



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad - 500 043

MECHANICAL ENGINEERING

COURSE DESCRIPTION FORM

Course Title	INTELLECTUAL PROPERTY RIGHTS			
Course Code	A60017			
Regulation	R15-JNTUH			
Course Structure	Lectures	Tutorials	Practicals	Credits
	4	-	-	4
Course Coordinator	Dr. K. G. K Murti, Professor, Department of Mechanical Engineering.			
Team of Instructors	Dr. K. G. K Murti, Professor Mr. M. V. Aditya Nag, Assistant Professor.			

I. COURSE OVERVIEW:

This course introduces the importance of intellectual property and the protection of creation or innovation or ideas which are to be used to make a product or service or design layout or process which is economical called patents, utilities etc. The course emphasizes on intellectual property protection and its importance of estimating the intelligence of an individual correlates with financial advantages. It also deals with fundamentals of laws to protect and encourage the inventions and creations. The main objective of this course is to examine the laws and the procedures to protect the intellectual property rights of an intellectual or expert and make it like another property which is non tangible. This course is presented to students by power point projections, lecture notes, course handouts, Assignments, Objective and subjective tests.

II. PREREQUISITE(S):

Level	Credits	Periods / Week	Prerequisites
UG	4	4	English, Mathematics, Engineering Drawing, MEFA, Environmental Studies

III. MARKS DISTRIBUTION:

Sessional Marks (25)	University End Exam Marks	Total Marks
Continuous Assessment Tests (Midterm examinations): There shall be 2 midterm examinations. Each midterm examination consists of one objective paper, one subjective paper and four assignments. The objective paper is for 10 marks and subjective paper is for 10 marks, with duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for subjective paper). Objective paper is set for 20 bits of – multiple choice questions, fill-in the blanks, 10 marks. Subjective paper contains of 4 full questions (one from each unit) of which, the student has to answer 2 questions, each question carrying 5 marks. First midterm examination shall be conducted for 2.5 units of syllabus and second midterm examination shall be conducted for another 2.5 units. 5 marks are allocated for Assignment. The total marks secured by the student in each midterm examination are evaluated for 25 marks.	75	100

IV. EVALUATION SCHEME:

S. No.	Component	Duration	Marks
1	I Mid Examination	80 min	20
2	I Assignment		5
TOTAL			25
3	II Mid Examination	80 min	20
4	II Assignment		5
TOTAL			25
5	EXTERNAL Examination	3 hours	75
GRAND TOTAL			100

V. COURSE OBJECTIVES:

The objectives of the course are to enable the student;

- I. Understand with different types of intellectual property.
- II. Apply procedures of evaluation, registration, protection and acquisition of trademarks.
- III. Analyze law of copy rights and law of patents.
- IV. Explore the Trade secrets.
- V. Explore on new developments of intellectual property

VI. COURSE OUTCOMES:

On successful completion of the course, the student will be able to

1. Understand different types of intellectual property.
2. List the international organizations and its functions to protect intellectual property.
3. Explain in detail about agencies and treaties related to intellectual property rights.
4. Remember the importance of intellectual property rights.
5. Explain the purpose and function of trademarks.
6. Explain the acquisition of trademark rights.
7. Explain the trademark evaluation, registration processes.
8. Describe the fundamentals of copy right law.
9. Explain the originality of material and rights of reproduction.
10. Illustrate international copy right law with respect to ownership and registration of copy rights.
11. Explain the patent searching processes and transfer of ownership on patents.
12. Explain trade secrets determination, misappropriation, protection for submission and litigation.
13. Explain the new international developments in trademarks law and copy right law and patent law.
14. Explain intellectual property audits.

VII. HOW COURSE OUTCOMES ARE ASSESSED:

Program Outcomes		Level	Proficiency assessed by
PO1	Engineering knowledge: Capability to apply the knowledge of Mathematics, Science and Engineering in the field of Mechanical Engineering.	H	Assignments, Tutorials
PO2	Problem analysis: An ability to analyze complex engineering problems to arrive at relevant conclusions using knowledge of Mathematics, Science and Engineering.	H	Assignments
PO3	Design/development of solutions: Competence to design a system, component or process to meet societal needs within realistic constraints.	S	Mini Projects
PO4	Conduct investigations of complex problems: To design and conduct research oriented experiments as well as to analyze and implement data using research methodologies.	S	Projects

PO5	Modern tool usage: An ability to formulate, solve complex engineering problems using modern engineering and Information Technology tools.	S	Mini Projects
PO6	The engineer and society: To utilize the Engineering practices, Techniques, skills to meet needs of the health, safety, legal, cultural and societal issues.	H	Assignment
PO7	Environment and sustainability: To understand impact of Engineering solutions in the societal context and demonstrate the knowledge for sustainable development.	N	--
PO8	Ethics: An understanding and Implementation of professional and Ethical responsibilities.	H	Guest Lecture
PO9	Individual and teamwork: To function as an effective individual and as a member or leader in Multi-disciplinary environment and adopt in diverse teams.	N	--
PO10	Communication: An ability to assimilate, comprehends, communicate, give and receive instructions to present effectively with engineering community and society.	S	Mini Project
PO11	Project management and finance: An ability to provide leadership in managing complex engineering projects at Multidisciplinary environment and to become a professional engineer.	N	--
PO12	Life-long learning: Recognition of the need and an ability to engage in life-long learning to keep abreast with technological changes.	S	Guest Lecture

VIII. HOW PROGRAM SPECIFIC OUTCOMES ARE ASSESSED:

Program Specific Outcomes		Level	Proficiency assessed by
PSO1	Professional Skills: To produce engineering professional capable of synthesizing and analyzing mechanical systems including allied engineering streams.	H	Lectures, Assignments
PSO2	Design/Analysis: An ability to adopt and integrate current technologies in the design and manufacturing domain to enhance the employability.	H	Projects
PSO3	Successful Career and Entrepreneurship: To build the nation, by imparting technological inputs and managerial skills to become Technocrat.	S	Guest Lectures

IX.SYLLABUS:

UNIT-I

INTRODUCTION TO INTELLECTUAL PROPERTY:

Introduction, types of intellectual property, international organizations, agencies and treaties, importance of intellectual property rights.

