

|                                |                                  |   |   |   |   |
|--------------------------------|----------------------------------|---|---|---|---|
| <b>LSCM 8002</b>               | <b>Business Research Methods</b> | L | T | P | C |
| <b>Version 1.0</b>             |                                  | 3 | 0 | 0 | 3 |
| <b>Pre-requisites/Exposure</b> | Basic Statistics                 |   |   |   |   |
| <b>Co-requisites</b>           | Quantitative Methods             |   |   |   |   |

### Course Objectives

- a) To familiarize participants with basic of research and the research process.
- b) To enable the participants in conducting research work and formulating research synopsis and report.
- c) To familiarize participants with Statistical packages such as SPSS/EXCEL.
- d) To impart knowledge for enabling students to develop data analytics skills and meaningful interpretation to the data sets so as to solve the business/Research problem.

### LEARNING OUTCOMES OF THE COURSE

The aim of the course is to provide participants with an introduction to research methods and report writing. Upon successful completion of the course you are expected to

- CO1. Develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling.
- CO2. Have basic knowledge on qualitative research techniques
- CO3. Have adequate knowledge on measurement & scaling techniques as well as the quantitative data analysis
- CO4. Have basic awareness of data analysis-and hypothesis testing procedures

### Business Research Methods

#### Course Content

---

#### **Module I: 6 lecture hours**

Foundations of Research Methodology, 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

#### **Module II: 6 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.

**Module III: 6 lecture hours**

Sampling Technique, Sampling, Population, Sampling Frame, Sample, Bias, and Statistical Terms in Sampling: statistic, parameter, Sampling Distribution, Sampling & non-sampling errors, Probability & Non-Probability Sampling, Sample Size Determination.

**Module IV: 7.5 lecture hours**

Data Collection Method, 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, Questionnaire Designing.

**MODULE V: 10.5 lecture hours**

Analysis & Report Writing, Data Preparation, Data aggregation, Data accuracy, Data structure, Data transformation, Descriptive Statistics, Univariate analysis, Correlation/Regression, 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.

**TEXT BOOKS:**

- (a) Malhotra N.K. (2011) Marketing Research, Pearson Education, Inc.
- (b) Zikmund W.G. (2007) Business research Methods, Thomspns, Akash Press New Delhi.

**REFERENCE BOOKS:**

- (a) Beri G.C. (2010) Marketing Research 3rd Edition, TMH Publishers Ltd, New Delhi.
- (b) Chawla D. & Sondhi N. Research Methodology Concepts and Cases, S. Chand & Company Ltd.
- (c) Cooper & Schindler (2015) Business Research Methods, Mcgraw-Hill.
- (d) Dr. Shajahan S.(2006) Research Methods for Management, JAICO publishing house.
- (e) Green, Tull & Albaum (2010) Research for Marketing Decisions, PHI Pvt. Ltd, New Delhi.
- (f) Hooda (2008) Statistics for Business Economics, Macmillan Publications.
- (g) Kothari C.R. (2014) Research Methodology Methods & Techniques, New age international publisher.
- (h) Leveine , Khrehbiel & Berenson (2003) Business Statistics, Pearson Education.
- (i) Luck D. & Rubin D. (2006) Marketing Research, PHI Pvt. Ltd, New Delhi.
- (j) Panneerselvam, R (2014) Research Methodology, PHI Pvt. Ltd, New Delhi.
- (k) Sachdeva J.K. (2017) Business Research Methodology, Himalya Pulishing.
- (l) Shao & Zhou, Marketing Research, Cengage Learning.
- (m) Tull D.S. & Hawkins D.I. (2011) Marketing research, PHI Pvt. Ltd, New Delhi.
- (n) Wilson J. (2010) Essential of Research Methods, SAGE Publication.

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

| Components | Quizzes | Case Study | Individual Assignment | Group Project Presentation | ESE |
|------------|---------|------------|-----------------------|----------------------------|-----|
|            |         |            |                       |                            |     |

|                      |           |           |             |             |           |
|----------------------|-----------|-----------|-------------|-------------|-----------|
| <b>Weightage (%)</b> | <b>15</b> | <b>10</b> | <b>12.5</b> | <b>12.5</b> | <b>50</b> |
|                      |           |           |             |             |           |

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

| <b>Mapping between COs and POs</b> |  |                                 |
|------------------------------------|--|---------------------------------|
|                                    | <b>COURSE OUTCOMES ( COs )</b>   | <b>POs</b>                      |
| <b>CO 1</b>                        | Develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling. | PO 1,2, 3,4,7,8,9,10, 11,13, 14 |
| <b>CO 2</b>                        | Have basic knowledge on qualitative research techniques  | PO 1,2, 3, 7,8,9,10, 11,14      |
| <b>CO 3</b>                        | Have adequate knowledge on measurement & scaling techniques as well as the quantitative data analysis                              | PO 1,2, 3, 8,9,10, 11, 13,14    |
| <b>CO 4</b>                        | Have basic awareness of data analysis-and hypothesis testing procedures  | PO 4,5, 8,12,13, 14             |

