Kadi Sarva Vishwavidyalaya

Faculty of Engineering and Technology

2nd Semester Master of Engineering

In Effect from Academic Year 2017-18

Subject Code: MECC201-N	Subject Title: TECHNICAL COMMUNICATION

Teaching Scheme				Total Credit	Evaluation Scheme					
L	T	P	Total		Theory		IE	CIA	Pract.	Total
Hrs	Hrs	Hrs	Hrs		Hrs	Marks	Marks	Marks	Marks	Marks
2	0	0	2	2	3	70	30	20	-	120

LEARNING OBJECTIVES:

This subject intends to bring orientation towards technical communication for PG students. The PG Scholars shall acquire essential skills pertaining to technical communication which are required for various PG activities such as research, seminars, dissertation, report/paper writing, defending examination etc. The course would also help students in identifying different sources of information for literature review and data collection. It would further assist the PG scholars in understanding the drafting technical documentation including research paper/thesis/articles/reports. Further, the scholars are intended understand issues such as ethics, internet communication, gender & diversity issues etc. pertaining to technical communication.

INSTRUCTIONAL METHOD AND PEDAGOGY (Continuous Internal Assessment (CIA) Scheme)

1. At the start of course, the course delivery pattern , prerequisite of the subject will be discussed
2. Lecture may be conducted with the aid of multi-media projector, black board, OHP etc. & equal weightage should be given to all topics while teaching and conduction of all examinations.
3. Attendance is compulsory in lectures and laboratory, which may carries five marks in overall evaluation.
4. One/Two internal exams may be conducted and total/average/best of the same may be converted to equivalent of 30 marks as a part of internal theory evaluation.
5. Assignment based on course content will be given to the student for each unit/topic and will be evaluated at regular interval. It may carry an importance of ten marks in the overall internal evaluation.
6. Surprise tests/Quizzes/Seminar/Tutorial may be conducted and having share of five marks in the overall internal evaluation.

OUTLINE OF THE COURSE:

Sr. No.	Date/Week	Unit No.	Percentage Weightage.	Topic No:
1	1st ,2nd ,3rd	Unit :1,2	20	1

2	4th ,5th ,6th	Unit:3	20	2
3	7th ,8th ,9th	Unit:4	20	3
4	19th b ,11th ,12th	Unit:5	20	4
5	13th ,14th ,15th	Unit:6	20	5

Total Hours (Theory): 30
Total Hours (Lab): 00
Total Hours: 30

DETAILED SYLLABUS

1. Essence of Technical Communication: Analogy of Question/Answer to Problem/Solution. Steps in technical communication and practical guidelines. Hypothesis. Active-Passive voice, Direct-Indirect Speech.

2. Organization of technical report: Title, Authors, Affiliation, Abstract, Introduction, Literature survey, Methods, Result, Discussion, Figures, Tables, Conclusion, References, Acknowledgement, Communication with editor.

3. Patent Drafting and submission, preparing document for Technology Transfer, MOUs, Confidentiality agreement, SI prefixes, fundamental constants, standard Abbreviations & Scientific & Technological sign & symbols.

4. Wisdom of Internet Communication. Gender and diversity issues and stereotypes used in technical communication.

5. Ethical issues in engineering research, Avoid Plagiarism, citations methodology

6. Preparation & Presentation of research proposal for funding agencies. Poster presentations, Graphical Abstract and Highlights of Research article/proposal/Manuscript. Use of applicable simulation-platforms / open-source toolkits for scientific visualization of data.

LESSON PLANNING

Sr. No	LECTURE NO	Course Content	Hrs.	Percentage Weightage
1	1	Essence of Technical Communication	1	50%
2	2	Analogy of Question/Answer to Problem/Solution	1	
3	3	Steps in technical communication and practical guidelines	1	
4	4	Hypothesis	1	
5	5	Active-Passive voice, Direct-Indirect Speech	1	
6	6	Organization of technical report: Title, Authors,	1	

7	**7**	Affiliation, Abstract, Introduction, Literature survey	**1**	
8	**8**	Methods, Result, Discussion, Figures, Tables, Conclusion	**1**	
9	**9**	References, Acknowledgement	**1**	
10	**10**	Communication with editor	**1**	
11	**11**	Patent Drafting and submission	**1**	
12	**12**	preparing document for,	**1**	
13	**13**	Technology Transfer, MOUs	**1**	
14	**14**	Confidentiality agreement, SI prefixes	**1**	
15	**15**	fundamental constants	**1**	
16	**16**	standard Abbreviations & Scientific & Technological sign & symbols	**1**	50%
17	**17**	Wisdom of Internet Communication	**1**	
18	**18**	Gender and diversity issues	**1**	
19	**19**	stereotypes used in technical communication	**1**	
20	**20**	Ethical issues in engineering research	**1**	
21	**21**	Avoid Plagiarism	**1**	
22	**22**	citations methodology	**1**	
23	**23**	Preparation & Presentation of research proposal for funding agencies	**1**	
24	**24**	Poster presentations, Graphical	**1**	
25	**25**	Abstract and Highlights of Research article/proposal/Manuscript	**1**	
26	**26**	Use of applicable simulation-platforms / open-source toolkits for scientific visualization of data	**1**	
27	**27**	Case Study	**1**	
28	**28**	Case Study	**1**	
29	**29**	Case Study	**1**	
30	**30**	Case Study	**1**	
		TOTAL Hrs. Required To complete Task	**30**	

STUDENTS LEARNING OUTCOME:

At the end of this course, the student would be able

- To understand the process of research and learn the technical skills to communicate his/her research
- To learn identifying/drafting problem statement for his/her research domain
- To understand/draft different components of research papers
- To understand the significance of patenting and related drafting
- To understand notes taking, paraphrasing, elevator pitch, gender & diversity issues and ethical issues in technical communication

List of Reference Books:

- C. R. Kothari, "Research Methodology: Methods and Techniques", New Age International Publishers
- Raman, Meenakshi and Sangeeta Sharma, "Technical Communication: Principle and Practice", Oxford University Press.
- Stuart Johnson and Jon Scott, " Study and communication skills for Biosciences, Oxford University press
- Robert A. Day, "Write and Publish a scientific Paper" Oryx Press
- Jennifer Peat, "Scientific Easy when you know how", BMJ books
- Paul G. Chapin, "Research Projects and Research Proposals A Guide for Scientists seeking funding, University Press
- Sharon Gerson, Steven Geson, "Technical Writing: Process and Product", Pearson Education.
- Sunita Mishra, C, Murlikrishna, "Communication Skills for Engineers", Pearson Education.

List of References:

1. http://dl.acm.org/
2. http://springer.com/
3. http://sciencedirect.com/ (http://elsevier.com/)
4. http://ieeexplore.ieee.org/
5. https://scholar.google.co.in/
6. https://www.scopus.com/
7. https://iitbombayx.in/

E-Resources / Web Links:

1. http://courses.writing.ufl.edu/3254/Textbook/Lannon%20Instructor%20Manual%2012e.pdf
2. http://www.limat.org/data/research/Research%20Methodology.pdf
3. http://www.sociology.kpi.ua/wp-content/uploads/2014/06/Ranjit_Kumar-Research_Methodology_A_Step-by-Step_G.pdf
4. http://www.ndc.gov.ng/Lectures/Research-Methodology.pdf