Courses having focus on Employability/ Entrepreneurship/ Skill Development

Automobile/Regulation 2018



REGISTRAR
Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
(Deemed to be University)
Periyar E.V.R. High Road,
Maduravoyal, Chennai 600 095

Subject Code : BEN18001	Subject Name : TECHNICAL ENGLISH - I	Ty/Lb/E	L	T/ SLr	P/R	С
DEIVIOUT	Prerequisite : None	Ty	1	0/0	2/0	2

 $L: Lecture \ T: Tutorial \ SLr: Supervised \ Learning \ P: Project \ R: Research \ C: Credits \ T/L/ETL: Theory / Lab / Embedded Theory and Lab$

OBJECTIVES:

- Strengthen their vocabulary in both technical and business situations
- Get practice in functional grammar
- Learn the effective way of corresponding with officials
- Learn to give instructions, suggestions, recommendations and comprehend and infer the information from the given passages.
- Train learners in organized academic and professional writing

COURSE OUTCOMES (Cos): (3-5)

Students completing the course would be able to

CO1	Strengthen their active and technical vocabulary
CO2	Understand functional grammar and gain proficiency in technical writing
CO3	Learn the appropriate technique of writing formal and business letters; interpret the advertisements and prepare the resume relevantly
CO4	Learn to give instructions, suggestions, recommendations and comprehend and infer the information from the given passages/ reports
CO5	Focus on academic and technical writing

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1				3						3		3
CO2				3						3		3
CO3				3		2			3	3		3
CO4				3					3	3		3
CO5				3					3	3		3
	Basic Sciences	Engg Sciences	Humanities & Social Sciences	Drogram cores	10814111 0010	Program Electives		Open Erecuves	Practical / Project		Internships / Technical Skills	Soft Skills

Subject Code : BEN18001	Subject Name : TECHNICAL ENGLISH - I	С	L	T/SLr	P/ R
	Prerequisite : None	2	1	0/0	2/0

UNIT I VOCABULARY BUILDING

6

The concept of Word Formation-Root words and affixes from foreign languages and their use in English to form derivatives.-Homophones- Words often confused-Verbal analogy

UNIT II BASIC WRITING SKILLS

6

Using Idioms and phrases in sentences-Sentence structures: statements, interrogative and imperative-Use of Conditional/if' clauses in sentences-Importance of proper punctuation-Creating coherence with sentence markers-Organizing coherent paragraphs in essays

UNIT III IDENTIFYING COMMON ERRORS IN WRITING

6

Subject-verb agreement-Noun-pronoun agreement- Misplaced modifiers-Articles-Prepositions-Redundancies and Clichés

UNIT IV WRITING PRACTICE- NATURE AND STYLE OF TECHNICAL WRITING

6

Describing Gadgets- Defining Concepts-Classifying data-Comprehension-Essay Writing-Informal and Formal Letter Writing:

UNIT V ORAL COMMUNICATION AND INTERACTIVE LEARNING

6

(This unit involves interactive practice sessions in Language Lab)

Activities to develop knowledge in Word formation, Vocabulary and analytical thinking-Instructions and –Recommendations-Formal and Informal Registers in Speech-Listening and taking notes

Total no. of Periods: 30

TEXT BOOK:

Quest: A Textbook of Communication Skills, Vijay Nicole, 2017. Pushkala, R, PadmasaniKannan S, Anuradha V, Chandrasena M Rajeswaran

SUGGESTED READINGS:

- (i) Practical English Usage. Michael Swan. OUP. 1995.
- (ii) Remedial English Grammar. F.T. Wood. Macmillan.2007
- (iii) On Writing Well. William Zinsser. Harper Resource Book. 2001
- (iv) Study Writing. Liz Hamp-Lyons and Ben Heasly. Cambridge University Press. 2006.
- (v) Communication Skills. Sanjay Kumar and PushpLata. Oxford University Press. 2011.
- (vi) Exercises in Spoken English. Parts. I-III. CIEFL, Hyderabad. Oxford University Press
- (vi) Pronunciation in Use ,Mark Hancock. Cambridge University Press. 2012

Subject Code:	Subject Name: COMMUNICATION LAB	Ty/Lb/	L	T/	P/R	C
BEN18ET1		ETL		SLr		
	Prerequisite : None	ETL	1	0/0	2/0	1

L: Lecture T: Tutorial SLr: Supervised Learning P: Project R: Research C: Credits

T/L/ETL: Theory / Lab / Embedded Theory and Lab

OBJECTIVES:

- Strengthen the academic and interpersonal advanced vocabulary
- Strengthen learners' writing skill such as summarizing, describing and report writing
- Learn to keep the simple conversations in day to day life
- Get to know certain life skills such as marketing, advertising and do presentation
- Improve the reading skill with comprehension

COURSE OUTCOMES (Cos): (3-5)

