

DSRM7002	<b>Business Research Methods</b>	L	T	P	C
<b>Version 1.0</b>		3	0	0	3
<b>Pre-requisites/Exposure</b>	Graduate from any discipline with analytical skills				
<b>Co-requisites</b>	--				

### Course Objectives

1. To familiarize students with basic of research and the research process.
2. To help students in conducting research work and making research reports.
3. To familiarize students with Statistical packages such as EXCEL.

### Course Outcomes

On completion of this course, the students will be able to

CO 1: Have an understanding of various kinds of research, objectives of doing research, research process research designs and sampling.

CO 2: Be able to formulate research problem and develop a sufficiently coherent research design.

CO 3: Have basic knowledge on qualitative, quantitative as well as measurement & scaling techniques.

CO 4: Have a basic awareness of data analysis, including descriptive & inferential measures.

CO 5: Be able to write & develop independent thinking for critically analyzing research reports.

### Catalog Description

All Business Management students require the ability to deal with quantitative material, including the collection, collation and analysis of such data. This course introduces students to the business research methods in business mainly centered on statistical aspects. It also provides them with experience in designing questionnaires and report writing. In order to effectively carry out statistical analysis, the students are required to have experience of computing. This course reinforces the experience gained in their Computing for Business course.

### Course Content ( 1 LECTURE=60 MINUTES)

---

#### Unit I: 7.5 lecture hours

##### Introduction to research

- What is Research
- Objectives & motivations for research
- Types of Research
- Introduction to Qualitative Research

##### Introduction to Quantitative Research

##### Conceptualization

- Business Problem
- Problem Formulation
- Techniques involved in defining a problem

**Unit II: 4.5 lecture hours**

**Research Process & Research Design**

Introduction to Research Process

- Steps in Research Process

Introduction to Research Design

- Types of Research Design: Exploratory, Descriptive and Causal Research
- Nature of good design

**Unit III: 4.5 lecture hours**

**Sampling Technique**

- Population, Sampling Frame, Sample, Bias
- Statistical Terms in Sampling: statistic, parameter
- Sampling Distribution
- Sampling & non-sampling errors

Probability & Non-Probability Sampling

- Simple Random Sampling
- Stratified Random Sampling
- Systematic Random Sampling
- Cluster Random Sampling
- Multi-stage Sampling
- Convenience Sampling
- Judgment Sampling
- Quota Sampling
- Snowball Sampling

**Unit IV: 9 lecture hours**

**Data Collection Method**

Data Collection

- Introduction to Primary & Secondary data
- Methods of primary data collection
- Methods of secondary data collection

Advantages & disadvantages of data collection

Measurement & Scaling Technique

- Scales of Measurement: Nominal, Ordinal, Interval, Ratio
- General Issues in scaling
- Likert Scaling

Questionnaire Designing

- Types of questions
- Question Content, Wording & Placement
- Response Format
- Criterion for a good questionnaire

**Unit V: 10.5 lecture hours**

**Analysis & Report Writing**

Data Preparation

- Data aggregation
- Data accuracy
- Data structure

- Data transformation
- Descriptive Statistics
- Univariate analysis
  - Correlation

#### Inferential Statistics

- Hypothesis Testing Process
- Large sample test
- Small sample
- Parametric and Non Parametric Test

#### Report Writing

- Types of Research output
- Key Elements of Report Writing

#### Formatting & Referencing

### **Text Books**

Kothari ,C. R.(2016), Research Methodology- Methods & Techniques, New age international publishers, ISBN : 978-93-86649-22-5.

Gupta, S L & Gupta, H (2012), Business Research Methods, TMHE Pvt. Ltd, ISBN: 978-1-25-900503-9.

Gupta and Kapoor (2014), Fundamentals of Applied Statistics, Sultan Chand & Sons, ISBN: 978-8180547058.

Krishnaswamy ,K N, Sivakumar ,A I and Mathirajan,M(2011),Research Methodology, Pearson, ISBN: 978-81-7758-563-6.

Gupta and Kapoor ,(2002),Fundamentals of Mathematical Statistics, Sultan Chand & Sons,ISBN: 81-7014-791-3.

Pannerselvam,R(2016), Research Methodology,PHI Pvt. Ltd., New Delhi,ISBN:978-81-203-4946-9.