UNIT-II

TRADEMARKS:

Purpose and function of trademarks, acquisition of trademarks rights, protectable matter, selecting and evaluating trademark, trademark registration processes.

UNIT-III

LAW OF COPY RIGHTS

Fundamentals of copy right law, originality of material, rights to reproduction, rights to perform the work publicly, copy right ownership issues, copy right registration, notice of copy right, international copy right law.

LAW OF PATENTS: Foundation of patent law, patent searching process, ownership rights and transfer

UNIT-IV

TRADE SECRETS:

Trade secrets law, determination of trade secrets status, liability for misappropriations of trade secrets, protection for submission, trade secrets litigation.

UNFAIR COMPETITION: Misappropriation of right of publicity, False advertising.

UNIT-V

NEW DEVELOPEMNTS OF INTELLECTUAL PROPERTY:

New developments in trade law; copy right law; patent law; intellectual property audits.

International overview of intellectual property, international- trademark law, copy right law, international patent law, international development in trade secrets law.

TEXT BOOKS:

1. Intellectual property right, Deborah.E.Bouchoux, Cengage learning.
2. Intellectual property right- Unleashing the knowledge economy, prabuddha ganguli, Tata Mc. Graw Hill Publishing Company Ltd.
3. Theory of Machines / S.S. Rattan/ Tata McGraw-Hill education
4. Kinematics and dynamics of machinery/ Norton/ Tata McGraw-Hill education
5. Theory of Machines/ Sadhu Singh/ Pearson
6. Mechanisms and Machine Theory / JS Rao and RV Duggipati Theory of machines/ R. K. Bansal/ Lakshmi Publications

X. COURSE PLAN:

The course plan is meant as a guideline. There may probably be changes.

Lecture No.	Course Learning Outcomes	Topics to be covered	Reference
1-4	Describe different types of properties	Introduction of Intellectual Property (IP), Types of IP,	T1:1.1, T1:1.2
5-6	Describe the organizations, agencies and treaties related to intellectual property	International organizations, Agencies and treaties.	T1:1.4
7-8	Understand the patents law to protect your ideas or creativity	Intellectual property importance to protect intellectual's ideas.	T1:1.5
9-12	understand the purpose and function of trademarks	Purpose of Trademarks and function of trademark	T1:2.2
13-15	Describe acquisition of trademark rights and protectable matter	Acquisition of trademark rights and protectable matter	T1:2.4,2.9
16-18	Describe the evaluation of trademark and its selection, trademark registration processes	Selecting and evaluating trademark, Trademark registration processes	T1:3.1,T1:4.5
19-21	Understand fundamentals of copyright law, originality of material and rights of reproduction	fundamentals of copyright law, originality of material and rights of reproduction	T1:10.2,T1:11.2
22-24	Explain the rights to perform the work publicly, copyright ownership and copy right registration.	The rights to perform the work publicly, copyright ownership issues and copy right registration	T1:11.5,T1:12.1, T1:13.4
25-27	Know international copy right law and notice of copy right.	Notice of copy right, International copy right law	T1:16
28-32	Explain the foundation of patent law, the patent searching processes	Foundation of patent law, Patent searching processes	T1: 17, T1:18.1
33-35	Learn patent ownership rights and transfer	patent ownership rights and transfer	T1:19

36-38	Describe Trade Secret Law	Trade Secret Law	T2:(2.1,2.3)
39-40	Determine trade secret status	Determine trade secret status	T1:22.2
41-44	Identify liability for misappropriations of trade secrets	Liability for misappropriations of trade secrets, protection for submission, trade secrets litigation	T1:22.2,T1:22.5, T1:22.8
45-48	Describe misappropriation right of publicity, False advertising.	Misappropriation right of publicity, False advertising.	T1:23.2,T1:23.3
49-52	Describe New developments in Trademark law, Copy right Law	New developments and international in Trademark law, Copy right Law	T1:7, T1:8 T1:15.7,T1:16
53-55	Describe New developments in Patent Law, Intellectual Property audits	New developments and international in Patent Law, Intellectual Property audits	T1:21.(1,2) T1:24.2

XI. MAPPING COURSE OBJECTIVES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Objectives	Program Outcomes												Program Specific Outcomes		
	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
I	H	H	S	S	S	H		H		S		S	H	S	
II	H	H	S										H	S	
III	H	H	S	S				S				S	S	H	
IV	H	H						S				S	H	S	
V	H	H						S					H		S

S =Supportive

H=Highly Related

XII. MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES:

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
1	H	S	S	S	S	H		S		S		S	H	S	
2	S	H	S	S	S	S		H		S		S	S	H	
3	S	S	S	S	S	H		S		S		S	H	S	
4	S	S	S	S	S	S		S		S		S	S	H	
5	H	S											S	H	
6	H			S								S	H	S	
7	S			H									S	H	
8	S	H											H	S	
9			H	H	S							S	S	H	
10	H			S									S	H	S
11	H			S	S								H	S	
12	H		H									S	S	H	S
13	H		S							S		S	S		
14	H		S							S		S	S		

S =Supportive

H=Highly Related

Prepared By:

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Mr. M V Aditya Nag, Assistant Professor