



AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
(APPROVED BY AICTE, RECOGNISED BY GOVT OF A.P. & AFFILIATED TO JNTU, KAKINADA)
CHERUKUPALLY (V), NEAR TAGARAPUVALASA BRIDGE, VIZIANAGARAM DIST-531162
WWW.AVANTHI.EDU.IN, WWW.AISTE.AG.IN

CIRCULAR

Date: 20-06-2014

This is to inform that all the IV B.Tech students of all the branches are attend the CRT classes from 23-06-2014 without fail.

Sourabh
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AVANTHI INSTITUTE OF ENGG & TECH
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Bhogapuram (M)
Vizianagaram (Dist)-531 163

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Date: 17-07-2015

This is to inform that all the IV B.Tech students of all the branches are attend the CRT classes from 20-07-2015 without fail.


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CIRCULAR

Date: 13-06-2013

This is to inform that all the IV B.Tech students of all the branches are attend the CRT classes from 17.06.2013 without fail


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CIRCULAR

Date: 08-06-2012

This is to inform that all the IV B.Tech students of all the branches are attend the CRT classes from 11-06-2012 without fail.

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CIRCULAR

Date: 01-07-2016

This is to inform that all the IV B.Tech students of all the branches are attend the CRT classes from 04-07-2016 without fail.


COLLEGE PRINCIPAL
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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

IV B.Tech I Semester CRT Syllabus

Arithmetic Syllabus

1. Divisibility Rules - Concept
Divisibility Rules - Solved Examples
2. Numbers Theory -1
Numbers Theory -2
Numbers - Theory 3
Numbers - Theory Number Systems
Problems on Numbers -1
Problems on Numbers -2
Problems on Numbers -3
Problems on Numbers -4
3. Fractions and Decimals - Theory
Fractions and Decimals - Solved Problems 1
Fractions and Decimals - Solved Problems 2
4. HCF and LCM - Concept
HCF and LCM Solved Problems
5. Percentages - Concept and Important Formulae
Percentages - Solved Problems 1
Percentages - Solved Problems 2
6. Profit and Loss - Concept and Important Formulae
Profit and Loss - Solved Problems 1
Profit and Loss - Solved Problems 2
7. Ratio and Proportion - Concept and Formulae
Ratio and Proportion - Solved Examples 1
Ratio and Proportion - Solved Examples 2



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8. Partnerships - Concept

Partnerships - Solved Problems

9. Problems on Ages-1

Problems on Ages-2

10. Averages - Concept and Problems-1

Averages - Solved Questions 2

11. Clocks - Basic Concept

Clocks - Solved Problems on Clocks

12. Mensuration II - Volumes - Solved Problems 2

13. Mensuration II - Volumes - Solved Problems 3



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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

IV B.Tech I Semester CRT Syllabus

Reasoning Syllabus

1. Number series
2. Analogy
3. Classifications
4. Blood relations
5. Coding-decoding
6. Puzzle test
7. Machine input
8. Inequalities
9. Decision making
10. Syllogism
11. Sitting arrangement
12. Sequential output tracing
13. Direction sense test
14. Logical Venn diagram
15. Alphabet test
16. Alpha-numerical sequence puzzle
17. Mathematical operations
18. Numbers, ranking & time sequence test
19. Logical sequence test
20. Arithmetical operations



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IV B.Tech II Semester CRT Syllabus

Arithmetic Syllabus

12. Calendars - Important Points

Calendars - Solved Problems on Calendars

13. Time and Work - Concept and Formulae

Time and Work - Example Problems 1

Time and Work - Solved Problems 2

14. Time and Distance Concept and Formulae

Time and Distance Solved Problems 1

Time and Distance Solved Problems 2

15. Problems on Trains

16. Boats and Streams Concept

Boats and Streams - Solved Questions

17. Races and Games

18. Simple Interest - Concept and Solved Questions

19. Compound Interest - Concept and Solved Questions

20. Problems on Installments.

21. Mensuration - Areas - Theory and Formulae

Mensuration - Areas - Solved Problems 1

Mensuration - Areas - Solved Problems 2

Mensuration - Areas Solved Problems 3

22. Mensuration II - Volumes - Theory and Formulae

Mensuration II - Volumes - Solved Problems 1



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IV B.Tech II Semester CRT Syllabus

