

 <p>NPR Group of Institutions Reach the Star</p>	<h1 style="text-align: center;">NPR College of Engineering & Technology</h1>	
<p style="text-align: center;">NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai. An ISO 9001:2015 Certified Institution. Phone No: 04544- 246 500, 246501, 246502.</p>		
<p style="text-align: center;">Website : www.nprcolleges.org, www.nprcet.org, Email: nprcetprincipal@nprcolleges.org</p>		

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE INFORMATION SHEET

PROGRAMME: Computer Science & Engineering	DEGREE: B.E
COURSE: Communicative English	SEMESTER: 1 CREDITS: 4
COURSE CODE: HS8151 / C101	COURSE TYPE: CORE
COURSE AREA/STREAM : Communication Skills	CONTACT HOURS: 5+1 hours/Week.
CORRESPONDING LAB COURSE CODE (IF ANY):	LAB COURSE NAME : NIL
COURSE COORDINATOR NAME : Ms. R. Sindhu	

SYLLABUS:

MODULE	DETAILS	HOURS
I	<p>UNIT I SHARING INFORMATION RELATED TO ONESELF/FAMILY & FRIENDS</p> <p>Reading- short comprehension passages, practice in skimming-scanning and predicting- Writing- completing sentences- - developing hints. Listening- short texts- short formal and informal conversations. Speaking- introducing oneself - exchanging personal information- Language development- Wh- Questions- asking and answering-yes or no questions- parts of speech. Vocabulary development-- prefixes- suffixes- articles.- count/ uncount nouns.</p>	12
II	<p>UNIT II GENERAL READING AND FREE WRITING</p> <p>Reading - comprehension-pre-reading-post reading- comprehension questions (multiple choice questions and /or short questions/ open-ended questions)- inductive reading- short narratives and descriptions from newspapers including dialogues and conversations (also used as short Listening texts)- register- Writing – paragraph writing- topic sentence- main ideas- free writing, short narrative descriptions using some suggested vocabulary and structures –Listening- telephonic conversations. Speaking – sharing information of a personal kind—greeting – taking leave- Language development – prepositions, conjunctions Vocabulary development- guessing meanings of words in context.</p>	12
III	<p>UNIT III GRAMMAR AND LANGUAGE DEVELOPMENT</p> <p>Reading- short texts and longer passages (close reading) Writing- understanding text structure- use of reference words and discourse markers-coherence-jumbled sentences Listening – listening to longer texts and filling up the table- product description- narratives from different sources. Speaking- asking about routine actions and expressing opinions. Language development- degrees of comparison- pronouns- direct vs indirect questions- Vocabulary development – single word substitutes- adverbs.</p>	12



IV	UNIT IV READING AND LANGUAGE DEVELOPMENT Reading- comprehension-reading longer texts- reading different types of texts- magazines Writing- letter writing, informal or personal letters-e-mails-conventions of personal email- Listening- listening to dialogues or conversations and completing exercises based on them. Speaking- speaking about oneself-speaking about one's friend- Language development- Tenses- simple present-simple past- present continuous and past continuous- Vocabulary development-synonyms-antonyms- phrasal verbs	12
V	UNIT V EXTENDED WRITING Reading- longer texts- close reading -Writing- brainstorming -writing short essays – developing an outline- identifying main and subordinate ideas- dialogue writing-Listening – listening to talks- conversations- Speaking – participating in conversations- short group conversations-Language development-modal verbs-present/ past perfect tense - Vocabulary development-collocations- fixed and semi-fixed expressions.	12
TOTAL HOURS		60

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T1	Board of Editors. Using English A Coursebook for Undergraduate Engineers and Technologists. Orient BlackSwan Limited, Hyderabad: 2015
T2	Richards, C. Jack. Interchange Students' Book-2 New Delhi: CUP, 2015.
R1	Bailey, Stephen. Academic Writing: A practical guide for students. New York: Rutledge, 2011.
R2	Comfort, Jeremy, et al. Speaking Effectively: Developing Speaking Skills for Business English. Cambridge University Press, Cambridge: Reprint 2011
R3	Dutt P. Kiranmai and Rajeevan Geeta. Basic Communication Skills, Foundation Books: 2013.

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
Nil	Nil	Knowledge regarding basics of communication	Nil

COURSE OBJECTIVES:

1	To develop the basic reading and writing skills of first year engineering and technology students.
2	To help learners develop their listening skills, which will, enable them listen to lectures and comprehend them by asking questions; seeking clarifications.
3	To help learners develop their speaking skills and speak fluently in real contexts.
4	To help learners develop vocabulary of a general kind by developing their reading skills



COURSE OUTCOMES:

SNO	DESCRIPTION	Level in Bloom's Taxonomy
C101.1	Communicate clearly both in the written form and orally using appropriate vocabulary and comprehend written texts to make inferences.	K2
C101.2	Speak persuasively in different social contexts and write biographical details and technical documents cohesively, coherently and flawlessly using appropriate words.	K2
C101.3	Speak, read and write effectively for a variety of professional and social settings.	K2
C101.4	Read descriptive, narrative, expository and interpretive texts and write using creative, critical, analytical and evaluative methods.	K6
C101.5	Listen, comprehend and respond to different spoken and written discourses/excerpts in different accents and write different genres of texts adopting various writing strategies.	K6

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME OUTCOMES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101.1	-	-	-	-	-	-	-	-	3	3	-	2
C101.2	-	-	-	-	-	-	-	-	3	3	-	2
C101.3	-	-	-	-	-	-	-	-	2	3	-	2
C101.4	-	-	-	-	-	-	-	-	3	3	-	2
C101.5	-	-	-	-	-	-	-	-	3	3	-	2
C101	-	-	-	-	-	-	-	-	3	3	-	2

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO	PSO 1	PSO 2	PSO 3
C101.1	3	3	2
C101.2	3	3	2
C101.3	2	3	2
C101.4	3	3	2
C101.5	3	3	2
C101	3	3	2



