



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad -500 043

MECHANICAL ENGINEERING

COURSE DESCRIPTOR

Course Title	ENGLISH FOR RESEARCH PAPER WRITING				
Course Code	BCSB32				
Programme	M.Tech				
Semester	I	CAD/CAM			
Course Type	Audit Course				
Regulation	IARE - R18				
Course Structure	Theory			Practical	
	Lectures	Tutorials	Credits	Laboratory	Credits
	2	-	0	-	-
Chief Coordinator	Mr. B.V.S.N.Rao, Associate Professor				
Course Faculty	Mr. B.V.S.N.Rao, Associate Professor				

I. COURSE OVERVIEW:

To accomplish this goal, each student will write during the term a 15-20 page research paper. From the development of a thesis statement to the editing of the final draft, the student will compose this research paper under the direction of the course instructor and in consultation with other students in the class. Depending on the topic under development, the student may also work with a faculty advisor in the pertinent discipline—from Umbra or from his/her home institution. Students pursuing honors theses or independent research projects may develop more extended papers to fulfill individual requirements. The course is also available to creative writing students working on projects requiring extended research.

II. COURSE PRE-REQUISITES:

Level	Course Code	Semester	Prerequisites
UG	AHS001	II	English For Communication
UG	AEE301	VII	Project Work(Phase-I)
UG	AEE302	VIII	Project Work(Phase-II)

III. MARKS DISTRIBUTION:

Subject	SEE Examination	CIA Examination	Total Marks
English For Research Paper Writing	70 Marks	30 Marks	100

IV. DELIVERY / INSTRUCTIONAL METHODOLOGIES:

✓	Chalk & Talk	✓	Quiz	✓	Assignments	✗	MOOCs
✓	LCD / PPT	✓	Seminars	✗	Mini Project	✗	Videos
✗	Open Ended Experiments						

V. EVALUATION METHODOLOGY:

The course will be evaluated for a total of 100 marks, with 30 marks for Continuous Internal Assessment (CIA) and 70 marks for Semester End Examination (SEE). Out of 30 marks allotted for CIA during the semester, marks are awarded by taking average of two CIA examinations or the marks scored in the make-up examination.

Semester End Examination (SEE): The SEE is conducted for 70 marks of 3 hours duration. The syllabus for the theory courses is divided into five units and each unit carries equal weightage in terms of marks distribution. The question paper pattern is as follows. Two full questions with “either” or “choice” will be drawn from each unit. Each question carries 14 marks. There could be a maximum of two sub divisions in a question.

The emphasis on the questions is broadly based on the following criteria:

50 %	To test the objectiveness of the concept
30 %	To test the analytical skill of the concept
20 %	To test the application skill of the concept

Continuous Internal Assessment (CIA):

CIA is conducted for a total of 30 marks (Table 1), with 25 marks for Continuous Internal Examination (CIE), 05 marks for Alternative Assessment Tool (AAT).

Table 1: Assessment pattern for CIA

Component	Theory		Total Marks
	CIE Exam	Technical Seminar and Term paper	
CIA Marks	25	05	30

Continuous Internal Examination (CIE):

Two CIE exams shall be conducted at the end of the 9th and 17th week of the semester respectively. The CIE exam is conducted for 25 marks of 2 hours duration, consisting of 5 one mark compulsory questions in part-A and 4 questions in part-B. The student has to answer any 4 questions out of five questions, each carrying 5 marks. Marks are awarded by taking average of marks scored in two CIE exams.

Technical Seminar and Term Paper:

Two seminar presentations are conducted during semester. For seminar, a student under the supervision of a concerned faculty member, shall identify a topic in each course and prepare the term paper with overview of topic. The evaluation of Technical seminar and term paper is for maximum of 5 marks. Marks are awarded by taking average of marks scored in two Seminar Evaluations.

VI. HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes		Strength	Proficiency assessed by
PO1	Independently carry out research / investigation and development work to solve practical problems	3	Seminar
PO2	Write and present a substantial technical report / document.	1	Assignments
PO3	Abilities and capabilities in developing and applying computer software and hardware to mechanical design and manufacturing fields.	2	Seminar
PO4	Apply advanced level knowledge, techniques, skills and modern tools in the field of computer aided engineering to critically assess the emerging technological issues.	1	Assignments
PO5	Conduct experimental and/or analytical study and analyzing results with modern mathematical / scientific methods and use of software tools.	2	Seminar
PO6	Design and validate technological solutions to defined problems and recognize the need to engage in lifelong learning through continuing education.	3	Assignments
PO7	Function on multidisciplinary environments by working cooperatively, creatively and responsibly as a member of a team	2	Seminar

3 = High; 2 = Medium; 1 = Low

VII. COURSE OBJECTIVES (COs):

The course should enable the students to:	
I	Understand that how to improve your writing skills and level of read ability.
II	Learn about what to write in each section.
III	Understand the skills needed when writing a title ensure the good quality of paper at very firsttime submission.