Reasoning Syllabus

21. Inserting the missing characters
22. Data Sufficiency
23. Eligibility test
24. Assertion and reason
25. Situation reaction test
26. Verification of truth of the statement
27. Statements and course of action
 1. Statements and assumption
 2. Cause and effect reasoning
 3. Statements and argument
 4. Drawing inference
 5. Statement and Conclusion
 6. Deriving conclusion from passages
 7. Theme detection
 8. Calendars
28. Clocks
29. Sequence and series
30. Puzzles
31. Seating arrangement
32. Odd figures or Odd man out

I Year – I SEMESTER

T	P	C
3+1	0	3

Professional Ethics and Human Values**UNIT I : Human Values:**

Morals, Values and Ethics – Integrity – Work Ethics – Service Learning – Civic Virtue – Respect for others – Living Peacefully – Caring – Sharing – Honesty – Courage – Value time – Co-operation – Commitment – Empathy – Self-confidence – Spirituality- Character.

UNIT II : Engineering Ethics:

The History of Ethics-Purposes for Engineering Ethics-Engineering Ethics-Consensus and Controversy –Professional and Professionalism –Professional Roles to be played by an Engineer –Self Interest, Customs and Religion-Uses of Ethical Theories-Professional Ethics-Types of Inquiry – Engineering and Ethics-Kohlberg’s Theory – Gilligan’s Argument –Heinz’s Dilemma.

UNIT III : Engineering as Social Experimentation:

Comparison with Standard Experiments – Knowledge gained – Conscientiousness – Relevant Information – Learning from the Past – Engineers as Managers, Consultants, and Leaders – Accountability – Role of Codes – Codes and Experimental Nature of Engineering.

UNIT IV : Engineers’ Responsibility for Safety and Risk:

Safety and Risk, Concept of Safety – Types of Risks – Voluntary v/s Involuntary Risk- Short term v/s Long term Consequences- Expected Probability- Reversible Effects- Threshold Levels for Risk- Delayed v/s Immediate Risk- Safety and the Engineer – Designing for Safety – Risk-Benefit Analysis-Accidents.

UNIT V : Engineers’ Responsibilities and Rights:

Collegiality-Techniques for Achieving Collegiality –Two Senses of Loyalty-obligations of Loyalty-misguided Loyalty – professionalism and Loyalty-Professional Rights –Professional Responsibilities – confidential and proprietary information-Conflict of Interest-solving conflict problems – Self-interest, Customs and Religion- Ethical egoism-Collective bargaining-Confidentiality-Acceptance of Bribes/Gifts-when is a Gift and a Bribe-examples of Gifts v/s Bribes-problem solving-interests in other companies-Occupational Crimes-industrial espionage-price fixing-endangering lives-

Whistle Blowing-types of whistle blowing-when should it be attempted-preventing whistle blowing.

UNIT VI : Global Issues:

Globalization- Cross-culture Issues-Environmental Ethics-Computer Ethics-computers as the instrument of Unethical behaviour-computers as the object of Unethical Acts-autonomous computers-computer codes of Ethics-Weapons Development-Ethics and Research-Analysing Ethical Problems in Research-Intellectual Property Rights.

Text Books:

1. “Engineering Ethics & Human Values” by M.Govindarajan, S.Natarajan and V.S.SenthilKumar-PHI Learning Pvt. Ltd-2009.
2. “Professional Ethics and Morals” by Prof.A.R.Aryasri, Dharanikota Suyodhana-Maruthi Publications.
3. “Professional Ethics and Human Values” by A.Alavudeen, R.Kalil Rahman and M. Jayakumaran- Laxmi Publications
4. “Professional Ethics and Human Values” by Prof. D.R. Kiran.
5. “Indian Culture, Values and Professional Ethics” by PSR Murthy-BS Publication.
6. “Ethics in Engineering” by Mike W. Martin and Roland Schinzinger – Tata McGraw-Hill – 2003.
7. “Engineering Ethics” by Harris, Pritchard and Rabins, CENGAGE Learning, India Edition, 2009.

I Year – I SEMESTER**T P C**
0 3 2**ENGLISH – COMMUNICATION SKILLS LAB – I****Suggested Lab Manuals:**

OBJECTIVE: To impart to the learner the skills of grammar as well as communication through listening, speaking, reading, and writing including soft, that is life skills.