**Program Outcome / Course Outcome mapping**


| <b>Course Outcomes</b> | <b>CO 1</b> | <b>CO 2</b> | <b>CO 3</b> | <b>CO 4</b> |
|------------------------|-------------|-------------|-------------|-------------|
| <b>PO 1</b>            | 3           | 3           | 3           | 2           |
| <b>PO 2</b>            | 3           | 3           | 3           | 2           |
| <b>PO 3</b>            | 3           | 3           | 3           | 2           |
| <b>PO 4</b>            | 3           | 1           | 1           | 3           |
| <b>PO 5</b>            | 2           | 2           | 1           | 3           |
| <b>PO 6</b>            | 1           | 1           | 1           | 1           |
| <b>PO 7</b>            | 3           | 3           | 1           | 2           |
| <b>PO 8</b>            | 3           | 3           | 3           | 3           |

|               |   |   |   |   |
|---------------|---|---|---|---|
| <b>PSO 9</b>  | 3 | 3 | 3 | 1 |
| <b>PSO 10</b> | 3 | 3 | 3 | 2 |
| <b>PSO 11</b> | 3 | 3 | 3 | 2 |
| <b>PSO 12</b> | 1 | 1 | 1 | 3 |
| <b>PSO 13</b> | 3 | 1 | 3 | 3 |
| <b>PSO 14</b> | 3 | 3 | 3 | 3 |

| Course Code      | Course Title                     | PO 1  | PO 2   | PO 3  | PO 4  | PO 5  | PO 6  | PO 7  | PO 8  | PSO 9   | PSO 10   | PSO 11  | PS12  | PSO 13  | PS O14   |
|------------------|----------------------------------|---|--|---|---|---|---|---|---|---|--|---|---|---|--|
| <b>LSCM 8002</b> | <b>Business Research Methods</b> | 3   | 3  | 3   | 2   | 2   | 1   | 3   | 3   | 2   | 2  | 3   | 2   | 3   | 3  |
|                  |                                  | Students will be able to develop and evaluate alternate managerial decisions and identify optimal solutions | Students will demonstrate effective application capabilities of their conceptual understanding to the real world business situations | Students will be able to exhibit effective decision making skills, employing analytical and critical thinking ability | Students will demonstrate effective oral and written communication skills in the professional context | Students will be able to work effectively in teams and demonstrate team building capabilities | Students will exhibit leadership and networking skills while handling business situations | Students will demonstrate sensitivity towards ethical and moral issues and have ability to address them in the course of business | Students will demonstrate employability traits in line with the changing dynamics of the industry | Students will demonstrate strong conceptual knowledge in the functional area of management as well as LSCM domain | Students will demonstrate effective understanding of relevant functional areas of management and their application in LSCM | Students will demonstrate analytical skills in identification and resolution of business problems pertaining to LSCM & general management | Students will exhibit the ability to integrate functional areas of management with domain perspective for the purpose of planning, implementation & control of LSCM | Students will have global perspective towards business situations in the area of LSCM | Students will exhibit deployable skills pertinent to the LSCM sector |

- 1 – Weakly mapped
- 2 – Moderately mapped
- 3 – Strongly mapped

## Model Question Paper

|  |  |     |     |
|--|--|-----|-----|
| <b>Name:</b><br><b>Enrolment No:</b>   |  |     |     |
| <b>Course: LSCM 8002 – Business Research Methods</b>   |  |     |     |
| <b>Programme: M.B.A (All Program)</b><br><b>Time: 03 hrs.</b>  | <b>Semester: ODD-2016-17</b><br><b>Max. Marks: 100</b>                             |     |     |
| <b>Instructions:</b><br>Attempt all questions from <b>Section A</b> (Part A 1 Mark each & Part B carrying 2 marks each); any <b>Two Questions</b> from <b>Section B</b> (each carrying 5 marks). <b>Section C</b> (attempt any two questions of 15 marks each) and <b>Section D</b> is Compulsory (carrying 10 marks). |  |     |     |
| <b>Section A (All Questions are Mandatory)</b>   |  |     |     |
| 1  | The degrees of freedom for strata ‘m’ rows and ‘n’ columns is given by:            | [1] | CO1 |
| 2.   | Correlation coefficient is used for testing.....between two variables.             | [1] | CO2 |
| 3.   | Chi-square test is used for generally .....data.                                   | [1] | CO1 |
| 4.   | Cronbach alpha is used for.....  | [1] | CO1 |
| 5.   | COV can be calculated as .....   | [1] | CO1 |
| 6.   |  | [1] | CO1 |
| 7.   | Alpha is also known as .....error.   | [1] | CO2 |
| 8.   | .....approach is used for questionnaire designing.                                 | [1] | CO4 |
| 9.   | ..... test is used for testing the sample adequacy.                                | [1] | CO1 |
| 10.  | F Ratio was introduced by.....   | [1] | CO1 |
| <b>Define the following:</b>   |  |     |     |
| 1.   | Differentiate Quantitative from Qualitative Research.                              | [2] | CO1 |
| 2.   | Define the formula for sample size determination for finite population.            | [2] | CO2 |

