introductory Statistics, 7 th Edition, Wiley India, 2016
		Aczel A.D and Soundarapandian.J, 'Complete Business Statistics', 6 th edition, TataMcGraw Hill Publishing Company Ltd, New Delhi, 2012
		Ken Black, Applied Business Statistics, 7 th Edition, Wiley India Edition, 2012
		N.D.Vohra, Business Statistics, Tata McGraw Hill, 2012
2	SUPPLEMENTARY READING MATERIALS	Pillai & Bagavathi, Statistics Theory and Practice, S.Chand, New Delhi, 2009
		Srivastava & Rego, Statistics for Management, Second edition, McGraw-Hill, 2012
		Joseph Francis, Business Statistics, Cengage Learning India Pvt. Ltd., Delhi, 2015 (JF)
3	JOURNALS	Journal of Statistics Education http://www.pibburns.com/statmath.htm
4	WEBSITES	https://www.edx.org/course/statistics-for-business-i (course handled by IIM-B Professor)
		https://www.analyticsvidhya.com/resource-statitics/
		https://www.quora.com/What-are-good-resources-to-learn-statistics-online
		www.khanacademy.org
6	VIDEOS	VIDEOS OF KHAN ACADEMY- https://www.khanacademy.org/math/statistics

INTERNAL ASSESSMENT TESTS DATES AND PORTIONS

TEST	PORTIONS	DATE OF EXAM	PAPER CORRECTION COMPLETION DATE	NO.OF STUDENTS REGISTERED	NO.OF STUDENTS APPEARED	NO.OF STUDENTS PASSED	NO.OF STUDENTS FAILED
IA TEST-1	UNIT-5 & 2						
IA TEST-2	UNIT 3 & 4						
IA TEST-3	ALL UNITS						

END SEMESTER EXAMS: ASSESSMENT OF RESULTS BY FACULTY

Total No. of Students Registered		Total No. of Students Appeared	
Expected Pass%:		Secured Pass%:	
Expected O Grade		Secured O Grade	
Expected A+ Grade		Secured A+ Grade	
Expected A Grade		Secured A Grade	
Expected B+ Grade		Secured B+ Grade	
Expected B Grade		Secured B Grade	
Expected RA (Re-appear)		Secured RA (Re-appear)	

Lessons Learned:

Corrective Actions:

Dr.S.P.Thenmozhi

COURSE FACILITATOR

PRINCIPAL/DIRECTOR