Students completing the course would be able to

CO1	strengthen their active vocabulary and appropriate language usage through reading poems, stories, texts, newspapers, magazines and research articles
CO2	use appropriate technical vocabulary in interpreting data
CO3	engage effectively in role-play, dialogue, conversation and interviews
CO4	equip them for effective interaction with people in all situations both academic and professional
CO5	learn English language as a 'life skill' and prepare for placement interviews

COs/PO	s	PO1	PO2	PO3	PO	4	PO5	PO6	PO7	PO	8	PO9	PO10	PO11	PO12
CO1					3								3		3
CO2					3								3		3
CO3					3			2				3	3		3
CO4					3							3	3		3
CO5					3							3	3		3
Category	Basic Sciences		Engg Sciences	Humanities & Social Sciences		Program core		Program Electives	Open Electives		Practical / Project		Internships / Technical Skills		Soft Skills
				V											

BEN18ET1 COMMUNICATION LAB 1 1 0/02/0	
UNIT I Listening and Speaking- Informal and Formal Contexts	6
UNIT II Compeering -Anchoring -Group Discussion	6
UNIT III Poster Presentation -Welcome Speech -Vote of Thanks	6
UNIT IV Formal Presentation -Power point presentation of charts/ Diagrams	8
UNIT V Facing an Interview- Mock Interview	4

Total No. of Periods: 30

SUGGESTED READINGS:

- (i) Practical English Usage. Michael Swan. OUP. 1995.
- (ii) Remedial English Grammar. F.T. Wood. Macmillan.2007
- (iii) On Writing Well. William Zinsser. Harper Resource Book. 2001
- (iv) Study Writing. Liz Hamp-Lyons and Ben Heasly. CambridgeUniversity Press. 2006.
- (v) Communication Skills. Sanjay Kumar and PushpLata. OxfordUniversity Press. 2011.
- (vi) Exercises in Spoken English. Parts. I-III. CIEFL, Hyderabad. OxfordUniversity Press
- (vi) Pronunciation in Use ,Mark Hancock. CambridgeUniversity Press. 2012

Subject Code : BES18ET1	Subject Name: ORIENTATION TO ENTREPRENEURSHIP & PROJECT LAB	Ty/Lb/ ETL	L	T/ SLr	P/R	С
	Prerequisite : None	ETL	0	0/0	2/0	1

L: Lecture T: Tutorial SLr: Supervised Learning P: Project R: Research C: Credits

T/L/ETL: Theory / Lab / Embedded Theory and Lab

OBJECTIVES:

- Understand how entrepreneurship Education transforms individuals into successful leaders.
- Identify individual potential &S have career dreams
- Understand difference between ideas & opportunities
- Identify components & create action plan.
- Use brainstorming in a group to generate ideas.

COURSE OUTCOMES (Cos) : (3 – 5)

Students completing the course were able to

CO1	Develop a Business plan & improve ability to recognize business opportunity
CO2	Do a self analysis to build a entrepreneurial career.
002	2 o w son ununjets to contra w entrepreneurum curevit.
CO3	Articulate an effective elevator pitch.
	Table distriction of the case
CO4	Analyze the local market environment & demonstrate the ability to find an attractive market
C05	Identify the required skills for entrepreneurship & develop
003	identify the required skins for endepreneursing & develop

11 0				0		•	,						
COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8]	PO9	PO10	PO11	PO12
CO1		2	2	3	2	2	2			2	2	2	1
CO2	3	2		3	2	3	2	3		3	3	2	2
CO3		2	2	2		3		3		3	3		
CO4		3	2	2	2	2		3		2	2	3	
CO5		2	2	3	2	2	3	3		2	2	3	1
Category	Basic Sciences	Engg Sciences	Humanitie	s & Social Sciences	Program core	Program Electives	Open	Electives	Practical /	Project	Internships / Technical Skills	Soft Skills	
										1			

Subject Code : BES18ET1	Subject Name: ORIENTATION TO ENTREPRENEURSHIP & PROJECT LAB	Ty/Lb /ETL	L	T/ SLr	P/R	С
	Prerequisite : None	ETL	0	0/0	2/0	1

UNIT I CHARACTERISTICS OF A SUCCESSFUL ENTREPRENEUR

Introduction to entrepreneurship education – Myths about entrepreneurship – How has entrepreneurship changed the country – Dream it. Do it - Idea planes - Some success stories – Global Legends – Identify your own heroes –

UNITH ENTREPRENEURIAL STYLE

Entrepreneurial styles – Introduction, concept & Different types - Barrier to Communication – Body language speaks louder than words

UNIT III DESIGN THINKING

Introduction to Design thinking – Myth busters – Design thinking Process - Customer profiling – Wowing your customer – Personal selling – concept & process – show & tell concept – Introduction to the concept of Elevator Pitch

UNIT IV RISK MANAGEMENT

Introduction to risk taking & Resilience – Managing risks (Learning from failures, Myth Buster) – Understanding risks through risk takers – Why do I do? – what do I do?

UNIT V PROJECT

How to choose a topic – basic skill sets necessary to take up a project – creating a prototype – Pitch your project – Project presentation.