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

SNO	DESCRIPTION	Mapping to PO	PROPOSED ACTIONS
Nil			

TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

Sl.No	Topic	Mapping to PO
1	Communication Skills	-

WEB SOURCE REFERENCES:

1	www.englishgrammar.org
2	www.englishclub.com
3	www.mindtools.com

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

✓ CHALK & TALK	✓ STUD. ASSIGNMENT	✓ WEB RESOURCES	✓ TUTORIAL
✓ LCD/SMART BOARDS	✓ STUD. SEMINARS		

DELIVERY METHODS USED FOR EACH COURSE OUT COME

SNO	DELIVERY METHODS
C101.1	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C101.2	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C101.3	CHALK & TALK , STUD.ASSIGNMENT, WEB RESOURCES
C101.4	CHALK & TALK, WEB RESOURCES, TUTORIAL,LCD/SMART BORADS
C101.5	CHALK & TALK, STUD. ASSIGNMENT, LCD/SMART BORADS ,WEB RESOURCES

ASSESSMENT METHODOLOGIES-DIRECT.

✓ ASSIGNMENTS	✓ STUD. SEMINARS	✓ TESTS/MODEL EXAMS	✓ UNIV. EXAMINATION
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ASSESSMENT METHODOLOGIES-INDIRECT.

STUDENT FEEDBACK ON FACULTY (ONCE)	
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ASSESSMENT METHODOLOGIES USED FOR EACH COURSE OUT COME

SNO	ASSESSMENT METHODOLOGIES-DIRECT	ASSESSMENT METHODOLOGIES-INDIRECT
C101.1	Assignments, Univ. Examination, Stud. Seminars, Tests/Model Exams	Student Feedback On Faculty
C101.2	Univ. Examination, Tests/Model Exams,	Student Feedback On Faculty
C101.3	Univ. Examination, Tests/Model Exams, Assignments	Student Feedback On Faculty
C101.4	Univ. Examination, Tests/Model Exams	Student Feedback On Faculty
C101.5	Assignments, Univ. Examination, Tests/Model Exams	Student Feedback On Faculty

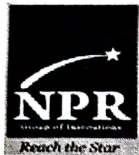
Prepared by
(Course Coordinator)


Name and Signature
Ms. R. Sindhu

Approved by
(Programme Coordinator)


Name and Signature
Dr. T. Priya





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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE INFORMATION SHEET

PROGRAMME: Computer Science & Engineering	DEGREE: B.E
COURSE: ENGINEERING MATHEMATICS - I	SEMESTER: 1 CREDITS: 4
COURSE CODE: MA8151 / C102	COURSE TYPE: ALLIED
COURSE AREA/STREAM : Differentiation and Integration	CONTACT HOURS: 5+1 hours/Week.
CORRESPONDING LAB COURSE CODE (IF ANY):	LAB COURSE NAME : NIL
COURSE COORDINATOR NAME : Ms. S. Kanagalakshmi	

SYLLABUS:

MODULE	DETAILS	HOURS
I	DIFFERENTIAL CALCULUS Representation of functions - Limit of a function - Continuity - Derivatives - Differentiation rules - Maxima and Minima of functions of one variable.	12
II	FUNCTIONS OF SEVERAL VARIABLES Partial differentiation – Homogeneous functions and Euler’s theorem – Total derivative – Change of variables – Jacobians – Partial differentiation of implicit functions – Taylor’s series for functions of two variables – Maxima and minima of functions of two variables – Lagrange’s method of undetermined multipliers.	12
III	INTEGRAL CALCULUS Definite and Indefinite integrals - Substitution rule - Techniques of Integration - Integration by parts, Trigonometric integrals, Trigonometric substitutions, Integration of rational functions by partial fraction, Integration of irrational functions - Improper integrals.	12
IV	MULTIPLE INTEGRALS Double integrals – Change of order of integration – Double integrals in polar coordinates – Area enclosed by plane curves – Triple integrals – Volume of solids – Change of variables in double and triple integrals.	12
V	DIFFERENTIAL EQUATIONS Higher order linear differential equations with constant coefficients - Method of variation of parameters – Homogenous equation of Euler’s and Legendre’s type – System of simultaneous linear differential equations with constant coefficients - Method of undetermined coefficients.	12
TOTAL HOURS		60



TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T1	Grewal B.S., —Higher Engineering MathematicsI, Khanna Publishers, New Delhi, 43rd Edition, 2014.
R1	Narayanan, S. and Manicavachagom Pillai, T. K., —Calculus" Volume I and II, S. Viswanathan Publishers Pvt. Ltd., Chennai, 2007.
R2	Anton, H, Bivens, I and Davis, S, "Calculus", Wiley, 10th Edition, 2016.
R3	Jain R.K. and Iyengar S.R.K., —Advanced Engineering MathematicsI, Narosa Publications, New Delhi, 3rd Edition, 2007.

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
C102	ENGINEERING MATHEMATICS - I	The basic concepts of differentiation and integration.	I

COURSE OBJECTIVES:

1	To achieve conceptual understanding and to retain the best traditions of traditional calculus.
2	The basic tools of calculus mainly for the purpose of modelling the engineering problems mathematically.
3	Understand the concepts of limit theory and differential equation.
4	To find area and volume in multiple integrals.
5	Slove the problems of differentiation of functions of two variables.