BASIC COMMUNICATION SKILLS

- | | |
|--------|---|
| UNIT 1 | A. Greeting and Introductions
B. Pure Vowels |
| UNIT 2 | A. Asking for information and Requests
B. Diphthongs |
| UNIT 3 | A. Invitations
B. Consonants |
| UNIT 4 | A. Commands and Instructions
B. Accent and Rhythm |
| UNIT 5 | A. Suggestions and Opinions
B. Intonation |

Text Book:

‘Strengthen your Communication Skills’ Part-A by Maruthi Publications.

Reference Books:

1. INFOTECH English (Maruthi Publications).
2. Personality Development and Soft Skills (Oxford University Press, New Delhi).

I Year – II SEMESTER**T P C**
0 3 2**ENGLISH – COMMUNICATION SKILLS LAB – II****Suggested Lab Manuals:**

OBJECTIVE: To impart to the learner the skills of grammar as well as communication through listening, speaking, reading, and writing including soft, that is life skills.

ADVANCED COMMUNICATION SKILLS

UNIT 6	Body language
UNIT 7	Dialogues
UNIT 8	Interviews and Telephonic Interviews
UNIT 9	Group Discussions
UNIT 10	Presentation Skills
UNIT 11	Debates

Text Book:

‘Strengthen your Communication Skills’ Part-B by Maruthi Publications

Reference Books:

1. INFOTECH English (Maruthi Publications).
2. Personality Development and Soft Skills (Oxford University Press, New Delhi).

III Year – I SEMESTER

T	P	C
3+1	0	2

INTELLECTUAL PROPERTY RIGHTS AND PATENTS**UNIT I**

Introduction to Intellectual Property Law – Evolutionary past – Intellectual Property Law Basics - Types of Intellectual Property - Innovations and Inventions of Trade related Intellectual Property Rights – Agencies Responsible for Intellectual Property Registration – Infringement - Regulatory – Over use or Misuse of Intellectual Property Rights - Compliance and Liability Issues.

UNIT II

Introduction to Copyrights – Principles of Copyright – Subject Matters of Copyright – Rights Afforded by Copyright Law –Copyright Ownership – Transfer and Duration – Right to Prepare Derivative Works –Rights of Distribution – Rights of performers – Copyright Formalities and Registration – Limitations – Infringement of Copyright – International Copyright Law-Semiconductor Chip Protection Act.

UNIT III

Introduction to Patent Law – Rights and Limitations – Rights under Patent Law – Patent Requirements – Ownership and Transfer – Patent Application Process and Granting of Patent – Patent Infringement and Litigation – International Patent Law – Double Patenting – Patent Searching – Patent Cooperation Treaty – New developments in Patent Law- Invention Developers and Promoters.

UNIT IV

Introduction to Trade Mark – Trade Mark Registration Process – Post registration procedures – Trade Mark maintenance – Transfer of rights – Inter parties Proceedings – Infringement – Dilution of Ownership of Trade Mark – Likelihood of confusion – Trade Mark claims – Trade Marks Litigation – International Trade Mark Law.

UNIT V

Introduction to Trade Secrets – Maintaining Trade Secret – Physical Security – Employee Access Limitation – Employee Confidentiality Agreement –

Trade Secret Law – Unfair Competition – Trade Secret Litigation – Breach of Contract – Applying State Law.

UNIT VI

Introduction to Cyber Law – Information Technology Act - Cyber Crime and E-commerce – Data Security – Confidentiality – Privacy - International aspects of Computer and Online Crime.

REFERENCE BOOKS:

1. Deborah E. Bouchoux: "Intellectual Property". Cengage learning , New Delhi
2. Kompal Bansal & Parishit Bansal "Fundamentals of IPR for Engineers", BS Publications (Press)
3. Cyber Law. Texts & Cases, South-Western's Special Topics Collections
4. Prabhuddha Ganguli: ' Intellectual Property Rights' Tata Mc-Graw – Hill, New Delhi
5. Richard Stim: "Intellectual Property", Cengage Learning, New Delhi.
6. R. Radha Krishnan, S. Balasubramanian: "Intellectual Property Rights", Excel Books. New Delhi.
7. M. Ashok Kumar and Mohd. Iqbal Ali: "Intellectual Property Right" Serials Pub.