Total No. of Periods: 15

Subject Code:	Subject Name: TECHNICAL SKILL-1 (EVALUATION)	Ty/Lb/E TL	L	T/ SLr	P/R	С
BAU18TS1	Pre requisite: All subjects studied up to date	Lb	0	0/0	3/0	1

L: Lecture T: Tutorial S Lr: Supervised Learning P: Project R: Research C: Credits

T/L/ETL: Theory/Lab/Embedded Theory and Lab

OBJECTIVES:

- To create awareness in students, various top companies helping them improve their skill set matrix, leading to develop a positive frame of mind.
- To help students be aware of various techniques of candidate recruitment and help them prepare CV's and resume.
- To help student how to face various types of interview, preparing for HR, technical interviews.
- To help students improve their verbal reading, narration and presentation skills by performs various mock sessions.

COUR	SE OU	ITCO	MES (CO	s):									
CO1			Be aware	of various	s top cor	npanies	leading	to impro	vement	in skills a	mongst th	em.	
CO2			to prepare	cV's and	d resume	es.		-		-			nd be able
CO3			Prepare fo	or differen	t types o	of intervi	ews and	l be prep	ared for	HR and t	echnical ir	nterviews.	
CO4			Improve t	heir verba	ıl, writte	n and otl	her skill	s by perf	forming	mock sess	sions.		
CO5			Participat	ion of gro	up discu	ssion an	d aptitud	de tests					
Mappi	ing of C	Course	Outcome	s with Pro	ogram (Outcome	es (POs))					
Cos/Po	OS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1		3	2	2	1	3	1			2	1		2
CO2		3	2	2	1	3	1			2	1		2
CO3		3	3	3	3	3	3	2		3	2		2
CO4		3	3	2	3	3	3	2		3	3		3
CO5		3	3	3	3	3	3	2		3	3		3
Cos / P	PSOs]	PSO1	PSC	O2	PS	03	PS	604				
CO1													
CO2													
CO3													
CO4													
CO5													
	Category	Basic Sciences	Engineering Sciences	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical	Soft Skills			

Subject Code:	Subject Name: TECHNICAL SKILL-I (EVALUATION)	T / L/ ETL	L	T / S.Lr	P/ R	С
BAU18TS1		L	0	0/0	3/0	1

Students should undergo training for at least 1 month in any industry/skill development center for skill development. The report along with certificate in proof of Skill acquired should be submitted during viva voce examination to be conducted by the department.

Subject Code:	Subject Name: SOFT SKILLS-I CAREER & CONFIDENCE BUILDING	Ty/Lb/ ETL	L	T/ SLr	P/R	C
BEN18SK1	Pre requisite: None	Lb	0	0/0	3/0	1

 $L: Lecture \ T: Tutorial \quad S \ Lr: Supervised \ Learning \ P: Project \ R: Research \ C: Credits$

T/L/ETL: Theory/Lab/Embedded Theory and Lab

OBJECTIVES: The student will

- To create awareness in students, various top companies helping them improve their skill set matrix, leading to develop a positive frame of mind.
- To help students be aware of various techniques of candidate recruitment and help them prepare CV's and resume.
- To help student how to face various types of interview, preparing for HR, technical interviews.
- To help students improve their verbal reading, narration and presentation skills by performs various mock sessions.

COURSE OUTCOM	IES (COs):
CO1	D C

CO1	Be aware of various top companies leading to improvement in skills amongst them.
CO2	Be aware of various candidate recruitment techniques like group discussion, interviews and be able to prepare CV's and resumes.
CO2	1 1
CO3	Prepare for different types of interviews and be prepared for HR and technical interviews.
CO4	Improve their verbal, written and other skills by performing mock sessions.
CO5	Participation of group discussion and aptitude tests

Mapping of Co	urse Out	comes w	iui Progra	m Outco	mes (PC	<i>J</i> S)						
Cos/Pos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	1	1	1	2	2	3	2	3	2	3
CO2	1	1	1	1	1	2	2	3	2	3	2	3
CO3	1	1	1	1	1	2	2	3	2	3	2	3
CO4	1	1	1	1	1	2	2	3	2	3	2	3
CO5	1	1	1	1	1	2	2	3	2	3	2	3
Cos / PSOs	PS	O1	PSC)2	PS	O3	PS	O4				
CO1												
CO2												
CO3												
CO4												
CO5												
Category	Basic Sciences	Engineering Sciences	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical	Soft Skills			
									✓			

Subject Code:	Subject Name : SOFT SKILLS-I CAREER & CONFIDENCE BUILDING	T / L/ ETL	L	T / S.Lr	P/ R	C
BEN18SK1	Prerequisite: None	ETL	0	0/0	3/0	1

To Improve:

- 1. Behavioral Pattern and Basic Etiquette
- 2. Value System
- 3. Inter Personal Skills
- 4. Behaving in Corporate Culture
- 5. Self Awareness / Confidence
- 6. Managing Self and Personality Styles including Body Language
- 7. International Culture / Cross Cultural Etiquette
- 8. Communication Skill

UNIT-I 6

Creation of awareness of the top companies / different verticals / Subjects for improving skill set matrix, Industry expectations to enable them to prepare for their career – Development of positive frame of mind – Avoiding inhibitions – Creation of self awareness – Overcoming of inferiority / superiority complex.