Ghuri, Pervez & Gronhaug ,Kjell(2010),Research Methods in Business Studies,Pearson,ISBN: 978-0273712046.

Green, P E, Tull, D S & Albaum, Gerald(1988),Research for Marketing Decisions, Prentice Hall of India Pvt. Ltd.

Easwaran, S & Singh,S J(2010), Marketing Research, OXFORD University Press,ISBN:978-0-19-567696-9.

Chawala, Deepak & Sondhi, Neena (2016),Research Methodology- Concept &Cases, Vikas Publication,ISBN:978-93259-8239-0.

### **Reference Books**

Branica,T & Roche, W.K.(1997), Business Research Methods, Jaico Publishing House, ISBN: 1860760007 9781860760006

Wilson,J(2013), Essential of Research Methods,SAGE Publication,ISBN: 9781446257333.

Sachdeva, J.K.(2009), Business Research Methodology,Himalaya Publishing House,ISBN: 9781441676108.

Shajahan,S(2010), Research methods, JAICO publishing house,ISBN: 978-8172244910.

Trochim, W.M.K.(2003), Research methods, Dreamtech Press,ISBN: 9788177223729.

Shao & Zhou (2006),Marketing Research,Cengage Learning Pvt. Ltd,ISBN: 978-1592602889.

Cauvery,R.,Nayak, U. K. S. , Girija ,M. & Meenakshi, R. (2003),Research Methods,Sultan Chand & company Ltd, ISBN: 9788121922203.

Lee, Nick & Lings, Ian (2009), Doing Business Research,Sage South Asia,ISBN: 978-8132104544.

Mark Saunders,Lewis,P. & Thornhill, A.(2015), Research Methods for Business Students, Pearson Education,ISBN: 978-1292016627.

**Modes of Evaluation: Quiz/Assignment/ presentation/ Project / Written Examination  
Examination Scheme:**

<b>Components</b>	Class test(2)	White paper/ Status report	Assignment	<b>ESE</b>
<b>Weightage (%)</b>	<b>20</b>	<b>20</b>	<b>10</b>	<b>50</b>

**PO's of UISC**

1. Students will be able to develop and evaluate alternate managerial choices and identify optimal solutions.
2. Students will demonstrate effective application capabilities of their conceptual understanding to infrastructure planning, development and management.
3. Students will be able to exhibit effective decision-making skills, employing analytical and critical thinking ability for planning, development and management of soft and hard infrastructure.
4. Students will demonstrate effective oral and written communication skills in the professional context.
5. Students will be able to work effectively in teams and demonstrate team-working capabilities.
6. Students will exhibit leadership and networking skills.
7. Students will demonstrate sensitivity towards ethical and moral issues and have ability to address them in the context of urban planning, development and management including cost effective financing and good governance.
8. Students will demonstrate employability traits in line with the needs of changing hard and soft urban infrastructure sector.
9. Students will demonstrate strong conceptual knowledge and execution in soft and hard infrastructure planning, development, management, financing, regulation and governance.
10. Students will demonstrate effective understanding of infrastructure planning and development, utility & energy management, urban transportation including metro rail, e-vehicle with charging and other modes of urban surface transportation, water supply and sewerage, smart city planning and effective financing urban infrastructure.
11. Students will demonstrate analytical skills to understand issues with remedial solutions relating to urban infrastructure.
12. Students will exhibit the ability to integrate planning, construction & development, operation & management, financing, regulation and governance of urban infrastructure projects and facilities.
13. Students will exhibit the ability to integrate technical, economic, social and regulatory frameworks for urban infrastructure sector planning and resource management.

**Relationship between the Course Outcomes (COs) and Program Outcomes (POs)**

<b>Mapping between COs and POs</b>
------------------------------------

	<b>Course Outcomes (COs)</b>	<b>Mapped Programme Outcomes</b>
<b>CO1</b>	Have an understanding of various kinds of research, objectives of doing research, research process research designs and sampling.	<b>PO1,2,11,13</b>
<b>CO2</b>	Be able to formulate research problem and develop a sufficiently coherent research design.	<b>PO2,11</b>
<b>CO3</b>	Have basic knowledge on qualitative, quantitative as well as measurement & scaling techniques.	<b>PO1,11</b>
<b>CO4</b>	Have a basic awareness of data analysis, including descriptive & inferential measures.	<b>PO3,8,11,13</b>
<b>CO5</b>	Be able to write & develop independent thinking for critically analyzing research reports.	<b>PO1,3,7,8,12,13</b>