I Year - I Semester	L	T	P	C
	0	0	3	2

ENGLISH - COMMUNICATION SKILLS LAB- I

PRESCRIBED LAB MANUAL FOR SEMESTER I:

'INTERACT: English Lab Manual for Undergraduate Students' Published by **Orient Blackswan Pvt Ltd.**

OBJECTIVES:

To enable the students to learn through practice the communication skills of listening, speaking, reading and writing.

OUTCOME:

A study of the communicative items in the laboratory will help the students become successful in the competitive world.

The course content along with the study material is divided into six units.

UNIT 1:

1. WHY study Spoken English?
2. Making Inquiries on the phone, thanking and responding to Thanks
Practice work.

UNIT 2:

1. Responding to Requests and asking for Directions
Practice work.

UNIT 3:

1. Asking for Clarifications, Inviting, Expressing Sympathy, Congratulating
2. Apologising, Advising, Suggesting, Agreeing and Disagreeing
Practice work.

UNIT 4:

1. Letters and Sounds
Practice work.

UNIT 5:

1. The Sounds of English
Practice work.

UNIT 6:

1. Pronunciation
 2. Stress and Intonation
- Practice work.

Assessment Procedure: Laboratory

1. Every lab session (150 minutes) should be handled by not less than two teachers (three would be ideal) where each faculty has to conduct a speaking activity for 20/30 students.
2. The teachers are to assess each learner in the class for not less than 10 speaking activities, each one to be assessed for 10 marks or 10%. The average of 10 day-to-day activity assessments is to be calculated for 10 marks for internal assessment.

The rubric given below has to be filled in for all the students for all activities.

The rubric to assess the learners:

	Body language		Fluency & Audibility	Clarity in Speech	Neutralization of accent	Appropriate Language		Total 10 marks	Remarks
	Gestures & Postures	Eye Contact				Grammar	Vocabulary & expressions		

- **Lab Assessment: Internal (25 marks)**
 1. Day-to-Day activities: 10 marks
 2. Completing the exercises in the lab manual: 5 marks
 3. Internal test (5 marks written and 5 marks oral)
- **Lab Assessment: External (50 marks)**
 1. Written test: 20 marks (writing a dialogue, note-taking and answering questions on listening to an audio recording).
 2. Oral: Reading aloud a text or a dialogue- 10 marks
 3. Viva-Voce by the external examiner: 20 marks

Reference Books:

1. Strengthen your communication skills by Dr M Hari Prasad, Dr Salivendra Raju and Dr G Suvarna Lakshmi, Maruti Publications.
2. English for Professionals by Prof Eliah, B.S Publications, Hyderabad.
3. Unlock, Listening and speaking skills 2, Cambridge University Press
4. Spring Board to Success, Orient BlackSwan
5. A Practical Course in effective english speaking skills, PHI
6. Word power made handy, Dr shalini verma, Schand Company
7. Let us hear them speak, Jayashree Mohanraj, Sage texts
8. Professional Communication, Aruna Koneru, Mc Grawhill Education
9. Cornerstone, Developing soft skills, Pearson Education

ENGLISH LANGUAGE COMMUNICATION SKILLS LAB- II

PRESCRIBED LAB MANUAL FOR SEMESTER II:

'**INTERACT:** English Lab Manual for Undergraduate Students' Published by **Orient Blackswan Pvt Ltd.**

OBJECTIVES:

To enable the students to learn demonstratively the communication skills of listening, speaking, reading and writing.

OUTCOME:

A study of the communicative items in the laboratory will help the students become successful in the competitive world.

The course content along with the study material is divided into six units.

UNIT 1:

1. Debating
Practice work

UNIT 2:

1. Group Discussions
Practice work

UNIT 3:

1. Presentation Skills
Practice work

UNIT 4:

1. Interview Skills
Practice work

UNIT 5:

1. Email,
2. Curriculum Vitae
Practice work

UNIT 6:

1. Idiomatic Expressions
2. Common Errors in English
Practice work

Reference Books:

1. Strengthen your communication skills by Dr M Hari Prasad, Dr Salivendra Raju and Dr G Suvarna Lakshmi, Maruti Publications.
2. English for Professionals by Prof Eliah, B.S Publications, Hyderabad.
3. Unlock, Listening and speaking skills 2, Cambridge University Press
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