UNIT- II

Selection of appropriate field vis-à-vis personality / interest to create awareness of existing industries, Preparation of Curriculum Vitae – OBJECTIVESs, Profiles vis-à-vis companies.

UNIT-III 6

Group discussions: Do's and Don'ts – handling of group discussions – What evaluators look for! Interpersonal relationships – with colleagues – clients – understanding one's own behaviour – perception by others, How to work with persons whose background, culture, language / work style different from one's, behaviour pattern in multi-national offices.

UNIT-IV 6

Interview – awareness of facing questions – Do's and Don'ts of personal interview / group interview, Enabling students prepare for different Procedures / levels to enter into any company – books / websites to help for further preparation, Technical interview – how to prepare to face it. Undergoing employability skills test.

UNIT-V 6

Entrepreneurship development – preparation for tests prior to the interview – Qualities and prerequisites for launching a firm.

Total No. of Periods 30

TEXT BOOKS:

- 1. Agarwal, R.S. Chand, S. (1989) Quantitative Aptitude. Publication.
- 2. ShaliniVerma,(2009) Soft Skills. Publication Pearson.

REFERENCES:

- 1. Shaliniverma, (2012) Enhancing employability @ SOFT SKILLS. Publication Pearson.
- 2. KiranmaiDutt, P. GeethaRajeevan, C.L. Prakash, N.(2010) A Subject in Communication Skills. Publication Foundation Books.
- 3. Nirakonar,(2011) English Language Laboratories.PHI Learning.
- 4. Anandamurugan, S.(2011) Placement Interviews. Publication Tata McGraw Hill Education.

		(1	EVALU.	ATION)			Ty/Lb/E TL	L	T/ SLr	P/R	С
Pre	requisite	e: All Sub	jects St	udied up	o to date	e		Lb	0	0/0	3/0	1
Tutoria	ıl S Lr	: Supervis	ed Learı	ning P:	Project	R : Res	earch C:	Credits	11_			<u> </u>
ory/Lał	/Embedo	ded Theor	y and La	ıb								
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			skill of	the stude	ents.							
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I	Enhance t	he emplo	yability	of the stu	udents.							
ourse (Outcome	s with Pr	ogram (Outcome	es (POs))						
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO	12
3	2	2	1	3	1			2	1		2	2
3	2	2	1	3	1			2	1		2	2
3	3	3	3	3	3	2		3	2		Ź	2
3	3	2	3	3	3	2		3	3		(3
3	3	3	3	3	3	2		3	3		í	3
P	SO1	PS	02	PS	SO3	PS	SO4					
	3	3		3		3						
	3	3		3		3						
	3	3		3		3						
	3	3		3		3						
	3	3		3		3						
Basic Sciences	Engineering Sciences	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skill	Soft Skills				
	Tutoria cory/Lab S: is to dev COME I I I Course (PO1 3 3 3 7 PO PO1 PO1 PO1 PO1 PO1 PO1 PO1 PO1 PO1	Pre requisite Tutorial S Lr cory/Lab/Embedo S: is to develop the COMES (COs) Able to id Expose to Develop t Bridge th the studer Enhance t Course Outcome PO1 PO2 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Tutorial S Lr : Supervise sory/Lab/Embedded Theorems to develop the technical Expose to latest technical Bridge the gap bette the students. Enhance the emplo Bourse Outcomes with Proportion Polymore P	Tutorial S Lr : Supervised Learn cory/Lab/Embedded Theory and Lasts: is to develop the technical skill of a Expose to latest technology Develop the technical skills Bridge the gap between the the students. Enhance the employability fourse Outcomes with Program Outcomes with Program Outcomes with Program Outcomes With Program Outcomes	Tutorial S Lr : Supervised Learning P : sory/Lab/Embedded Theory and Lab S: is to develop the technical skill of the stude COMES (COs): Able to identify student's field of in Expose to latest technology in his fi Develop the technical skills required Bridge the gap between the skill rethe students. Enhance the employability of the students of the students. Enhance the employability of the students of the stu	Tutorial S Lr : Supervised Learning P : Project Proy/Lab/Embedded Theory and Lab Strist to develop the technical skill of the students. COMES (COs): Able to identify student's field of interest Expose to latest technology in his field of interest Bridge the gap between the skills requirement the students. Enhance the employability of the students. Course Outcomes with Program Outcomes (POs) PO1 PO2 PO3 PO4 PO5 PO6 3 2 2 1 3 1 3 3 2 2 1 3 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	CEVALUATION Pre requisite: All Subjects Studied up to date	Tutorial S Lr : Supervised Learning P : Project R : Research C: cory/Lab/Embedded Theory and Lab S: is to develop the technical skill of the students. COMES (COs): Able to identify student's field of interest Expose to latest technology in his field of interest Develop the technical skills required in the field of study Bridge the gap between the skill requirements of the emplithe students. Enhance the employability of the students. Course Outcomes with Program Outcomes (POs) PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 3 2 2 1 3 1 3 1	CEVALUATION TIL	CEVALUATION TIL	CEVALUATION TIL SLr Pre requisite: All Subjects Studied up to date Lb 0 0/0	CEVALUATION TL