**Program Outcome / Course Outcome mapping**

<b>Course Outcomes</b>	<b>CO 1</b>	<b>CO2</b>	<b>CO 3</b>	<b>CO 4</b>	<b>CO 5</b>
<b>PO 1</b>	3		3		2
<b>PO 2</b>	2	3			
<b>PO 3</b>				3	2
<b>PO 4</b>					
<b>PO 5</b>					
<b>PO 6</b>					
<b>PO 7</b>					3
<b>PO 8</b>				3	3
<b>PO 9</b>					
<b>PO 10</b>					
<b>PO 11</b>	2	2	2	3	
<b>PO 12</b>					2
<b>PO 13</b>	2			3	3

		Students will be able to develop and evaluate alternate managerial choices and	Students will demonstrate effective application capabilities of their conceptual	Students will be able to exhibit effective decision-making skills employing analytical	Students will demonstrate effective oral and written communication skills in the	Students will be able to work effectively in teams and demonstrate team-working	Students will exhibit leadership and networking skills	Students will demonstrate sensitivity towards ethical and moral issues and have	Students will demonstrate sensitivity towards ethical and moral issues and have	Students will demonstrate strong conceptual knowledge and execution in	Students will demonstrate effective understanding of infrastructure planning	Students will demonstrate analytical skills to understand issues with remedial	Students will exhibit the ability to integrate planning construction & development	Students will exhibit the ability to integrate technical economic social and regulatory
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13
DSRM 7002	Business Research Methods	2	2	2				1	2			3	1	2

- 1=weakly mapped  
2= moderately mapped  
3=strongly mapped

### Master's-Level Programs

In master's-level programs, knowledge of the key content areas and functional disciplines of business is assumed. Graduates of master's-level programs should acquire a depth of knowledge in these areas that exceeds that of the typical bachelor's degree graduate.

Graduates of master's-level programs in business should be able to:

1. Recognize problems
2. Integrate theory and practice for the purpose of analysis
3. Employ and apply quantitative techniques and methods in the analysis of real-world business situations

## Model Question Paper



Name:

Enrolment No:

**Course: DSRM7002 – Business Research Methods**

**Programme: MBA(UISC)**

**Semester: EVEN-2017-19**

**Time: 03 hrs.**

**Max. Marks:100**

### Section A ( attempt all)

1.	<p><b>As a researcher under which situation(s) you use the following in research (Max. 30 words)</b></p> <ul style="list-style-type: none"> <li>(i) Chi-square test</li> <li>(ii) Two-tailed test</li> <li>(iii) Snowball sampling</li> <li>(iv) Systematic sampling</li> <li>(v) Exploratory research design</li> <li>(vi) Pilot technique</li> <li>(vii) Regression</li> <li>(viii) Editing</li> <li>(ix) Research Hypothesis</li> <li>(x) F- test</li> </ul>	<b>[2x10]</b>	<p><b>CO3</b></p> <p><b>CO3</b></p> <p><b>CO1</b></p> <p><b>CO1</b></p> <p><b>CO1</b></p> <p><b>CO1</b></p> <p><b>CO3</b></p> <p><b>CO2</b></p> <p><b>CO3</b></p> <p><b>CO3</b></p>
<b>SECTION B (Attempt any Eight Questions)</b>			<b>CO1</b>
3.	<p>‘Majority of the researchers make use of primary sources of data and secondary data sources do not really contribute to a scientific enquiry’. Do you agree/disagree with this statement? Explain.</p>	<b>[5]</b>	<b>CO1</b>
4.	<p>What is the observation method? What are the different types of observation methods available to the researcher? Elaborate with suitable examples.</p>	<b>[5]</b>	<b>CO1</b>
5.	<p>What is scaling? Describe the various scaling techniques used in business research.</p>	<b>[5]</b>	<b>CO2</b>
6.	<p>What is a questionnaire? Can it be used in all situations? Why /why not? Support your answer with suitable examples.</p>	<b>[5]</b>	<b>CO2</b>