COURSE OUTCOMES:

SNO	DESCRIPTION	Level in Bloom's Taxonomy
C102.1	Use both the limit definition and rules of differentiation to differentiate functions.	K3
C102.2	Apply differentiation to solve maxima and minima problems	K3
C102.3	Evaluate integrals both by using Reimann sums and by using the fundamental theorem of convergent improper integrals. Evaluate integrals using techniques of integration, such as substitution, partial Fractions, integration by parts and improper integrals.	K5
C102.4	Apply integration to compute multiple integrals, area, volume, integrals in polar Coordinates, in addition to change of order and change of variables.	K3
C102.5	Apply various techniques in solving differential equations.	K3



CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME OUTCOMES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C102.1	2	1	-	-	-	-	-	-	-	-	-	-
C102.2	2	1	-	-	-	-	-	-	-	-	-	-
C102.3	2	1	-	-	-	-	-	-	-	-	-	-
C102.4	2	1	-	-	-	-	-	-	-	-	-	-
C102.5	2	1	-	-	-	-	-	-	-	-	-	-
C102	2	1	-	-	-	-	-	-	-	-	-	-

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO	PSO 1	PSO 2	PSO 3
C102.1	1	-	-
C102.2	1	-	-
C102.3	1	-	-
C102.4	1	-	-
C102.5	1	-	-
C102	1	-	-

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

SNO	DESCRIPTION	Mapping to PO	PROPOSED ACTIONS
1	Bernoulli's Equations	PO3	Assignment
2	Linear equations of first order	PO1, PO2	Study material distributed.

TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

Sl.No	Topic	Mapping to PO
1	The Mean Value Theorem	PO1, PO2, PO3
2	Summary of Curve Sketching	PO1, PO2, PO3
3	Theorem of integral calculus	PO1, PO2, PO3
4	First order system	PO1, PO2, PO3



WEB SOURCE REFERENCES:

1	https://nptel.ac.in/courses/111/106/111106100/
2	https://www.digimat.in/nptel/courses/video/111105121/L20.html
3	https://www.digimat.in/nptel/courses/video/111104025/L01.html
4	https://nptel.ac.in/courses/111/105/111105122/
5	https://nptel.ac.in/courses/111/108/111108081/

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

✓ CHALK & TALK	✓ STUD. ASSIGNMENT	✓ WEB RESOURCES	✓ TUTORIAL
✓ LCD/SMART BOARDS	✓ STUD. SEMINARS		

DELIVERY METHODS USED FOR EACH COURSE OUT COME

SNO	DELIVERY METHODS
C102.1	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C102.2	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C102.3	CHALK & TALK , STUD.ASSIGNMENT, WEB RESOURCES
C102.4	CHALK & TALK, WEB RESOURCES, TUTORIAL
C102.5	CHALK & TALK, STUD. ASSIGNMENT, WEB RESOURCES
C102	CHALK & TALK, STUD.SEMINARS

ASSESSMENT METHODOLOGIES-DIRECT.

✓ ASSIGNMENTS	✓ STUD. SEMINARS	✓ TESTS/MODEL EXAMS	✓ UNIV. EXAMINATION
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ASSESSMENT METHODOLOGIES-INDIRECT.

STUDENT FEEDBACK ON FACULTY (ONCE)	
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ASSESSMENT METHODOLOGIES USED FOR EACH COURSE OUT COME

SNO	ASSESSMENT METHODOLOGIES-DIRECT	ASSESSMENT METHODOLOGIES-INDIRECT
C102.1	Assignments, Univ. Examination, Stud. Seminars, Tests/Model Exams	Student Feedback On Faculty
C102.2	Univ. Examination, Tests/Model Exams,	Student Feedback On Faculty
C102.3	Univ. Examination, Tests/Model Exams, Assignments	Student Feedback On Faculty
C102.4	Univ. Examination, Tests/Model Exams	Student Feedback On Faculty
C102.5	Assignments, Univ. Examination, Tests/Model Exams	Student Feedback On Faculty

Prepared by
(Course Coordinator)



Name and Signature

Ms. S. Kanagalakshmi

Approved by
(Programme Coordinator)



Name and Signature

Dr. T. Priya





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COURSE INFORMATION SHEET

PROGRAM: ALL BRANCHES OF ENGINEERING	DEGREE: B.E
COURSE: ENGINEERING PHYSICS	SEMESTER: 01 CREDITS: 03
COURSE CODE: PH8151 REGULATION:2017	COURSE TYPE: CORE /ELECTIVE / BREADTH/ S&H-S&H
COURSE AREA/DOMAIN:	CONTACT HOURS: 5(Tutorial) hours/Week. 5 HOURS/WEEK
CORRESPONDING LAB COURSE CODE (IF ANY): NIL	LAB COURSE NAME (IF ANY): NIL
COURSE COORDINATOR NAME : Ms. G. Sornambigai	

SYLLABUS:

UNIT	DETAILS	HOURS
I	UNIT-I- PROPERTIES OF MATTER Elasticity – Stress-strain diagram and its uses - factors affecting elastic modulus and tensile strength – torsional stress and deformations – twisting couple - torsion pendulum: theory and experiment - bending of beams - bending moment – cantilever: theory and experiment – uniform and non-uniform bending: theory and experiment - I-shaped girders - stress due to bending in beams.	9
II	UNIT-II- WAVES AND FIBER OPTICS Oscillatory motion – forced and damped oscillations: differential equation and its solution – plane progressive waves – wave equation. Lasers : population of energy levels, Einstein’s A and B coefficients derivation – resonant cavity, optical amplification (qualitative) – Semiconductor lasers: homojunction and heterojunction – Fiber optics: principle, numerical aperture and acceptance angle - types of optical fibres (material, refractive index, mode) – losses associated with optical fibers - fibre optic sensors: pressure and displacement.	9
III	UNIT-III- THERMAL PHYSICS Transfer of heat energy – thermal expansion of solids and liquids – expansion joints - bimetallic strips - thermal conduction, convection and radiation – heat conductions in solids – thermal conductivity - Forbe’s and Lee’s disc method: theory and experiment - conduction through compound media (series and parallel) – thermal insulation – applications: heat exchangers, refrigerators, ovens and solar water heaters.	9
IV	UNIT-IV- QUANTUM PHYSICS Black body radiation – Planck’s theory (derivation) – Compton effect: theory and experimental verification – wave particle duality – electron diffraction – concept of wave function and its physical significance – Schrödinger’s wave equation – time independent and time dependent equations – particle in a one-	9



	dimensional rigid box – tunnelling (qualitative) - scanning tunnelling microscope.	
V	UNIT-V_CRYSTAL PHYSICS Single crystalline, polycrystalline and amorphous materials – single crystals: unit cell, crystal systems, Bravais lattices, directions and planes in a crystal, Miller indices – inter-planar distances - coordination number and packing factor for SC, BCC, FCC, HCP and diamond structures - crystal imperfections: point defects, line defects – Burger vectors, stacking faults – role of imperfections in plastic deformation - growth of single crystals: solution and melt growth techniques.	9
TOTAL HOURS		45