Subject Code:	Subject Name :	TECHNICAL SKILL -2 (EVALUATION)	T / L/ ETL	L	T / S.Lr	P/ R	С
BAU18TS2			L	0	0/0	3/0	1

Students should undergo training for at least 1 month in any industry/skill development center for skill development. The report along with certificate in proof of Skill acquired should be submitted during viva voce examination to be conducted by the department.

Subject Code: BEN18SK2	SOFT SKILLS-II QUALITATIVE AND QUANTITATIVE SKILLS	T / L/ ETL	L	T / S.Lr	P/R	С
	Prerequisite: Basic Mathematics.	ETL	0	0/0	3/0	1

L: Lecture T: Tutorial SLr: Supervised Learning P: Project R: Research C: Credits T/L/ETL: Theory/Lab/Embedded Theory and Lab

OBJECTIVES:

- To bring behavioural patterns of students. To train them for corporate culture.
- To create self awareness.

		nfidence.											
To train the students for facing the interviews and develop interpersonal relationship.													
	OUTCOMES (COs): (3-5) Recognize and apply arithmetic knowledge in a variety of contexts.												
CO1		Recognize	e and appl	ly arithn	netic kno	owledge	in a var	iety of c	ontexts.				
CO2		Ability to	ility to identify and critically evaluate philosophical arguments and defend them from criticism.										
CO3			in the skill in solving H.C.F & L.C.M – Problem and Profit & Loss problems.										
CO4		Gain the s					rmutatio	ons & Co	ombinatio	ns			
CO5		Data Inter											
Mapping of C								ı	1	1	T	1	
Cos/Pos	os PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12												
CO1	3	3	3	3	3	3	1	1	3	2	3	3	
CO2	2	2	2	3	1	3	1	3	3	3	3	1	
CO3	3	3	3	3	3	3	2	2	3	3	3	3	
CO4	3	3	3	3	3	3	1	1	3	2	3	3	
CO5	2	2	2	3	1	3	1	3	3	3	3	1	
Cos / PSOs]	PSO1	PSC)2	PS	O3	PS	O4					
CO1													
CO2													
CO3													
CO4													
CO5				1		1							
Category	Basic Sciences	Engineering Sciences	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skill	Soft Skills	Interdisciplinary Subject			
)													

Subject Code: BEN18SK2	SOFT SKILLS-II QUALITATIVE AND QUANTITATIVE SKILLS	T / L/ ETL	L	T / S.Lr	P/ R	С
	Prerequisite: None	ETL	0	0/0	3/0	1

SUBJECT OBJECTIVES:

- Ability to work out mentally any problem.
- Ability to choose the correct approaches.
- Ability to tackle all interviews and competitive exams.

The purpose of this Subject is to build confidence, inculcate various Soft skills and also helps the students to identify in achieving their personal potential.

At the end of this training program the participant will be able to,

Explain the concept problem solving

- Outline the basic steps in problem solving.
- List out the key elements
- Explain the use of tools and techniques in problem solving.
- Discuss the personality types and problem solving techniques.
- By adapting different thinking styles in group and learn environment.
- Recognizing and removing barriers to thinking in challenging situations.
- Make better decision through critical thinking and creative problem solving.

METHODOLOGY

The entire program is designed in such a way that every student will participate in the class room activities. The activities are planned to bring out the skills and talent of the students which they will be employing during various levels in their real life.

- 1. Group activities + individual activities
- 2. Collaborative learning
- 3. Interactive sessions
- 4. Ensure Participation
- 5. Empirical Learning

UNIT I Logical Reasoning I

 $Logical\ Statements-Arguments-Assumptions-Courses\ of\ Action.$

UNIT II Logical Reasoning II

Logical conclusions – Deriving conclusions from passages – Theme detection.

UNIT III Arithmetical Reasoning I

Number system – H.C.F & L.C.M – Problem on ages – Percentage – Profit & Loss – Ratio & Proportion – Partnership.

UNIT IV Arithmetical Reasoning II

Time & Work – Time & Distance – Clocks – Permutations & Combinations – Heights & Distances – Odd man out and Series.

UNIT V Data Interpretation

Tabulation – Bar graphs – Pie graphs – Line graphs.

Total No. of Periods: 30

Reference Book:

- 1. R.S.Agarwal, A modern approach to Logical Reasoning, S.Chand& Co., (2017).
- 2. R.S.Agarwal, A modern approach to Verbal and Non verbal Reasoning, S.Chand& Co., (2017).
- 3. R.S.Agarwal, Quantitative Aptitude for Competitive Examinations, S.Chand& Co., (2017).