|   |  |      |             |
|---|--|------|-------------|
| 3.  | Discuss the significance of Likert Scale?  | [2]  | CO3         |
| 4.  | Enumerate various data measurement scales?   | [2]  | CO1         |
| 5.  | Differentiate Stratified sampling from Delebrate sampling?   | [2]  | CO1         |
| <b>SECTION B (Attempt any Four Questions)</b> |  |      |             |
| 1.  | Write down the steps involve in the testing of hypothesis procedure for F test.  | [5]  | CO1         |
| 2.  | Differentiate Exploratory research design from Experimental research design?   | [5]  | CO4         |
| 3.  | Discuss the significance of standard error.  | [5]  | CO3         |
| 4.  | Discuss any two projective techniques.   | [5]  | CO4         |
| 5.  | Discuss the significance of regression line.   | [5]  | CO3         |
| <b>SECTION C (Attempt any Two Questions)</b>  |  |      |             |
| 1.  | Discuss various types of methods of data collection and how they are applied in market research? Give specific example.  | 15   | CO4         |
| 2.  | You are supposed to launch an online course for the college students highlighting various academic contents and evaluation procedure. Make necessary assumptions, if required. Describe the following:<br>a) Research Problem<br><br>b) Source of data<br><br>c) Method of data collection<br><br>d )What variables/factors would you keep in mind for successfully launching the newsletter?  | 15   | CO3         |
| 3.  | A time study operator developed a new sequence of operation elements that he hopes will reduce the mean cycle time of a certain assembling process. The results of a time study of 10 cycles are given below:<br><br><div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">12.25,11.97,12.15,12.08,12.31,12.28,11.94,11.89,12.16,12.04</div> If the present mean cycle time is 11.80 minutes, should he adopt the new sequence?  | [15] | CO1         |
| <b>SECTION D (Attempt all the questions)</b>  |  |      |             |
| 1.  | Suppose you are serving as a Manager – Supply Chain with a reputed electronics company in Uttarakhand. You have observed that complaints such as breakge, delay in execution of orders etc. have increased in last 12 months and no physical verification/proper quality audit of inventory has been carried out for last one year. You have deiced to hire Tajinder Chawla, an MBA –LSCM student for the Summer Internship on “Optimizing warehousing cost for electronic items”. He is required to submit a synopsis for carrying out the research for 6-8 weeks and at the end needs to | [15] | CO6,<br>CO7 |

|                    | <p>submit the report. As a mentor, what contents would you like to be addressed in the report.</p> <p>a) What points would you consider while evaluation to test the accuracy of the synopsis. Give brief outline of the same. (Make appropriate assumptions, if required). What steps/measures would you take to get accurate results and producing a good report at the end?</p>   |                    |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
|--------------------|--|--------------------|---------------|---------------|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|------|-------------|
| 2.                 | <p>A trainer observed that the trainees in his program were better at their job in the Morning than the Evening. He decided to test this out by using a quantitative test as this required the participants to concentrate. If there was a dip in performance in Evening the test should pick it up. He chose a random sample of 8 trainees and gave them two tests matched on their difficulty. The samples were balanced on the two versions of the test, and at what time they were tested first, to control for carry-over effects. The tests gave a score out of 20, the higher the score the better the performance. The results were as follows: Test the significance of belief of teacher at 5% level of significance. What would be the change in decision if level of significance is 1%.</p> <table border="1"> <thead> <tr> <th><i>Participant</i></th> <th><b>Junior</b></th> <th><b>Senior</b></th> </tr> </thead> <tbody> <tr> <td><b>1</b></td> <td>26</td> <td>24</td> </tr> <tr> <td><b>2</b></td> <td>24</td> <td>22</td> </tr> <tr> <td><b>3</b></td> <td>23</td> <td>24</td> </tr> <tr> <td><b>4</b></td> <td>25</td> <td>24</td> </tr> <tr> <td><b>5</b></td> <td>27</td> <td>23</td> </tr> <tr> <td><b>6</b></td> <td>26</td> <td>24</td> </tr> <tr> <td><b>7</b></td> <td>25</td> <td>22</td> </tr> <tr> <td><b>8</b></td> <td>26</td> <td>21</td> </tr> </tbody> </table> | <i>Participant</i> | <b>Junior</b> | <b>Senior</b> | <b>1</b> | 26 | 24 | <b>2</b> | 24 | 22 | <b>3</b> | 23 | 24 | <b>4</b> | 25 | 24 | <b>5</b> | 27 | 23 | <b>6</b> | 26 | 24 | <b>7</b> | 25 | 22 | <b>8</b> | 26 | 21 | [15] | CO5,<br>CO6 |
| <i>Participant</i> | <b>Junior</b>  | <b>Senior</b>      |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
| <b>1</b>           | 26   | 24                 |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
| <b>2</b>           | 24   | 22                 |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
| <b>3</b>           | 23   | 24                 |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
| <b>4</b>           | 25   | 24                 |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
| <b>5</b>           | 27   | 23                 |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
| <b>6</b>           | 26   | 24                 |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
| <b>7</b>           | 25   | 22                 |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |
| <b>8</b>           | 26   | 21                 |               |               |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |      |             |