VIII. COURSE OUTCOMES (COs):

COs	Course Outcome	CLOs	Course Learning Outcome
CO 1	Prepare and plan the word order, breaking of long sentences, structural formation of paragraph and being concise without any ambiguities.	CLO 1	Understand the planning and preparation to write the sentences and structuring paragraphs and sentences.
		CLO 2	Remember the removing redundancy and avoiding ambiguity and vagueness.
CO 2	Understand the how to write abstract and introduction to any topic or project.	CLO 3	Demonstrate the main idea(s) in the text with the identified specific details and distinguish fact from opinion .
		CLO 4	Identify how to make the abstract and introduction of the identified idea.
		CLO 5	Outline the findings, headings, critising, paraphrasing and plagiarism.
CO 3	Summarize the skills require for the discussions and conclusions.	CLO 6	Discuss the research process like literature, methodology and implementation of your finding ideas.

COs	Course Outcome	CLOs	Course Learning Outcome
CO 4	Identify quality of paper and time management in writing skills.	CLO 7	Summarize the skill required for writing of title, abstract, literature review and introduction of your research work.
		CLO 8	Predict the skill required for writing of methodology, implementation, results, conclusions of your research work.
		CLO 9	Produce accurate grammatical structures and comprehend relationships between ideas.
CO 4	Identify quality of paper and time management in writing skills.	CLO 10	Demonstrate the oral presentation in class using effective delivery strategies.
		CLO 11	Analyze to understand the useful phrase and how to ensure the paper is as good.

IX. COURSE LEARNING OUTCOMES (CLOs):

CLO Code	CLO's	At the end of the course, the student will have the ability to	PO's Mapped	Strength of Mapping
BCSB32.1	CLO 1	Understand the planning and preparation to write the sentences and structuring paragraphs and sentences.	PO4	3
BCSB32.2	CLO 2	Remember the removing redundancy and avoiding ambiguity and vagueness.	PO4	3
BCSB32.3	CLO 3	Demonstrate the main idea(s) in the text with the identified specific details and distinguish fact from opinion .	PO4, PO5	3
BCSB32.4	CLO 4	Identify how to make the abstract and introduction of the identified idea.	PO4	3
BCSB32.5	CLO 5	Outline the findings, headings, critising, paraphrasing and plagiarism.	PO4, PO5	3
BCSB32.6	CLO 6	Discuss the research process like literature, methodology and implementation of your finding ideas.	PO4, PO5	3
BCSB32.7	CLO 7	Summarize the skill required for writing of title, abstract, literature review and introduction of your research work.	PO4, PO5	3
BCSB32.8	CLO 8	Predict the skill required for writing of methodology, implementation, results, conclusions of your research work.	PO4, PO5	3
BCSB32.9	CLO 9	Produce accurate grammatical structures and comprehend relationships between ideas.	PO5	3
BCSB32.10	CLO 10	Demonstrate the oral presentation in class using effective delivery strategies.	PO6	3
BCSB32.11	CLO 11	Analyze to understand the useful phrase and how to ensure the paper is as good.	PO4, PO5	3

3 = High; 2 = Medium; 1 = Low

X. MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES

Course Outcomes (COs)	Program Outcomes (POs)		
	PO 4	PO 5	PO 6
CO 1	3	1	1

CO 2	3	2	1
CO 3	3	2	1
CO 4	3	2	2

XI. MAPPING COURSE LEARNING OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES:

Course Learning Outcomes (CLOs)	Program Outcomes (POs)						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CLO 1				3			
CLO 2				3			
CLO 3				3	2		
CLO 4				3			
CLO 5				3	2		
CLO 6				3	2		
CLO 7				3	2		
CLO 8				3	2		
CLO 9					3		
CLO 10						3	
CLO 11				3	2		

3 = High; 2 = Medium; 1 = Low

XII. ASSESSMENT METHODOLOGIES – DIRECT

CIE Exams	PO4,PO5, PO6	SEE Exams	PO4,PO5, PO6	Assignments	PO4,PO5, PO6	Seminars	PO4,PO5, PO6
Laboratory Practices	-	Student Viva	-	Mini Project	-	Certification	-
Term Paper	PO4,PO5, PO6						

XIII. ASSESSMENT METHODOLOGIES – INDIRECT

✓	Early Semester Feedback	✓	End Semester OBE Feedback
✗	Assessment of Mini Projects by Experts		

XIV. SYLLABUS

UNIT-I	PLANNING AND PREPARATION
Planning and preparation, word order, breaking up long sentences, structuring paragraphs and sentences, being concise and removing redundancy, avoiding ambiguity and vagueness.	