7.	To study the correlation between the heights of fathers and sons, a sample of 900 is taken and a coefficient of correlation of 0.67 is observed, can it be said at 5% level of significance that the correlation in the universe is 0.8?	[5]	CO3																				
8.	Use post coding for classifying the responses for the question “When I see a Porsche automobile, it makes me think of.....”  <b>Responses</b> 1 ‘how much fun I’d have if I owned one’. 2 ‘how unfair our social system is that only a few people have enough money to a car like that’. 3 ‘racing’. 4 ‘small cars and how dangerous they are’. 5 ‘the U.S. balance of payments’. 6 ‘what a ball it would be to drive’. 7 ‘my brother, because he’s a sports car nut’. 8 ‘how much the insurance must cost to own one’. 9 ‘rich people’. 10 ‘how well I like my Datsun 280ZX’. 11 ‘all those Pittsburgh steelworkers who are laid off’. 12 ‘what a pain they must be to work on’. 13 ‘my wife fainting if I drove one home’. 14 ‘going to a movie’. 15 ‘sticking out my thumb and hitching a ride’.	[5]	CO2																				
9.	When a researcher may use hypothesis in research? Explain.	[5]	CO2																				
10.	Business research is concerned more with proper fact findings, analysis and evaluation. ‘Do you agree with this statement? Give reason in support of your answer.	[5]	CO1																				
<b>SECTION C (Attempt any Four Questions)</b>																							
11.	The following Data summaries the results of survey of 1000 selected households in three cities according to their standard of living. Does this survey provide evidence that standard of living depends on the city they reside? Use $\alpha=0.1$ <table border="1" style="margin-left: auto; margin-right: auto;"><thead><tr><th colspan="4">Standard of Living</th></tr><tr><th>Cities</th><th>Below</th><th>Average</th><th>Above</th></tr></thead><tbody><tr><td>Delhi</td><td>15</td><td>120</td><td>330</td></tr><tr><td>Mumbai</td><td>20</td><td>110</td><td>55</td></tr><tr><td>Kolkata</td><td>30</td><td>140</td><td>180</td></tr></tbody></table>	Standard of Living				Cities	Below	Average	Above	Delhi	15	120	330	Mumbai	20	110	55	Kolkata	30	140	180	[10]	CO3
Standard of Living																							
Cities	Below	Average	Above																				
Delhi	15	120	330																				
Mumbai	20	110	55																				
Kolkata	30	140	180																				
12.	. A company has the head office in Calcutta & a branch in Bombay. The personnel	[10]	CO3																				



	director wanted to know if the workers at the two places would like the introduction of a new plan of work & a survey was conducted for this purpose. Out of a sample of 500 workers at Calcutta, 62% favored the new plan. At Bombay out a sample of 400 workers, 41% were against the new plan. Is there any significant difference between the two groups in their attitude towards the new plan at the 5 % level?												
13.	Watermelons were grown under two experimental conditions. Two random samples of 11 and 9 watermelons show the sample standard deviation of their weights as 0.8 and 0.5 kgs respectively. Test the hypothesis that the variances are equal. Assume that the distribution of weights are normal and Use $\alpha=0.05$	[10]	CO3										
14.	A professor wants to know if her introductory statistics class has a good grasp of basic math. Six students are chosen at random from the class and given a math proficiency test. The professor wants the class to be able to score above 70 on the test. The six students get scores of 62, 92, 75, 68, 83, and 95. Can the professor have 90 percent confidence that the mean score for the class on the test would be above 70?	[10]	CO3										
15.	Twelve cars were equipped with radial tires and driven over a test course. Then the same 12 cars (with the same drivers) were equipped with regular belted tires and driven over the same course. After each run, the cars' gas economy (in km/l) was measured. Is there evidence that radial tires produce better fuel economy? (Assume normality of data, and use $\alpha = .05$ .)	[10]	CO3										
Car													
Gas Economy	1			2	3	4	5	6	7	8	9	10	11
Y <sub>1</sub> (radial)	4.2			4.7	6.6	7.0	6.7	4.5	5.7	6.0	7.4	4.9	6.1
Y <sub>2</sub> (belted)	4.1	4.9	6.2	6.9	6.8	4.4	5.7	5.8	6.9	4.7	6.0		