



**Children's University**  
**School of Nutrition and Health**  
**Department of Home Science**  
**Gandhinagar**

**ACADEMIC  
YEAR  
2020-20**

**M.Sc. - FN**

<b>Year</b>	<b>I</b>	<b>Course Type: Foundation Course</b> <b>Course No: EGFN205</b> <b>Course Title: Research Methodology and Biostatistics</b>	<b>Credits</b>	<b>4</b>
<b>Semester</b>	<b>II</b>		<b>Hours/wk</b>	<b>4</b>
<b>Objectives</b>		<ol style="list-style-type: none"><li>1. To provide knowledge and skills for conducting research from planning a study to report writing.</li><li>2. To strengthen abilities of students with regard to identifying research problems, formulating research objectives, experimental designs, sampling, data collection and analysis and writing research reports.</li><li>3. To critique some recent research studies from the perspectives of – research methodologies, program applications, interdisciplinary approaches, gender sensitivity</li></ol>		
<b>COURSE CONTENT / SYLLABUS- THEORY</b>				
<b>Unit I</b>		<b>Basics of research</b> <ul style="list-style-type: none"><li>● Science and scientific method</li><li>● Research – definition, types, and research design</li><li>● Role of home science in research and statistics</li><li>● Objectives of research</li><li>● Ethics and plagiarism in research</li></ul>		
<b>Unit II</b>		<b>Steps in research</b> <ul style="list-style-type: none"><li>● How to select a research topic</li><li>● Hypothesis – definition and types, hypothesis testing</li><li>● Review of literature</li><li>● Planning of research</li><li>● Methodology and tools</li></ul>		

<b>Unit III</b>	<p><b>Research Procedure</b></p> <ul style="list-style-type: none"> <li>● Population and Variables – definition and types</li> <li>● Sampling – definition and types, Sampling methods</li> <li>● Data gathering instrument – Interview, questionnaire, observation</li> <li>● Representation of data – editing, classification, tabulation and coding</li> <li>● Graphical representation – Bar, Column, Histogram, Pie, Frequency polygon, Ogive</li> </ul>
<b>Unit IV</b>	<p><b>Statistical analysis</b></p> <ul style="list-style-type: none"> <li>● Basics of statistics – use of appropriate measurement tools in research</li> <li>● Frequency distribution – continuous and discrete series</li> <li>● Measurement of central tendency – mean, median, mode</li> <li>● Measurement of dispersion – range, mean deviation, quartile deviation, standard deviation</li> <li>● Student “t” test, chi square test, ANOVA</li> </ul>
<b>References</b>	
<ol style="list-style-type: none"> <li>6. Research Methodology by C R Kothari</li> <li>7. Research methods by Kahn</li> <li>8. Statistics by Sharma</li> <li>9. સંશોધન પદ્ધતિ અને પ્રવિધિ યુનીવર્સિટી ગ્રંથ નિર્માણ બોર્ડ</li> <li>10. શિક્ષણ અને સામાજિક વિજ્ઞાનોમા સંસોધનોમાં સંસોધનનુ પદ્ધતિ શાસ્ત્ર By D.A.Uachat</li> <li>11. શિક્ષણ માં આંકડાશાસ્ત્ર યુનીવર્સિટી ગ્રંથ નિર્માણ બોર્ડ</li> </ol>	