UNIT-II	ABSTRACT
Clarifying who did what, highlighting your findings, hedging and criticising, paraphrasing and plagiarism, sections of a paper, abstracts, introduction.	
UNIT-III	DISCUSSION AND CONCLUSIONS
Review of the literature, methods, results, discussion, conclusions, the final check. key skills are needed when writing a title, key skills are needed when writing an abstract, key skills are needed when writing an introduction, skills needed when writing a review of the literature,	
UNIT-IV	WRITING SKILLS
Skills are needed when writing the methods, skills needed when writing the results, skills are needed when writing the discussion, skills are needed when writing the conclusions	
UNIT-V	QUALITY AND TIME MAINTAINANCE
Useful phrases, how to ensure paper is as good as it could possibly be the first- time submission.	
Text Books:	
1 Goldbort R (2006) Writing for Science, Yale University Press(Avaliable on Google Books). 2 Day R(2006) How to Write and Publish a Scientific Paper,Cambridge Unviersity Press 3 Adrian Wallwork, English for Writing Research Papers, Springer New York Dordrecht Heidelberg London, 2 nd Edition, 2011	
Reference Books:	
1 HighmanN,Handbook of Writing for the Mathematical Sciences, SIAM.Highman's book, 1 st Edition, 1998.	

XV. COURSE PLAN:

The course plan is meant as a guideline. Probably there may be changes.

Lecture No.	Topics to be covered	CLOS	Reference
1	Planning and Preparation	CLO1	T3: 1.1 - 1.17
2	word Order,Breaking up long sentences	CLO1	T3: 2.1 - 2.16 3.1 – 3.16
3	Structuring Pragraphs	CLO1	T3: 4.1 - 4.14
4	Structuring Pragraphs and Sentences	CLO3	T3: 4.1 - 4.14
5	Being Concise	CLO1	T3: 5.1 - 5.14
6	Removing Redundency	CLO1	T3: 5.1 - 5.14
7	Avoiding Ambiguity and Vagueness	CLO2	T3: 6.1 - 6.18
8	Clarifying Who Did What	CLO3	T3: 7.1 - 7.10
9	Highlighting Your Findings	CLO3	T3: 8.1 - 8.13
10	Hedging and Critising	CLO1	T3: 9.1 - 9.13
11	Paraphrasing	CLO1	T3: 10.1 - 10.7
12	Paraphrasing And Plagarism	CLO5	T3: 10.1 - 10.7
13	Sections of a Paper	CLO5	T3: 11.1 - 11.16
14	Abstracts,Introduction	CLO5	T3: 12.1 - 12.17

15	Review of the Literature	CLO4	T3: 14.1 - 14.6
16	Methods,Implementation	CLO4	T3: 15.1 - 15.16
17	Results,Discussions,Conclusions,	CLO4	T3: 16,17,18
18	The Final Check of the Research Paper.	CLO4	T3: 20.1 - 20.19
19	Key Skills are needed whwn writing a Title	CLO6	T3: 16,17,18
20	Key Skills are needed whwn writing an Abstract	CLO6	T3: 16,17,18
21	Key Skills are needed when writing an Introduction	CLO6	T3: 16,17,18
22	Key Skills are needed whwn writing a Review of the Literature.	CLO6	T3: 16,17,18
23	Skills are needed when writing the Methods	CLO6	T3: 16,17,18
24	Skills are needed when writing the Results	CLO7	T3: 16,17,18
25	Skills are needed when writing the Discussion	CLO8	T3: 16,17,18
26	Skills are needed when writing the Conclusion.	CLO8	T3: 16,17,18
27	Useful Phrases	CLO11	T3: 19
28	how to ensure paper is as good as it could possibly be the first time submission.	CLO11	T3: 13.1 - 13.8

XVI. GAPS IN THE SYLLABUS - TO MEET INDUSTRY / PROFESSION REQUIREMENTS:

S. No	Description	Proposed Actions	Relevance With POs
1	Writing of term papers	Seminars / Assignment	PO6, PO7
2	Group research work	Discussions	PO6, PO7

Prepared by:

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