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
1	Bhattacharya, D.K. & Poonam, T. “Engineering Physics”. Oxford University Press, 2015.
2	Gaur, R.K. & Gupta, S.L. “Engineering Physics”. Dhanpat Rai Publishers, 2012.
3	Pandey, B.K. & Chaturvedi, S. “Engineering Physics”. Cengage Learning India, 2012.
4	Halliday, D., Resnick, R. & Walker, J. “Principles of Physics”. Wiley, 2015.
5	Serway, R.A. & Jewett, J.W. “Physics for Scientists and Engineers”. Cengage Learning, 2010.
6	Tipler, P.A. & Mosca, G. “Physics for Scientists and Engineers with Modern Physics’ W.H.Freeman, 2007.

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
PH 8151	ENGINEERING PHYSICS	To enhance the fundamental knowledge in Physics and its applications relevant to various streams of Engineering and Technology.	01

COURSE OBJECTIVES:

1	To understand the knowledge of the basics of properties of matter.
2	To get the concepts of waves and optical devices and their applications in fiber optics.
3	To acquire the knowledge on the concepts of thermal properties of materials and heat exchangers and their applications.
4	To gain information on advanced physics concepts of quantum theory and its applications.
5	To understand the crystals, types and their structures and also their various crystal growth techniques.



COURSE OUTCOMES:

S.NO	DESCRIPTION(Students will be able to)
C103.1	The students will gain knowledge on the basics of elastic properties of materials and their applications
C103.2	The students will acquire knowledge on the concepts of waves and optical devices and their applications in fiber optics
C103.3	The students will have adequate knowledge on the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers
C103.4	The students will get knowledge on advanced physics concepts of quantum theory and its applications in tunneling microscopes
C103.5	The students will understand the basics of crystals, their structures and different crystal growth techniques.

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME OUTCOMES

CO Vs PO															
SUBJECT															
COURSE COUTCOME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C103.1	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
C103.2	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
C103.3	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
C103.4	2	1	1	-	-	-	-	-	-	-	-	-	2	2	-
C103.5	3	2	2	-	-	-	-	-	-	-	-	-	2	2	-
C103	2.20	1.20	1.20	-	-	-	-	-	-	-	-	-	2.00	2.00	-

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

SNO	DESCRIPTION	PROPOSED ACTIONS
1	Nano Physics	INTERNAL PERSON
2	Crystal Characterization techniques	INTERNAL PERSON



TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

Sl.No	Topic	Reason for introduction
1	Nanoscience and Nano technology	INTERNAL PERSON
2	Plasma Physics	INTERNAL PERSON

WEB SOURCE REFERENCES:

1	https://www.encyclopedia.com/science/news-wires-white-papers-and-books/properties-matter
2	http://www.av.it.pt/conftele2009/Papers/31
3	http://physics.weber.edu/thermal/links.html
4	https://www.edx.org/learn/quantum-physics-mechanics
5	https://www.youtube.com/watch?v=RjIKTkfQOng

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

1. Lecture (Chalk & Talk (CT), Deliberation, Black board(BB), White board(WB))
2. Information and Communication Technology(ICT) tools (PPT, Video, OHP)
3. Experience Learning (Demonstration, Visiting the Artifact, Modeling)
4. Social Learning (Project & Problem based learning (PBL), Group Discussion(GD), Panel discussion(PD), Seminar, Collaborative learning(CL), Co-operative learning(CL))
5. Enabling (Quiz, Brainstorming, Debate)

DELIVERY METHODS USED FOR EACH COURSE OUT COME

SNO	DELIVERY METHODS
C103.1	CHALK & TALK, WEB RESOURCES,LCD
C103.2	CHALK & TALK, WEB RESOURCES,LCD
C103.3	CHALK &TALK ,WEB RESOURCES,LCD, STUD. ASSIGNMENT
C103.4	CHALK & TALK, LCD, WEB RESOURCES, STUD. ASSIGNMEN
C103.5	CHALK & TALK, LCD/SMART BOARDS, WEB RESOURCES

ASSESSMENT METHODOLOGIES-DIRECT.

ASSIGNMENTS	STUD. SEMINARS	TESTS/MODEL EXAMS	UNIV. EXAMINATION
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ASSESSMENT METHODOLOGIES-INDIRECT.

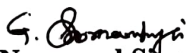
STUDENT FEEDBACK ON FACULTY (ONCE)	
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ASSESSMENT METHODOLOGIES USED FOR EACH COURSE OUT COME

SNO	ASSESSMENT METHODOLOGIES-DIRECT	ASSESSMENT METHODOLOGIES-INDIRECT
C103.1	ASSIGNMENTS, UNIV. EXAMINATION, STUD. SEMINARS, TESTS/MODEL EXAMS	STUDENT FEEDBACK ON FACULTY
C103.2	UNIV. EXAMINATION, TESTS/MODEL EXAMS,	STUDENT FEEDBACK ON FACULTY
C103.3	UNIV. EXAMINATION, TESTS/MODEL EXAMS, ASSIGNMENTS	STUDENT FEEDBACK ON FACULTY
C103.4	UNIV. EXAMINATION, TESTS/MODEL EXAMS	STUDENT FEEDBACK ON FACULTY
C103.5	ASSIGNMENTS, UNIV. EXAMINATION, TESTS/MODEL EXAMS	STUDENT FEEDBACK ON FACULTY

Prepared by
(Course Coordinator)


Name and Signature
Ms. G. Sornambigai


Approved by
(Programme Coordinator)