Subject Code:	:	Subject 1	Name: N	MINI-PI TRAI		Γ/INDU	JSTRIA	L	T / L/ ETL	L	T / S.Lr	P/R	С	
BAU18L07									Lb	0	0/0	3/0	1	
L : Lecture T : T/L/ETL : The			•		_	Project	R : Rese	earch C	Credits					
OBJECTIVE														
			edge and cess for th							nd to app	oly them f	or makii	ng an	
COURSE OU				ie deven	эртен с	or societ.	y and me	Justi ies.	•				-	
CO1	(develop a	ınd evalı	uate idea	s and in	formatio	on so as	to apply	the skills	acquired	to the		
CO2			make link											
CO3			kills to co			•								
CO4			quire collaborative skills through working in team to achieve a common goal le to learn on their own, reflect on their learning and take appropriate actions to improve it.											
CO5								and take	appropr	iate actio	ns to imp	rove it.		
Mapping of C					1			700	T 700		0 DO4	1 70		
Cos/Pos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO1				
CO1	3	3	3	3	3	3	3	3	3	2	3		3	
CO2	2	3 2	3	3	3	3	3 2	3	3	3	3		$\frac{3}{3}$	
CO4	3	2	3	3	2	2	2	-	3	3	2		3	
CO5	3	3	3	3	3	3	3	-	3	3	2		3	
Cos / PSOs		SO1	PSO			03		504	- 3	- 3				
CO1	1,	3	3			3		3						
CO2		3	3			3	3						-	
CO3		2	2			2		2						
CO4		3	3		,	3		3						
CO5		3	3			3		3						
								Skill						
Category	Basic Sciences	Engineering Sciences	Humanities and Social Sciences	n Core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skill	ills					
	Basic S	Engine	Humanit Sciences	Program Core	Prograi	Open E	Practica	Interns	Soft Skills					

Subject Code:	Subject Name: MINI-PROJECT /INDUSTRIAL TRAINING	T / L/ ETL	L	T / S.Lr	P/ R	С
BAU18L07		L	0	0/0	3/0	1

OBJECTIVES:

Students will have an opportunity to expose their knowledge and talent to make an innovative project. Students are supposed to do innovative projects useful to industries/society in the area of Mechanical Engineering and related areas, under the guidance of a staff member of their study. They have to prepare a project report and submit to the department.

OR

Students are supposed to get training in a Manufacturing/service Industry for a minimum period of 15days, prepare a report and submit to the department.

At the end of the semester Viva-Voce examination will be conducted by the internal Examiner duly appointed by the Head of the department and the students will be evaluated.

	rognicito		VALUA	ATION)	L-3			T / L/ ETL	L	T / S.Lr	P/R	C
TD	equisite	: All Sub	jects St	udied U	pto Date	e		Lb	0	0/0	3/0	1
I utoria	l SLr:	Superviso	ed Learn	ning P:	Project	R : Res	earch C	Credits			<u> </u>	
ory/Lab	/Embedo	led Theor	y and La	ıb								
S:												
			skill of t	the stude	ents.							
			1 ,, ~	11 6:								
						4 4						
	•						tudy					
								over or i	nduetry a	nd the co	mnatan	cv of
			ween the	SKIII IC	quii eiile	anto OI U	ic empi	oyer or i	naustry a	na are co	mpeteri	.y 01
			yability (of the stu	idents.							
)						
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO	12
3	2	2	1	3	1			2	1			2
3	2	2	1	3	1			2	1			2
3	3	3	3	3	3	2		3	2			2
3	3	2	3	3	3	2		3	3			3
3	3	3	3	3	3	2		3	3			3
PS	SO1	PSC)2	PS	O3	PS	SO4					
	3	3		3	3		3					
	3	3		3	3		3					
	3	3		3	3		3					
	3	3		3	3		3					
	3	3		(3		3					
Basic Sciences	Engineering Sciences	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skill	Soft Skills				
	s to dev COME A B COME B COME B COME CO	s to develop the COMES (COs) Able to id Expose to Develop the Bridge the the studen Enhance t Ourse Outcomes PO1 PO2 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3	Able to identify stude Expose to latest technical Develop the technical Bridge the gap betwithe students. Enhance the employ ourse Outcomes with Property PO1 PO2 PO3 PO3 PO3 PO1 PO2 PO3 PO3 PO1 PO2 PO3 PO3 PO1 PO2 PO3	Able to identify student's fi Expose to latest technology Develop the technical skills Bridge the gap between the the students. Enhance the employability ourse Outcomes with Program Outcomes with Program Outcomes with Program Outcomes With Program Outcomes Outcome	Able to identify student's field of in Expose to latest technology in his field be between the skills required Bridge the gap between the skill rethe students. Enhance the employability of the students. Enhance with Program Outcome PO1 PO2 PO3 PO4 PO5 3 2 2 1 3 3 3 2 2 1 3 3 3 3 3 3 3 PSO1 PSO2 PS 3 3 3 3 3 3 PSO1 PSO2 PS 3 3 3 3 3 3 3 3 PSO1 PSO2 PS 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	s to develop the technical skill of the students. COMES (COs): Able to identify student's field of interest Expose to latest technology in his field of in Develop the technical skills required in the file Bridge the gap between the skill requirements the students. Enhance the employability of the students. Ourse Outcomes with Program Outcomes (POs) PO1 PO2 PO3 PO4 PO5 PO6 3 2 2 1 3 1 3 3 2 2 1 3 1 3 3 3 3 3 3 3 3 PSO1 PSO2 PSO3 3 3 3 3 3 3 3 PSO1 PSO2 PSO3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 PSO1 PSO2 PSO3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 PSO1 PSO2 PSO3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 PSO1 PSO2 PSO3 3 3 3 3 3 3 3 3 3 3 3 3 3 PSO1 PSO2 PSO3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Able to identify student's field of interest Expose to latest technology in his field of interest Develop the technical skills required in the field of ship of the students. Enhance the employability of the students. Enhance the employability of the students. Ourse Outcomes with Program Outcomes (POs) PO1 PO2 PO3 PO4 PO5 PO6 PO7 3 2 2 1 3 1 3 3 1 3 1 3 3 3 3 3 3 3 3 3 3 3	s to develop the technical skill of the students. COMES (COs): Able to identify student's field of interest Expose to latest technology in his field of interest Develop the technical skills required in the field of study Bridge the gap between the skill requirements of the empl the students. Enhance the employability of the students. Ourse Outcomes with Program Outcomes (POs) PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO8 3 2 2 1 3 1	Store Stor	Store Stor	Able to identify student's field of interest	s to develop the technical skill of the students. COMES (COs): Able to identify student's field of interest

