

**Research and Communication skills**  
**01VE0101 (GN-UC)**

**Objective of the Course:** Objectives of introducing this subject at first year level in Masters of civil engineering are:

- To sharpen the basic communication skills of listening, writing and spoken of professional English language.
- To understand the fundamental of research and its types
- To impart the knowledge of various techniques of research
- To impart the knowledge for writing various statements and research paper
- To understand how to conduct literature review and organize references
- To impart the knowledge about copyright, IPR patent and plagiarism

**Credit Earned:3**

**Learning outcomes:**

After studying this subject students will be able to:

- Understand the research as well as differentiate between journal/proceeding and books and their authenticity indices
- Analyse between copyright, trademark and patents and how to apply for the same
- Apply listening, speaking, writing and reading skills to communicate effectively in the profession.
- Apply right writing skills to effectively prepare statements, letters, report, thesis and journal papers

**Teaching and Examination Scheme**

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE (E)	CSE (M)	Internal (I)	Viva (V)	Term Work (TW)	
2	2	0	3	-	20	30	25	25	100

**Details of the syllabus**

Sr No.	Title of the unit	Number of hours
1	<b>Module 1 Communication skills:</b>	
	Listening: importance and types of listening, qualities of an effective listener	1
	<b>wiring of effective letter &amp; statements</b>	
	Personal statement, statement of research, letters to various authorities for seeking of permission /approval/demand of material etc	3
	<b>Speaking:</b> efficiently and fluency in speech for debate, discussion, presentation of seminar or any other content	3
	<b>Presentation:</b> key contents, Body language, confidence, Vocabulary, ethics and use of MS power point , feedback and review	1
2	<b>Research Methodology and skills</b>	
	Definition, types, various method to identify research problem, skills for research, literature finding, review, Difference among journals, conferences, books, magazines .Index & PEER reviewed journals Use of online resources for effective searches. H-index, impact factor ,Identify important information, identification and analysis of real v/s dummy data.	10
3	<b>Thesis writing</b>	
	Details and sequence of the chapters, Reference, Bibliography their styles in writing. Use of computer programs like MS word or Latex for thesis writing.	3
4	<b>IPR, copyright, patents and plagiarism</b>	
	Fundamentals, difference among IPR, copyright, patents, Plagiarism, Use of software to evaluate the plagiarism for the report written, how to site copyrighted material in the report.	3
	Total	24

**Suggested Theory Distribution**

The suggested theory distribution as per Bloom's taxonomy is as per follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyze	Evaluate	Create
5%	10%	20%	35%	20%	10%

**Instructional Method and Pedagogy:**

1. Use of Learning Management system like canvas
2. Demonstration through ppt and videos and lectures
3. Brainstorming and group discussion sessions
4. Collaborative learning

**F. Recommended Study Material:****Reference Book:**

1. Lesikar R V, Flatley M E ,Rentz K and Pandey Business Communication: Making Connections in a Digital World 2009: New Delhi, Tata Mcgrow Hill
2. Kumar S and Lata P Communication Skills 2011: New Delhi Oxford University Press
3. Research Methodology: Methods and Techniques, by C.R. Kothari, Newage Publishers

**Web Resources**

1. <http://www.elsevier.com/online-tools/scopus>
2. <http://computationalengineering.mit.edu/research/methodology>
3. <https://www.ieee.org/index.html>
4. <http://www.asce.org/>
5. <http://www.asme.org/>

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