Name and Signature
Dr. T. Priya





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DEPARTMENT OF SCIENCE AND HUMANITIES

COURSE INFORMATION SHEET

PROGRAMME: Computer Science & Engineering	DEGREE: B.E
COURSE: Engineering Chemistry	SEMESTER: 1 CREDITS: 3
COURSE CODE: CY8151 / C104	COURSE TYPE: CORE
COURSE AREA/STREAM : Chemistry	CONTACT HOURS: 3+1 hours/Week.
CORRESPONDING LAB COURSE CODE (IF ANY): BS8161	LAB COURSE NAME : Chemistry Laboratory
COURSE COORDINATOR NAME :	Mr. M. Soundara Manivel

SYLLABUS:

MODULE	DETAILS	HOURS
I	UNIT I WATER AND ITS TREATMENT Hardness of water – types – expression of hardness – units – estimation of hardness of water by EDTA.Numerical problems–boiler troubles(scale and sludge). Treatment of boiler feed water – Internal treatment (phosphate, colloidal, sodium aluminate and calgon conditioning). External treatment – Ion exchange process, zeolite process – desalination of brackish water – Reverse Osmosis.	9
II	UNIT II SURFACE CHEMISTRY AND CATALYSIS Adsorption: Types of adsorption – adsorption of gases on solids – adsorption of solute from solutions – adsorption isotherms. Freundlich's adsorption isotherm – Langmuir's adsorption isotherm – contact theory. Kinetics of surface reactions, unimolecular reactions, Langmuir – applications of adsorption on pollution abatement. Catalysis: Catalyst – types of catalysis – criteria – autocatalysis – catalytic poisoning and catalytic promoters – acid base catalysis – applications (catalytic convertor) – enzyme catalysis– Michaelis – Menten equation.	9
III	UNIT III ALLOYS AND PHASE RULE Alloys: Introduction- Definition- properties of alloys- significance of alloying, functions and effect of alloying elements- Nichrome and stainless steel (18/8) – heat treatment of steel. Phase rule: Introduction, definition of terms with examples, one component system. - water system – reduced phase rule – thermal analysis and cooling curves – two component systems – lead-silver system.	9



IV	UNIT IV FUELS AND COMBUSTION Fuels: Introduction – classification of fuels – coal – analysis of coal (proximate and ultimate). Carbonization – manufacture of metallurgical coke (Otto Hoffmann method) – petroleum – manufacture of synthetic petrol (Bergius process). Knocking – octane number – diesel oil – cetane number – natural gas – compressed natural gas (CNG). Liquefied petroleum gases (LPG) – power alcohol and biodiesel. Combustion of fuels: Introduction – calorific value – higher and lower calorific values – theoretical calculation of calorific value – ignition temperature – spontaneous ignition temperature – explosive range – flue gas analysis (ORSAT Method).	9
V	UNIT V ENERGY SOURCES AND STORAGE DEVICES Nuclear fission – controlled nuclear fission – nuclear fusion – differences between nuclear fission and fusion – nuclear chain reactions – nuclear energy – light water nuclear power plant – breeder reactor – solar energy conversion – solar cells – wind energy. Batteries, fuel cells and supercapacitors: Types of batteries – primary battery (dry cell) secondary battery (lead acid battery, lithium-ion-battery) fuel cells – H ₂ -O ₂ fuel cell.	9
TOTAL HOURS		45

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T1	S. S. Dara and S. S. Umare, “A Textbook of Engineering Chemistry”, S. Chand & Company LTD, New Delhi, 2015.
T2	P. C. Jain and Monika Jain, “Engineering Chemistry” Dhanpat Rai Publishing Company (P) LTD, New Delhi, 2015.
R1	Friedrich Emich, “Engineering Chemistry”, Scientific International PVT, LTD, New Delhi, 2014.
R2	Prasanta Rath, “Engineering Chemistry”, Cengage Learning India PVT, LTD, Delhi, 2015.
R3	Shikha Agarwal, “Engineering Chemistry-Fundamentals and Applications”, Cambridge University Press, Delhi, 2015.

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
C104	Engineering Chemistry	Preparation, properties and applications of engineering materials.	I

COURSE OBJECTIVES:

1	To make the students conversant with boiler feed water requirements, related problems and water treatment techniques..
2	To develop an understanding of the basic concepts of phase rule and its applications to single and



	two component systems and appreciate the purpose and significance of alloys.
3	Types of fuels, calorific value calculations, manufacture of solid, liquid and gaseous fuels.
4	Principles and generation of energy in batteries, nuclear reactors, solar cells, wind mills and fuel cells.

COURSE OUTCOMES:

SNO	DESCRIPTION	Level in Bloom's Taxonomy
C104.1	Summarize the water related problems in boilers and their treatment	K2
C104.2	Discuss the applications of adsorption in the field of water and air pollution abatement.	K1
C104.3	Discuss the types of catalysis and the mechanism of enzyme catalysis.	K2
C104.4	Associate phase rule in the alloying and the behavior of one component and two component systems using phase diagram.	K2
C104.5	Summarize the principles and generation of energy in batteries, nuclear reactors, solar cells, wind mills and fuel cells	K2

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME OUTCOMES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C104.1	2	1	1	-	-	-	-	-	-	-	-	-
C104.2	2	1	1	-	-	-	-	-	-	-	-	-
C104.3	2	1	1	-	-	-	-	-	-	-	-	-
C104.4	2	1	1	-	-	-	-	-	-	-	-	-
C104.5	3	2	2	-	-	-	-	-	-	-	-	-
C104	2.20	1.20	1.20	-	-	-	-	-	-	-	-	-

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO	PSO 1	PSO 2	PSO 3
C104.1	2	2	-
C104.2	2	2	-
C104.3	2	2	-



C104.4	2	2	-
C104.5	2	2	-
C104	2.00	2.00	-

TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

Sl.No	Topic	Mapping to PO
1	Water Purification Methods	PO1, PO2,, PO3
2	Energy Generation Techniques	PO1, PO2,, PO3
3	Application of Alloys	PO1, PO2,, PO3
4	Wind Energy	PO1, PO2,, PO3