Subject Code:	Subject Name: TECHNICAL SKILL-3 (EVALUATION)	T / L/ ETL	L	T / S.Lr	P/ R	С
BAU18TS3		L	0	0/0	3/0	1

Students should undergo training for at least 1 month in any industry/skill development center for skill development. The report along with certificate in proof of Skill acquired should be submitted during viva voce examination to be conducted by the department.

Subject Code: BHS18FLX		Subject Na		REIGN	LANGU	AGE			Ty/Lb/ ETL	L	T/ SLr	P/R	C
		Pre Requis							Lb	0	0/0	3/0	1
L : Lecture T :	Tutoria	al SLr : Si	ipervised I	earning	P : Projec	ct R : Re	search C	: Credits	3				
T/L/ETL: The	ory/Lal	o/Embeddeo	d Theory a	nd Lab									
OBJECTIVE higher studies/p				course is	to equip	the stude	nts with o	one forei	ign language	which v	vill enable	them fo	r
				COUR	SE OUT	COMES	(COs):	(3-5)					
CO1		Students v	vill gain th	e knowle	dge of id	entifying	phonetic	es of all	the letters in	n one for	eign langu	age	
CO2		Students v	vill gain th	e knowled	dge of re	ading sm	all words	and ir	n one foreign	n languag	ge		
CO3		Students v	vill gain th	e knowled	dge of wr	iting skil	l in one f	oreign l	anguage.				
CO4		Students v	vill gain th	e knowled	dge of rea	ading ski	ll in one f	foreign l	anguage				
CO5		Students v	vill gain th	e knowled	dge of sp	oken skil	l in one f	oreign la	anguage				
			Mapping	of Cours	e Outcon	nes with	Progran	1 Outco	mes (POs)				
COs/POs	PO1	l PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO	12
CO1	2	1	1	1	1	3	3	3	3	3	3	3	
CO2	3	2	3	3	2	3	3	3	3	3	3	2	
CO3	3	3	3	3	2	3	3	3	3	3	3	2	
CO4	3	2	3	3	2	3	3	3	3	3	3	2	
CO5	3	3	3	3	2	3	3	3	3	3	3	2	
COs / PSOs		PSO1	PS	O2	PS	O3	PS	SO4	PSO5				
CO1													
CO2													
CO3													
CO4													
CO5	1								<u> </u>				
Category	Basic Sciences	Engineering Sciences	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skill	Soft Skills				
			/										

Subject Code: BHS18FLX	Subject Name: FOREIGN LANGUAGE	Ty/Lb/ ETL	L	T/ SLr	P/R	С
BHSIGFLA	Pre Requisite: Nil	Lb	0	0/0	3/0	1

OBJECTIVE: The main objective of this course is to equip the students with one foreign language which will enable them for higher studies/professional career abroad