WEB SOURCE REFERENCES:

1	https://www.cdc.gov/healthywater/drinking/public/water_treatment.html
2	https://www.sciencedirect.com/topics/engineering/energy-generation
3	https://www.ias.ac.in/article/fulltext/reso/005/11/0056-0068
4	https://byjus.com/chemistry/uses-of-alloys/
5	https://www.energy.gov/eere/wind/advantages-and-challenges-wind-energy

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

✓ CHALK & TALK	✓ STUD. ASSIGNMENT	✓ WEB RESOURCES	✓ TUTORIAL
✓ LCD/SMART BOARDS	✓ STUD. SEMINARS		

DELIVERY METHODS USED FOR EACH COURSE OUT COME

SNO	DELIVERY METHODS
C104.1	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C104.2	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C104.3	CHALK & TALK , STUD.ASSIGNMENT, WEB RESOURCES
C104.4	CHALK & TALK, LCD/SMART BOARDS, WEB RESOURCES, TUTORIAL
C104.5	CHALK & TALK, STUD. ASSIGNMENT, LCD/SMART BOARDS, WEB RESOURCES
C104.6	CHALK & TALK, LCD/SMART BOARDS, STUD.SEMINARS



ASSESSMENT METHODOLOGIES-DIRECT.

✓ ASSIGNMENTS	✓ STUD. SEMINARS	✓ TESTS/MODEL EXAMS	✓ UNIV. EXAMINATION
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ASSESSMENT METHODOLOGIES-INDIRECT.

STUDENT FEEDBACK ON FACULTY (ONCE)	
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ASSESSMENT METHODOLOGIES USED FOR EACH COURSE OUT COME

SNO	ASSESSMENT METHODOLOGIES-DIRECT	ASSESSMENT METHODOLOGIES-INDIRECT
C104.1	Assignments, Univ. Examination, Stud. Seminars, Tests/Model Exams	Student Feedback On Faculty
C104.2	Univ. Examination, Tests/Model Exams,	Student Feedback On Faculty
C104.3	Univ. Examination, Tests/Model Exams, Assignments	Student Feedback On Faculty
C104.4	Univ. Examination, Tests/Model Exams	Student Feedback On Faculty
C104.5	Assignments, Univ. Examination, Tests/Model Exams	Student Feedback On Faculty
C104.6	Univ. Examination, Tests/Model Exams, Stud Seminars	Student Feedback On Faculty

Prepared by
(Course Coordinator)

M. Soundara Manivel

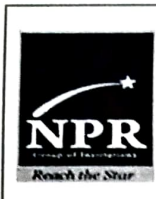
Name and Signature
Mr. M. Soundara Manivel

Approved by
(Programme Coordinator)

Dr. T. Priya

Name and Signature
Dr.T.Priya





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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE INFORMATION SHEET

PROGRAMME: Computer Science & Engineering	DEGREE: B.E
COURSE: Problem Solving and Python programming	SEMESTER: 1 CREDITS: 3
COURSE CODE: GE8151 / C105	COURSE TYPE: CORE
COURSE AREA/STREAM : Programming	CONTACT HOURS: 4+1 / Week.
CORRESPONDING LAB COURSE CODE (IF ANY):	LAB COURSE NAME : Problem Solving and Python Programming Lab
COURSE COORDINATOR NAME :	Mrs.S.Sathiya

SYLLABUS:

MODULE	DETAILS	HOURS
I	Algorithms, building blocks of algorithms (statements, state, control flow, functions), notation (pseudo code, flow chart, programming language), algorithmic problem solving, simple strategies for developing algorithms (iteration, recursion). Illustrative problems: find minimum in a list, insert a card in a list of sorted cards, guess an integer number in a range, Towers of Hanoi.	9
II	Python interpreter and interactive mode; values and types: int, float, boolean, string, and list; variables, expressions, statements, tuple assignment, precedence of operators, comments; modules and functions, function definition and use, flow of execution, parameters and arguments; Illustrative programs: exchange the values of two variables, circulate the values of n variables, distance between two points.	9
III	Conditionals: Boolean values and operators, conditional (if), alternative (if-else), chained conditional (if-elif-else); Iteration: state, while, for, break, continue, pass; Fruitful functions: return values, parameters, local and global scope, function composition, recursion; Strings: string slices, immutability, string functions and methods, string module; Lists as arrays. Illustrative programs: square root, gcd, exponentiation, sum an array of numbers, linear search, binary search.	9
IV	Lists: list operations, list slices, list methods, list loop, mutability, aliasing, cloning lists, list parameters; Tuples: tuple assignment, tuple as return value; Dictionaries: operations and methods; advanced list	9



	processing - list comprehension; Illustrative programs: selection sort, insertion sort, mergesort, histogram.	
V	Files and exception: text files, reading and writing files, format operator; command line arguments, errors and exceptions, handling exceptions, modules, packages; Illustrative programs: word count, copy file.	9
TOTAL HOURS		45

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T1	Allen B. Downey, ``Think Python: How to Think Like a Computer Scientist``, 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers, 2016 (http://greenteapress.com/wp/think-python/)
T2	Guido van Rossum and Fred L. Drake Jr, —An Introduction to Python – Revised and updated for Python 3.2, Network Theory Ltd., 2011.
R1	John V Guttag, —Introduction to Computation and Programming Using Python``, Revised and expanded Edition, MIT Press , 2013
R2	Robert Sedgewick, Kevin Wayne, Robert Dondero, —Introduction to Programming in Python: An Inter-disciplinary Approach, Pearson India Education Services Pvt. Ltd., 2016.
R3	Timothy A. Budd, —Exploring PythonI, Mc-Graw Hill Education (India) Private Ltd.,, 2015.
R4	Kenneth A. Lambert, —Fundamentals of Python: First ProgramsI, CENGAGE Learning, 2012.

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
NIL	NIL	Knowledge regarding basics of computer and programming	NIL

COURSE OBJECTIVES:

1	To know the basics of algorithmic problem solving
2	To read and write simple Python programs.
3	To develop Python programs with conditionals and loops.
4	To define Python functions and call them
5	To use Python data structures — lists, tuples, dictionaries.
6	To do input/output with files in Python.



COURSE OUTCOMES:

SNO	DESCRIPTION	Level in Bloom's Taxonomy
C105.1	Discuss the logical solutions through Flowcharts, Algorithms and Pseudo code	K2
C105.2	Understand the syntax for python programming constructs.	K2
C105.3	Compute the flow of the program to obtain the programmatic solution.	K2
C105.4	Examine the programs with sub problems using 'Python' language	K3
C105.5	Compute the compound data using Python lists, tuples, and dictionaries	K2
C105.1	Discuss the logical solutions through Flowcharts, Algorithms and Pseudo code	K2

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME OUTCOMES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C105.1	3	2	1	-	-	-	-	-	-	-	-	-
C105.2	3	2	1	-	2	-	-	-	-	-	-	-
C105.3	3	2	1	-	2	-	-	-	-	-	-	-
C105.4	3	2	1	-	2	-	-	-	-	-	-	-
C105.5	3	2	1	1	2	-	-	-	-	-	-	-
C105	3	2	1	1	2	-	-	-	-	-	-	-

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO	PSO 1	PSO 2	PSO 3
C105.1	2	1	1
C105.2	2	-	-
C105.3	2	1	-



C105.4	2	-	1
C105	2	1	1

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

SNO	DESCRIPTION	Mapping to PO	PROPOSED ACTIONS
NIL			

TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

Sl.No	Topic	Mapping to P O
1	Python –Classes/Objects	-

WEB SOURCE REFERENCES:

1	https://nptel.ac.in/courses/106106145/
2	https://www.tutorialspoint.com/python/
3	https://www.youtube.com/watch?v=cpPG0bKHYKc

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

✓ CHALK & TALK	✓ STUD. ASSIGNMENT	✓ WEB RESOURCES	✓ TUTORIAL
✓ LCD/SMART BOARDS	✓ STUD. SEMINARS		

DELIVERY METHODS USED FOR EACH COURSE OUT COME

SNO	DELIVERY METHODS
C105.1	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C105.2	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C105.3	CHALK & TALK , STUD.ASSIGNMENT, WEB RESOURCES
C105.4	CHALK & TALK, LCD/SMART BOARDS, WEB RESOURCES, TUTORIAL



C105.5	CHALK & TALK, STUD. ASSIGNMENT, LCD/SMART BOARDS, WEB RESOURCES
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ASSESSMENT METHODOLOGIES-DIRECT.

✓ ASSIGNMENTS	✓ STUD. SEMINARS	✓ TESTS/MODEL EXAMS	✓ UNIV. EXAMINATION
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ASSESSMENT METHODOLOGIES-INDIRECT.

STUDENT FEEDBACK ON FACULTY (ONCE)	
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ASSESSMENT METHODOLOGIES USED FOR EACH COURSE OUT COME

SNO	ASSESSMENT METHODOLOGIES-DIRECT	ASSESSMENT METHODOLOGIES-INDIRECT
C105.1	ASSIGNMENTS, UNIV. EXAMINATION, STUD. SEMINARS, TESTS/MODEL EXAMS	STUDENT FEEDBACK ON FACULTY
C105.2	UNIV. EXAMINATION, TESTS/MODEL EXAMS,	STUDENT FEEDBACK ON FACULTY
C105.3	UNIV. EXAMINATION, TESTS/MODEL EXAMS, ASSIGNMENTS	STUDENT FEEDBACK ON FACULTY
C105.4	UNIV. EXAMINATION, TESTS/MODEL EXAMS	STUDENT FEEDBACK ON FACULTY
C105.5	ASSIGNMENTS, UNIV. EXAMINATION, TESTS/MODEL EXAMS	STUDENT FEEDBACK ON FACULTY

**Prepared by
(Course Coordinator)**

S. Sathiya
Mrs.S.Sathiya
Name and Signature

**Approved by
(Programme Coordinator)**

J. Viswanath
Mr.J.Viswanath
Name and Signature





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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE INFORMATION SHEET

PROGRAMME: Mechanical Engineering	DEGREE: B.E
COURSE: Engineering Graphics	SEMESTER: 1 CREDITS: 4
COURSE CODE: GE8152 / C106	COURSE TYPE: S&H
COURSE AREA/STREAM : Design	CONTACT HOURS: 6 hours/Week.
CORRESPONDING LAB COURSE CODE (IF ANY):	LAB COURSE NAME : NIL
COURSE COORDINATOR NAME : Mr. M. Vimal Chanth	

SYLLABUS:

MODULE	DETAILS	HOURS
	CONCEPTS AND CONVENTIONS (Not for Examination) Importance of graphics in engineering applications – Use of drafting instruments – BIS conventions and specifications – Size, layout and folding of drawing sheets – Lettering and dimensioning.	1
I	UNIT I PLANE CURVES AND FREEHAND SKETCHING Basic Geometrical constructions, Curves used in engineering practices: Conics – Construction of ellipse, parabola and hyperbola by eccentricity method – Construction of cycloid – construction of involutes of square and circle – Drawing of tangents and normal to the above curves. Visualization concepts and Free Hand sketching: Visualization principles –Representation of Three Dimensional objects – Layout of views- Freehand sketching of multiple views from pictorial views of objects	19
II	UNIT II PROJECTION OF POINTS, LINES AND PLANE SURFACE Orthographic projection- principles-Principal planes-First angle projection- projection of points. Projection of straight lines (only First angle projections) inclined to both the principal planes - Determination of true lengths and true inclinations by rotating line method and traces Projection of planes (polygonal and circular surfaces) inclined to both the principal planes by rotating object method.	18
III	UNIT III PROJECTION OF SOLIDS Projection of simple solids like prisms, pyramids, cylinder, cone and truncated solids when the axis is inclined to one of the principal planes by rotating object method.	17
IV	UNIT IV PROJECTION OF SECTIONED SOLIDS AND DEVELOPMENT OF SURFACES Sectioning of above solids in simple vertical position when the cutting plane is inclined to the one of the principal planes and perpendicular to the other –	17