Subject Code:		Sı	ıbject Na	me: PR	OJECT	PHAS	E-I		Ty/Lb/ ETL	L	T/ SLr	P/R	C
BAU18L09	Pre r	equisite:	All Cours	es					Lb	0	0/0	3/3	2
L : Lecture T : To					P : Projec	t R : Re	esearch C	: Credits				l	<u>I</u>
OBJECTIVES:			1 1 1 1		11.	41 . 6		C . 1	1. 1	.1 C	1.		
			ge and skil evelopment				our years	of study	and to appl	y them to	or making	an innov	ative
COURSE OUT					<u> </u>								
CO1	G	enerate, o	develop and	d evaluate	e ideas an	d inform	nation so	as to app	ly the skills	acquired	to the pro	ject wor	k
CO2	A	bility to 1	nake links	across di	fferent ar	ea of kno	owledge						
CO3		-	ills to com			•							
CO4	A	equire collaborative skills through working in team to achieve a common goal											
CO5		ble to learn on their own, reflect on their learning and take appropriate actions to improve it.											
		comes with Program Outcomes (POs)											
Cos/Pos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO	12
CO1	3	3	3	3	3	3	3	3	3	2	3	,	3
CO2	3	3	3	3	3	3	3	3	3	2	3	,	3
CO3	2	2	3	3	2	2	2	-	3	3	3		3
CO4	3	2	3	3	2	2	2	-	3	3	2	,	3
CO5	3	3	3	3	3	3	3	-	3	3	2		3
Cos / PSOs	PS	O1	PSC)2	PS	03	PS	SO4					
CO1	;	3	3		3	3		3					
CO2	;	3	3		3	3		3					
CO3		2	2		2	2		2					
CO4	,	3	3		3	3		3					
CO5	•	3	3		3	3		3					
Category	Basic Sciences	Engineering Sciences	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skill	Soft Skills				

✓

Subject Code:	Subject Name: PROJECT PHASE-I	Ty/Lb/ ETL	L	T/ SLr	P/R	С
BAU18L09	Pre requisite: All Courses	Lb	0	0/0	3/3	2

Students should identify the topic of the Project and should collect the literatures and data, at the end of the Semester the students should submit their Project Phase - I report to the Department and Viva - Voce examination will be conducted with external examiners and this carries 3 credits.

Subject Code:	Sub	ject Name	: PROJE	CT PHA	SE-II				Ty/Lb/ ETL	L	T/ SLr	P/R	С		
BAU18L10	Pre	requisite:	All Cours	ses, Proj	ect Phase	e-I			Lb	0	0/0	8/8	8		
L: Lecture T: Tu T/L/ETL: Theory					P : Proje	ct R:Re	esearch C	C: Credits							
OBJECTIVES:															
			ge and skil evelopmen				our years	of study	and to appl	y them fo	or making	an inno	vative		
COURSE OUT	•		everopinen	t or socie	ty and in	dustries.									
CO1		, ,	develop and	d evaluat	e ideas ar	nd inforn	nation so	as to app	ly the skills	acquirec	l to the pr	oject wo	rk		
CO2	1	Ability to 1	nake links	across d	ifferent aı	rea of kn	owledge								
CO3	1	Acquire sk	ills to com	municate	e effective	ely and p	resent the	e ideas cl	early						
CO4	1	Acquire co	llaborative	skills th	rough wo	rking in	team to a	achieve a	common go	oal					
CO5	1	Able to lea	to learn on their own, reflect on their learning and take appropriate actions to improve it.												
Mapping of Cou	rse Ou	itcomes w	nes with Program Outcomes (POs)												
Cos/Pos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO	12		
CO1	3	3	3	3	3	3	3	3	3	2	3		3		
CO2	3	3	3	3	3	3	3	3	3	2	3		3		
CO3	2	2	3	3	2	2	2	-	3	3	3		3		
CO4	3	2	3	3	2	2	2	-	3	3	2		3		
CO5	3	3	3	3	3	3	3	-	3	3	2		3		
Cos / PSOs	P	SO1	PSC)2	PS	SO3	P	SO4							
CO1		3	3		;	3		3							
CO2		3	3		;	3		3							
CO3		2	2			2		2							
CO4		3	3		;	3		3							
CO5		3	3			3		3							
			ciences					III							
Category	Basic Sciences	Engineering Sciences	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skill	Soft Skills						
	Ba	En	Hu	Prc	Prc	do	► Pra	Int	Sol						

Subject Code:	Subject Name: PROJECT PHASE-II	Ty/Lb	L	T /	P/R	C
BAU18L10		/ETL		SLr		
DACIOLIO	Pre requisite: All Courses, Project Phase-I	Lb	0	0/0	8/8	8

To make the students to make use of the knowledge and skill developed during their four years of study and to apply them for making an innovative product/process for the development of society and industries.

Students are expected to do a Project work either in an Industry or at the University in the field of Mechanical Engineering in group, not exceeding 4 students in a group. Each group will be allotted aguide based on the area of Project work. Number of reviews will be conducted during the semester to monitor the development of project. Students must submit the thesis at the end of the semester and appear for the Project Viva-Voce examination conducted by one internal examiner and one external examiner. 50% weight age will be given for the internal assessment and 50% weight age for the Project viva a voce examination.



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