	obtaining true shape of section. Development of lateral surfaces of simple and sectioned solids – Prisms, pyramids cylinders and cones.	
V	UNIT V ISOMETRIC AND PERSPECTIVE PROJECTIONS Principles of isometric projection – isometric scale –Isometric projections of simple solids and truncated solids - Prisms, pyramids, cylinders, cones-combination of two solid objects in simple vertical positions - Perspective projection of simple solids-Prisms, pyramids and cylinders by visual ray method	18
TOTAL HOURS		90

TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
T1	Natrajan K.V., —A text book of Engineering GraphicsI, Dhanalakshmi Publishers, Chennai, 2009
T2	Venugopal K. and Prabhu Raja V., —Engineering GraphicsI, New Age International (P) Limited, 2008.
R1	Bhatt N.D. and Panchal V.M., —Engineering DrawingI, Charotar Publishing House, 50th Edition, 2010.
R2	Basant Agarwal and Agarwal C.M., —Engineering DrawingI, Tata McGraw Hill Publishing Company Limited, New Delhi, 2008.
R3	Gopalakrishna K.R., —Engineering DrawingI (Vol. I&II combined), Subhas Stores, Bangalore, 2007.

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
ME8593	Design of machine elements	Drafting knowleage regarding machine components and its applications	3

COURSE OBJECTIVES:

1	To develop in students, graphic skills for communication of concepts, ideas and design of Engineering products.
2	To expose them to existing national standards related to technical drawings
3	To familiarize the various steps involed in the design process
4	To understand the principles involved in evaluvating the shape and dimensions of a component to satisfy functional and strength requirments
5	To learn to use catalogues and standard machine components



COURSE OUTCOMES:

SNO	DESCRIPTION	Level in Bloom's Taxonomy
C106.1	Sketch the conic sections, special curves, and draw orthographic views from pictorial views and models.	K4
C106.2	Apply the principles of orthographic projections of points in all quadrants, lines and planes in first quadrant.	K3
C106.3	Sketch the projections of simple solids like prisms, pyramids, cylinder and cone and obtain the traces of plane figures.	K4
C106.4	Practice the sectional views of solids like cube, prisms, pyramids, cylinders & cones and extend its lateral surfaces	K3
C106.5	Sketch the perspective projection of simple solids, truncated prisms, pyramids, cone and cylinders and sketch the isometric projection of simple machine parts.	K4

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME OUTCOMES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106.1	-	3	-	-	-	-	3	-	-	-	-	-
C106.2	-	-	2	-	-	-	3	-	-	-	-	-
C106.3	-	2	-	-	-	-	2	-	-	-	-	-
C106.4	-	-	3	-	-	-	2	-	-	-	-	-
C106.5	-	3	-	-	-	-	3	-	-	-	-	-

CORELATION BETWEEN COURSE OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO	PSO 1	PSO 2	PSO 3
C106.1	2	1	-
C106.2	1	1	-
C106.3	1	1	-
C106.4	1	1	-
C106.5	1	1	-

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

SNO	DESCRIPTION	PROPOSED ACTIONS
1	Drafting Software commands	Lecture



TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

Sl.No	Topic	Mapping to PO
1	Use of assembly drawing in machine components	PO2,PO7

WEB SOURCE REFERENCES:

1	https://nptel.ac.in/courses/112/104/112104172/
2	https://nptel.ac.in/courses/105/104/105104148/
3	https://engineeringvidelectures.com/course/758

DELIVERY/INSTRUCTIONAL METHODOLOGIES:

✓ CHALK & TALK	✓ STUD. ASSIGNMENT	✓ WEB RESOURCES	✓ TUTORIAL
✓ LCD/SMART BOARDS	✓ STUD. SEMINARS		

DELIVERY METHODS USED FOR EACH COURSE OUT COME

SNO	DELIVERY METHODS
C106.1	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C106.2	CHALK & TALK, STUD. ASSIGNMENT, TUTORIAL
C106.3	CHALK & TALK , STUD.ASSIGNMENT, WEB RESOURCES
C106.4	CHALK & TALK, WEB RESOURCES, TUTORIAL,LCD/SMART BORADS
C106.5	CHALK & TALK, STUD. ASSIGNMENT, LCD/SMART BORADS ,WEB RESOURCES

ASSESSMENT METHODOLOGIES-DIRECT.

✓ ASSIGNMENTS	✓ STUD. SEMINARS	✓ TESTS/MODEL EXAMS	✓ UNIV. EXAMINATION
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ASSESSMENT METHODOLOGIES-INDIRECT.

STUDENT FEEDBACK ON FACULTY (ONCE)	
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ASSESSMENT METHODOLOGIES USED FOR EACH COURSE OUT COME

SNO	ASSESSMENT METHODOLOGIES-DIRECT	ASSESSMENT METHODOLOGIES-INDIRECT
C106.1	Assignments, Univ. Examination, Stud. Seminars, Tests/Model Exams	Student Feedback On Faculty
C106.2	Univ. Examination, Tests/Model Exams,	Student Feedback On Faculty
C106.3	Univ. Examination, Tests/Model Exams, Assignments	Student Feedback On Faculty
C106.4	Univ. Examination, Tests/Model Exams	Student Feedback On Faculty
C106.5	Assignments, Univ. Examination, Tests/Model Exams	Student Feedback On Faculty

Prepared by
(Course Coordinator)

M. Vimal Chanth

Name and Signature
Mr. M. Vimal Chanth

Approved by
(Programme Coordinator)

[Signature]

Name and Signature
Dr. T. Priya

